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Bergson and the Aristotelian model of immanent teleology

By Álvaro Cortina



Bergson and the Aristotelian model of immanent teleology

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Acronyms:

Bergson:

AC, "L'âme et le corps" - "Body and soul", in ES.

CV, "La conscience et la vie" - "Life and consciousness", in ES.

FR, "La vie et l'oeuvre de Ravaisson" - "Life and work of Félix Ravaisson", in PM.

EC, *L'évolution créatrice* - *Creative evolution*.

EL, *Étude sur la poésie, la philosophie, la physique, le texte et la langue de Lucrece* - *The Philosophy of Poetry. The Genius of Lucretius*.

ES, *L'énergie spirituel* - *Spiritual energy*.

DI, *Essai sur les données immédiates de la conscience* - *Time and freewill*.

DS, *Les deux sources de la morale et de la religion* - *The two sources of morality and religion*.

DurSim, *Duration et simultanéité* - *Duration and simultaneity*.

LR, *Le rire* - *On laughter*.

IM, "Introduction à la Métaphysique" - "Introduction to Metaphysics", in PM.

PR, "Le possible et le réel" - "The possible and the real", in PM.

PM, *La pensée et le mouvant* - *Creative mind*.

MM, *Matière et mémoire* - *Matter and memory*.

QA, *Quid Aristoteles de loco senserit* - *On the notion of place in Aristotle*

Aristotle:

Cat, *Categories*.

DA, *On the soul*.

DC, *On the heavens*.

DInt, *De interpretatione*.

NE, *Nicomachean Ethics*.

EE, *Eudemian Ethics*.

HA, *History of animals*.

GA, *Generation of animals*.

GC, *Generation and corruption*.

Poet, *On poetry*

PA, *The parts of animals*.

Phys, *Physics*.

Pol, *Politics*.

Met, *Metaphysics*.

Meteo, *Meteorology*.

“La philosophie d’Aristote, tombée depuis deux siècles environ dans un discredit général et presque dans l’oubli, commence à s’en relever”

Félix Ravaisson
Essai sur la ‘Métaphysique’ d’Aristote

Introduction.

Although the word “teleology” was coined in modernity, the main philosophical claims about it can be traced back to ancient thought. The Greek term “τέλος” (“*télos*”) defines the fulfillment of a natural capacity. In philosophy this term is traditionally also referred to as ‘final causality’ and the most frequent translations of *télos* are goal, end, completion, perfection and function. The very notion of teleology also presents a challenge to philosophical materialism, according to which nature is reduced to homogeneous elements which move in “blind”, non-perfective ways or even according to chance. Teleology can also be associated with certain theological frameworks. This use of teleology can be found from Plato’s *Timaeus* onwards. It means that every goal in nature is due to a god, so it may involve theological concepts such as the providence of a hypothetical demiurge that arranges this world rationally, Christian creation *ex nihilo* or, in modern times, pre-design theories. These are different versions of what I call transcendental teleology.¹

Yet, beyond and partially in opposition to this transcendental teleology, there also exists an immanent approach to teleology. Aristotle is the founder of the model of immanent teleology, and it pervades his vast oeuvre. Since in Aristotle’s corpus there is neither theological creation nor providence, the final cause is exclusively an immanent cause. Thus, it cannot be the trace of one transcendental producer that introduces perfection in matter. According to Aristotle the *télos* is nature itself: “nature is an end and for the sake of which” (*he dè physis télos kai hou héneka*, *Phys.* II. 2.194b29). Aristotle extends the idea of goal from the realm of the intellect to that of nature, which means that not only gods, humans, and their crafts have goals corresponding to intellectual plans. Within the non-rational living individuals there is an inner tendency towards survival, reproduction and also well-being. In Aristotle, the first two are innate goals of every living being from the moment it is alive and the third, well-being, can be found in superior species. For instance, in the case of humans, well-being may mean happiness, but humans are just one case among others. Every development of every specific organism has its own goal, its own flourishing, irreducible to others, inscribed in its specific form. The immanent teleological model understands nature in a pluralistic way, according to which it is full of different entities with their innate goals. Against absolute anthropocentrism (according to which there are only human goals among natural beings and everything in worldly nature is for the human’s sake), immanent teleology recognizes in nature a diversity of forms, developments and perfections. There is a rich diversity of ways of understanding what perfection is, irreducible neither to human or divine use nor also homogeneous material compounds.²

¹ For this vision of the history of teleology, see André Ariew, Chapter 9: “Teleology.” *The Cambridge Companion to the Philosophy of Biology*. Cambridge University Press, 2015; John Cooper, “Aristotle on natural teleology”. In *Language and Logos*. Ed. M. Schofield & M. C. Nussbaum. Cambridge University Press, 1982, p. 221; also Sedley, David. “Teleology, Aristotelian and Platonic”, in *Nature and life in Aristotle: Essays in honor of Allan Gotthelf*, ed. James Lennox and Robert Bolton. Cambridge University Press, 2010, p. 28. See more detail in Chapter 2. Introduction.

² See my account of ancient and modern anthropocentrism in 2.1.c.

In a few crucial texts Aristotle also conceived nature as a whole, as a compound of substances. Every particular being and its specific goal is seen in those passages as a contribution to a general order, a general *télos*. This complementary perspective of teleology does not emphasize plurality, but instead the convergence of that plurality. This overarching aspect of Aristotelian teleology is still perfectly immanent, since it does not involve a god's providence or activity, but merely the good immanent work of nature as a whole.

In this dissertation I argue that the influential 20th century French philosopher Henri Bergson subscribed to the immanent conception of teleology. Bergson was a *teleologist*, although in a singular and original way. Against the usual readings of Bergson,³ I interpret his work as deeply rooted in the Aristotelian tradition, which he knew and taught.⁴ In order to substantiate this interpretation I provide the first systematic book-length comparison between Aristotle and Bergson.

In more general terms, Bergson's view of the world was not that of the flux of pure becoming, progress without end. On the contrary, Bergson had a dynamic view of living beings, human psychology and history that may be considered finalist. In this framework, the organic world should be considered a directed tendency towards adaptation and ultimately, the fulfillment of natural potencies. Bergson's conception of human beings and their societies involves a teleological approach as well. His conception of the world as a whole is teleological too. In this case, the goal is not order or stability but the growth of freedom. In Bergson there are many more examples of global teleology than in Aristotle, but its perspective is equally immanent and, hence, non-theological. Behind every Bergsonian approach to nature, from a single embryo to the cosmos, there is always the search for a natural function. Here there is not pure becoming, but becoming for the sake of the fulfillment of one specific potency.

In comparing Aristotle and Bergson, first, I aim to highlight the latter's original approach to immanent teleology, an approach which was developed in the era of Darwin, modern physics and the philosophy of history. Within Bergsonian scholarship, I want to challenge the reading according to which Bergson's philosophy is a "refusal of mechanism and finalism".⁵ I attempt to challenge the usual understanding of Bergson among scholars, according to which *every kind of* "finalism is not an alternative to mechanism, but only its inverted image".⁶ This means that finalism has in the end the same problems as mechanism. According to this, the label 'vitalism', when applied to Bergson, may be seen to stand equidistant from those options. Bergson rejects not only modern mechanicism, according to which the world is composed of atoms whose movements and relations are governed by deterministic causal laws, but also hard theories of chance, since he finds that pure chance is an intellectual illusion. On the other hand, the case of final causality is different. Teleology was not a relic of the past for Bergson but an open field for fresh new speculation. This does not mean that Bergson held an uncritical stance toward theories of teleology. His critical remarks, however, are addressed to specific kinds of final causality.

³ Chapter 1.

⁴ Chapter 2, first section: "Bergson: Aristotelian scholar".

⁵ "Creativité comme tendancialité". Vollet, Matthias. *Bergson*. Ed. Camille Riquier. Cerf, Paris, 2012, p. 371.

⁶ "Time, life, concepts: the newness of Bergson". Paola Marrati. Vol. 120. n°5. The John Hopkins University Press, 2005, p. 1105.

Bergson himself wrote that final causality “will never be definitively refuted”⁷ and that his own doctrine will “necessarily partake of finalism to a certain extent”.⁸ On the contrary, he rejects “vitalism”.⁹

Finalism is not a doctrine, Bergson says, “with rigid outlines”, it is “flexible”, it is “extensible”, it is “comprehensive”.¹⁰ He held the perspective of a reformer. In the end, Bergson claims “not to stop at the classic conception of finality, still less to contract or attenuate it, but, on the contrary, to *go further*”.¹¹ An essential aim of my dissertation is to clarify systematically the meaning of the last two words in italics.

As I explain in detail in Chapter 1, some brief remarks by Étienne Gilson and Henri Hude have been more useful than certain studies on Bergson’s teleology.¹² In *From Aristotle to Darwin and back again*, Gilson claims that Bergson’s global teleology is “purified of its vices” which “owed its novelty to what was a return of the ancient immanent teleology of Aristotle”.¹³ Unfortunately, he did not clarified why.

Even from outside Bergsonian scholarship, this dissertation sheds light on the extraordinary richness and flexibility of the old Aristotelian philosophical model. I seek to offer a clear understanding of immanent teleology and its philosophical possibilities in modern times.¹⁴ We can gain considerable knowledge by emphasizing the tension between the old master and the ambitious reformer.

The doctrine of immanent teleology contains a pluralistic account of life: it understands nature for the sake of itself and not for the sake of anything else. At the same time, its world-view is hierarchical, so it understands life as standing on an axiological scale. This double vision of nature (horizontal and vertical, democratic and monarchical) is projected in human beings too. Human beings fall under the whole world of nature and its perfections, but they also possess certain faculties that put them, by far, at the top of that natural scale. In the case of Aristotle it is intellect, in the case of Bergson it is, ultimately, freedom. In both, human beings are rooted in the rich realm of life. This pluralistic account of the living world and this naturalistic view of human beings challenge the most powerful trends of modernity, like Cartesian anthropocentrism or Darwinian relativism. From the perspective of global teleology, the question is different. The eternal cosmos of Aristotle (which includes everything) the overarching *élan* of Life (which includes biological evolution and human progress) are visions of reality as a whole. It is more difficult to explain how to apply them to contemporary problems. The two express different ways of understanding totality as such since they belong to different epochs. From the point of view of history, I wish to show the Aristotelian roots of modern ordinary terms, like ‘progress’. It is enriching to see how, after immense lapses of time, old philosophical models are suddenly revived again.

⁷ EC, p. 40.

⁸ EC, p. 40.

⁹ EC, p. 42.

¹⁰ EC, p. 40.

¹¹ EC, p. 53, my emphasis.

¹² On Bergson’s bibliography on finalism see Chapter 1.1.

¹³ Gilson, Étienne. *D’Aristote à Darwin et retour. Essai sur quelques constantes de la biophilosophie*. [From Aristotle to Darwin and back again.] Trans. John Lyon. Notre Dame Press, 1981, p. 99, my emphasis.

¹⁴ In this way: Spaemann, Robert and Löw, Reinhard. [Die Frage Wozu] *Fini naturali. Storia & riscoperta del pensiero teleologico*. Trans. it. Leonardo Allodi and Giacomo Miranda Ares, Rome, 2013 and Weiss, Helene. “Aristotle’s teleology and Uexküll’s theory of living nature”. *Classical Quarterly* 42 (1-2), 1948.

From the point of view of philosophical enquiry, I think is extremely enlightening to see how Bergson tries to combine global historical teleology with contingency, human freedom, and creativity. This problem, alien to Aristotelianism, is a conceptual tension that goes through Bergson's mature works. Furthermore, it remains quite relevant in the contemporary philosophical scene.

In Chapter 1 I introduce various important scholarly interpretations of Bergson's work. The rest of the dissertation is devoted to comparing the two models of immanent teleology. In Chapter 2 I deal in detail with Aristotle's classic view of immanent teleology. This chapter establishes the structure of the whole work: my overview of Aristotle's notion of teleology in section 2.1 lays the groundwork for a comparative treatment of Bergson in Chapter 3 and my treatment of the domains of immanent teleology in Aristotle's model, presented in section 2.2, correspond to a comparative treatment of such domains in Bergson's model, presented in Chapter 4. More specifically, in 2.1 I show the structural elements of the classic teleological argument (perfection, hierarchy, analogy, regularity) and I compare them with Bergson's modern approach in Chapter 3. The two main problems to be tackled in Chapter 3 are anthropomorphism and anthropocentrism. In 2.2 I lay out the different domains of application for teleological arguments in Aristotle, from embryology to ethics to cosmology. In that same section, I deal with the twofold vision of teleology. This means that among the many applications of the model to different phenomena, we can distinguish between the two main domains noted above.¹⁵ Then correspondingly, in Chapter 4 I turn to Aristotle, as seen from the perspective of Bergson's reform. In this final chapter I again survey the different domains of his teleological argument, from embryology to ethics to cosmology. Just as I do with Aristotle, I distinguish two complementary domains of teleological explanation in Bergson.

Let me now briefly deal with some of these major philosophical topics of the dissertation following its order in the text. First, I address the structural affinities between Aristotle and Bergson, then their structural differences. The reader can find both similarities and differences in 2.1 and 3 respectively. Subsequently I address the contrast between the two in terms of empirical domains, as we find in 2.2 and 4.

Structural affinities: anthropomorphism, biomorphism and anthropocentrism

The Aristotelian and Bergsonian teleological frameworks defend a pluralistic vision of nature and both understand mankind as an essential part of it. Consequently, they both admit the possibility of establishing analogies between human consciousness and natural entities or even nature as a whole. As I show in Chapter 2 on Aristotle and Chapter 3 on Bergson, analogy is the methodological basis for immanent teleology and implies the rejection of the critique of anthropomorphism, according to which the use of analogy means automatically transferring human psychological features to nature in an illegitimate way. Note that both Aristotle and Bergson reject the possibility of establishing arbitrary analogies between the natural world and us, but they still defend that there are goals in nature beyond our intellectual goals, hence there is room for some sorts of analogies. They do not support the radical critique of anthropomorphism when it is held *in every case*: there is for them a way of establishing correct analogies. Teleology describes life as such, and not merely human life. It understands psychology in its original and genuine sense: the limits of the *psyche* are nothing

¹⁵ Kullmann, W. "Different concepts of the final cause in Aristotle" in *Aristotle on nature and living things*. Ed. Allan Gotthelf. Bristol, 1985.

less than the limits of life. Analogy accepts a certain kind of anthropomorphism, provided that it describes life as such. In the end, teleology aims to be biomorphism. We share with the other living beings our internal perfective drive towards the fulfillment of innate potencies. Here is the teleological element: perfection.¹⁶ Perfection is the ontological basis for teleology. Analogy is its method.

Regarding perfection and analogy, as dealt with in section 2.1 and Chapter 3, there are different problems at stake. From perfection and analogy the question of the status of human nature arises. Thus, behind these two structural elements of the teleological approach stands philosophical anthropology. In accordance with the positions of pluralism and biomorphism, both the ancient and the reformed teleological model of immanent teleology reject *absolute* anthropocentrism. In Aristotle and Bergson the world does not exist for the sake of human beings. Living beings have their own sake and coexist with human goals. From this perspective, teleology is actually compatible with a naturalistic conception of human beings. But at the same time, it is important to note that these two pluralistic accounts of nature and naturalistic accounts of human beings do not entail that human beings are *just equal* to other species. In fact, that is not the case at all. In the two cases there is an irrefutable hierarchical superiority of human beings over the rest of earthly nature. In both, the best human beings do not just represent the whole scale of nature through their different faculties but also possess unique faculties: Aristotle's wise man can think like gods do; Bergson's man can be free and creative like the original *élan vital*. As we can see, these special faculties permit human beings to establish special analogies between them and superior levels in the cosmos. Both Aristotle and Bergson reject anthropocentrism, since there are not only human goals in nature, but they also defend a definite hierarchical scale. This scale offers a nuanced pluralism, because, given that there are many different goals in nature, some of these goals are simply better.

I claim that in Aristotle there is a "mitigated anthropocentrism", to the extent that human beings are superior to the rest of nature. At the same time, this pluralistic position permits that the centrality of humans does not entail the reduction of the rest of goals in nature to human goals.¹⁷ In the case of Bergson the problem becomes quite different because of his evolutionary perspective, but Bergson also defends a mitigated anthropocentrism.¹⁸ Against the ancient Platonic world and the modern Cartesian world, Aristotle and Bergson defend anthropomorphism: the two have pluralistic approaches to nature and both agree on the essential superiority of humans.

Structural distance: the forms, freedom, evolution and time

Until now we have seen some general agreements between Aristotle and Bergson. Now, it is time to look at the distance and the clash between them.

In Aristotle the goal is related to the form, which is an indestructible constitutive of every substance. According to Aristotle the final cause is intimately linked and sometimes equated with the formal cause, thus to the form or *eidos*. At other times it is related to some specific activity, function or *érgon* (ἔργον). In Bergson there are not forms. We can say that he defends a more pragmatic view of individual teleology, one which is more concerned with

¹⁶ See Chapter 2.1.a.

¹⁷ There is one tension in this reading, as I indicate in the last passage from Aristotle in 2.2.b.

¹⁸ See Chapter 3.2.

the function of every living being and not with indestructible items. Bergson considers that the function as such can be considered perfection.

In Bergson we have the idea of freedom. He understands freedom as a capacity for self-creation, for creating newness and overcoming past limits. Bergson attributes this freedom to a cosmic force that he calls *élan* and also to individual human beings. This is a key subject in Bergson and cannot be found in Aristotle. While this certainly affects the types of analogies employed by Bergson, it does not render the method of analogy invalid altogether. Actually, it is part of his reform.¹⁹

There is a third difference between them: evolutionary thought. This can be found in the problem of Bergsonian mitigated anthropocentrism and the Bergsonian theory of time, both discussed in Chapter 3. As I mentioned, evolution challenges the Aristotelian conception of an eternal world, composed of perishable individuals and everlasting species. Thus, this perspective is a source of philosophical disagreements between the two philosophies.

Within Bergson's framework there is, as I said, a hierarchy, like there is in Aristotle. But at the same time, this hierarchy is substantially different from the Aristotelian one. Bergson was born in 1859, the year of the publication of *The Origin of Species* and thus he grew up in Darwin's world. What we have in Bergson is a historical understanding of the scale of beings, which means that plants, basic animals and developed animals lead to human beings, chronologically speaking. Human beings are still on the top of this general development, although the reasons of that superiority, as I mentioned above, are not exclusively related with intellect but also with freedom. In comparison with plants, animals are more spontaneous. Humans are essentially the *only* genuinely free beings, since they can change their habits, their ideas, and the face of the earth. Bergson understands the Aristotelian scale of freedom not in a vertical static way, but in a horizontal historical way. He also adds important additions to the scale, in accordance with his reformative view. The consciousness of Life reaches its apex *only* with human beings. In accordance with the teleological argument, the other living beings represent different "directions" of Life and they have their own irreducible goals. The human form is not the goal of the universe, since the goal of the universe is freedom. Everything is subordinated to it. To the extent that humans take part in freedom to an incomparable extent, they have exclusivity. In Bergson there is pluralism and hierarchy, and his evolutionary mitigated anthropocentrism adds fundamental differences to Aristotle's.²⁰

In the comparison between Chapter 2.1 and Chapter 3 we see a great deal of difference between these two frameworks that seek to make human beings and their faculties part of the natural world, while at the same time giving exclusive privileges to human beings. Privileges that are analogous to the contemplative God, in Aristotle, or the Bergsonian *élan*, which is more related to the concept of the soul of the world.

Apart from analogy and perfection, there is another structural element in teleology: regularity. This concept is definitely transformed when seen from the evolutionary perspective. As we will see in Chapter 2.1, part of the Aristotelian argument in favor of teleology as found in *Phys.*II.8 rests on the notion of regularity. The fulfillment of goals in nature, such as the correct growth of teeth among animals, is something regular. Natural

¹⁹ See 2.1. a and b and 3.1.

²⁰ See 2.1.c and 3.2.

things happen *usually* or *always* for the good. Teleological processes happen all the time. This is what I call primary teleology. However, in this section I also comment on *Phys.II.4-6*, where Aristotle talks about how to understand things that happen only once. These events are produced by chance or fortune, so they are unpredictable and do not happen according to forms. There is not the necessity of an ultimate fulfillment. The lucky or unlucky changes are not inscribed by nature in the entity. Around these events, according to some scholars, Aristotle leaves room for a secondary teleology. These events mean the retrospective interpretation of singular and unpredictable events as if they were naturally perfective. I call this narratology. It plays a notable role in Bergson's global teleology.

In Chapter 3 I show that in Bergson there are two dimensions of temporality regarding teleology, both rooted in Aristotle. Primary teleology and secondary teleology are to be applied to Bergson's model too. The adaptive process of an organism in nature is something regular. This can be derived from Bergson's early work MM and also LR. On the contrary, the general history of Life and of mankind is not something to be repeated. There are neither evolutions nor universal histories. Since they are singular, they are composed of singular events that happen only once: this is the realm of freedom in Bergson. This panoramic historical vision of Life and human beings related with Bergson's mature philosophy of the *élan vital* in EC, CV and DS could neither use nor imply the Aristotelian regularity argument. Hence, I propose that Aristotle's theory of chance can find a place in Bergson's theory of finality, too.

I have emphasized the feature of the singularity of history, but the other one, unpredictability, is even more important for Bergson. This second understanding of the "time of teleology" expresses one of Bergson's main concerns: to avoid a fatalist global teleology. The combination of primary teleology and secondary teleology is one of the major elements of Bergson's reform. Contingence comes to the center of Bergson's view of nature, in the end, for the sake of leaving room for human freedom.

Two domains of teleology: individual function and common function

After talking about the structural affinities and differences between the two teleological models, it is still necessary to clarify the different grounds of application. While in the whole of Chapter 3 I bring my treatment of teleology in Aristotle into conversation with Bergson's by addressing general philosophical topics in the latter, such as anthropomorphism, anthropocentrism, regularity and fatalism, in the fourth and last chapter my approach is more concrete and illustrative. I will examine the examples found in these philosophers' treatises. In this way, I aim to make clear how the previous philosophical claims measure up to the relevant phenomena. In 2.2, I lay out my twofold understanding of Aristotle's teleology. In Chapter 4 I set up another confrontation between Aristotle with Bergson. I also point out two areas in which Bergson's notion of teleology finds application. However, the twofold view of teleology may become evident earlier on its own, in Chapter 3, where I distinguish two main areas of the application of analogy, two main types of perfection and two main types of time. The general task in Chapter 4, on the other hand, is to make the general ideas more concrete by way of multiple examples.

In 2.2 I survey a large variety of phenomena. Basically, I defend the claim that in Aristotle we find two main domains of application for the argument regarding the notion of immanent teleology. As I said earlier, there is a paradigmatic model: an individual organism is compared with an intelligent action or with a tool that expresses intelligent actions. In the set

of grounds of teleological explanation in Aristotle I start from the biology of living beings and move upwards in the Aristotelian scale of being.

As said above in 2.2 I also analyze the few problematic but still crucial passages in Aristotle that do not follow the individual model of teleology, but rather the global one, where the *télos* has to do with imitation and participation. The craft analogy is not so present here, but still Aristotle proposes analogies with the intentional world, like the army, the household, or analogical terms like “imitation”.

I defend a comprehensive view of Aristotle’s teleology because I really find no problem, as many scholars do, in admitting two domains of teleology, the individual and the big-scale teleology.²¹ I call the first one the teleology of development. The second, the cosmic one, is in my account called the teleology of contribution, a term that I prefer over the recurrent expression of the “aim”. In short, I find that these are the two basic irreducible meanings of *télos* behind the different passages in the corpus. Note that the second global meaning is an addition to the first individual meaning of perfection, and does not diminish it. Undeniably, in terms of his doctrine, Aristotle poorly develops the cosmic understanding of the term *télos*. Also, the texts are few in comparison with the innumerable accounts of individual teleology in Aristotle. However, the passages which speak to a global teleology are indeed present in Aristotle’s work and their content is both important and clear.

As we move upwards in the scale of being, in Chapter 4, I systematically deal with the phenomena that can be applied to teleology in Bergson. In the exhaustive set of examples I examine in this regard, I start from simple living beings. The main thing to note about Chapter 4 is that I also follow a twofold teleological scheme; in Bergson I distinguish a developmental teleology, which I call conservative teleology. This concerns individual living entities, including humans (regarding certain human faculties), as well as transgressive global teleology. The last one involves some exclusively human faculties as well as overarching tendencies, such as the *élan vital*, which runs through evolution and human history. Conservative teleology may include concepts such as survival, reproduction and well-being. It addresses the conservation of the individual and the species.

Let me refer here only to one particularly illustrative example. In the organic context of MM, Bergson says that action is the “fundamental law of life,”²² and living corporeal beings are “centers of action,”²³ namely of “useful”²⁴ and “effective action.”²⁵ There is a main aim for this activity: “to adapt ourselves to a present situation.”²⁶ And, finally, the “purpose and function of our nervous system” is adaptation.²⁷ From this arise Bergson’s concepts of regularity and of “attention to life”, which contain teleological assumptions.

Some Aristotelian scholars have already claimed that behind the Darwinian concept of adaptation there is, in the end, a root of Aristotelian teleology, since being adapting in order

²¹ For the scholars that defend global teleology in Aristotle, see 2.2.b.

²² MM, p. 150.

²³ MM, pp. 228 and 242.

²⁴ I mean “vital utility”, for the sake of life itself.

²⁵ MM, p. 154.

²⁶ MM, p. 151.

²⁷ MM, p. 160.

to survive is the goal of all living beings as well as each species.²⁸ Famous historians of biology have endorsed the Aristotelian background of the concept of adaptation.²⁹ To this extent, my work on Bergson follows this line of thinking. “Function” and “adaptation” are part of Bergson’s new model of immanent teleology. I comment in detail on these and other passages concerning adaptation in Chapter 4.1.

The sort of progress which falls under transgressive teleology is brought about thanks to certain biological and historical trends (the ones that lead towards the progress of the locomotive functions and the development of the brain); religious, philosophical or cultural trends (especially, Christianity); normal humans and spiritual heroes (artists, saints, philosophers). Progress should be understood here as a gradual common good, it implies change (not conservation) for the better.

In the case of the teleology of individuals or in ethics, Bergson calls the goal “destination”. It means, on one hand, self-development, and on the other, enhancing the world. Bergson writes: “Nature warns us by a clear sign that our destination is attained. That sign is joy”, and adds “wherever there is joy, there is creation; the richer the creation, the deeper the joy.”³⁰ Individual freedom is a combination of the two domains of teleology in Bergson. It implies an individual beneficiary (the personal fulfillment), and at the same time, it refers to the concept of creation which, as I show later on, means a contribution to more general orders.

Bergson’s cosmology is teleological when he says that “the impetus of life (...) consists in a *need* for creation” and adds that the cosmos “strives to introduce into it the largest possible amount of indetermination and liberty.”³¹ The passage deals with one natural tendency: its need points to its goal, to how it would be satisfied. To some extent, human beings represent an attainment of that goal. The human being “continues the vital movement indefinitely.”³² Human beings are the “culminating point of evolution and they are nearest the source.”³³ I note again that this does not mean that humans are the overarching goal of nature understood as a whole. They are not. To be sure, the *only* goal of nature is freedom. That is the *télos*, the perfective feature here. This statement has a major status in Bergson’s philosophy of nature.

While the need for nature is stated categorically as something regular, the rest of Bergson’s large-scale account of Life and history, found scattered over different places, emphasizes that these are an unpredictable by-product of contingency. He defends a perfective panoramic vision but he does not claim that this is a matter of necessity. Bergson reforms the Aristotelian vertical scale of beings. He interprets the “chain of being”³⁴ in horizontal and

²⁸ Lennox, James. “Darwin was a Teleologist”. *Biology and Philosophy*. 8. 1998 and Gotthelf, Allan. “Darwin on Aristotle”. *Journal of the History of Biology*. Volume 32, March, 1999. Also: Judson, Lindsay. “Aristotelian teleology”. *Oxford Studies in Ancient Philosophy* 29:341-66, 2005, p. 355.

²⁹ See Mayr, Ernst. “The idea of teleology”. *Journal of the History of Ideas*. Vol. 53, No. 1. Jan.-Mar., 1992. “Teleological explanations in evolutionary biology”, Ayala, Francisco. *Philosophy of Science*. Vol. 37, No. 1. Mar., 1970, and Ruse, Michael. “Teleology: yesterday, today, and tomorrow?”. *Studies in History and Philosophy of Science Part C Studies in History and Philosophy of Biological and Biomedical Sciences* 31(1): 2000.

³⁰ ES, p. 29.

³¹ EC, p. 251. My emphasis. In the translation there is “need of creation”, while I prefer “need for creation”. I will put always “for”. Also EC, p. 261.

³² EC, p. 266.

³³ “Life and consciousness” (CV) in ES, p. 32. Also EC, p. 264.

³⁴ For this idea: Lovejoy, Arthur. *The great chain of being: A study of the history of an idea*. Harvard University Press, 2001.

historical terms. The vegetable form first, the animal form next, and finally the human form describe a progress directed toward indetermination, which, at the same time, is contingent. The vegetable, animal, and human forms were not inscribed in any plan. They are not necessary as such and there is merely retrospective teleology in the singular and unpredictable event of Life and also history. In addition, Bergson defends the branching pattern of Darwinism, according to which evolution is illustrated by the “tree of life”. There is then a plurality of branches and lineages in Life. But singularity, unpredictability, and the branching pattern do not mean that Bergson overcomes the model of the scale of beings. In 4.2.b I offer a detailed a teleological reading of his history of life. In sum, he combines secondary teleology and the tree of life with the ladder of perfection and mitigated anthropocentrism. What is central, in regard to Bergson, is that despite contingencies and irregularities there is one cosmic goal, invariable and constant: indetermination. That is what I understand when he, cryptically, says that “the essential *function* of the universe” is to be a “machine for the making of gods.”³⁵

Thus, what in Aristotle is *táxis* or order, in Bergson is progress. To some extent these notions are as opposite as stability and change, but the two of them employ the same contributive teleological model. In this respect, the two cosmic-army passages are quite illustrative: in Aristotle we have a static general arrangement of different substances, in Bergson’s army there is an army in “space and time” which moves forwards.³⁶ Again, in Bergson the wide-scale teleology is much more common than in Aristotle. Also, in Bergson the analogy of the self/Nature as microcosmos/macrococosmos is widely used, while it is not Aristotle. As I said, Bergson is an original interpreter of the model of immanent teleology, which means that he offers new paradigms for both analogies and perfection, two notions that, implicit or explicitly, he used massively.

While I said that the model of adaptation has gained attention from Aristotelian scholars, the model of progress has been mostly ignored. It is understandable since we have now moved far beyond Aristotle’s framework, although prominent interpreters such as Guthrie³⁷ and

³⁵ DS, p. 317, my emphasis.

³⁶ I comment on this both in 2.2.b and in 4.2.b, respectively. In Aristotle see *Met.* XII.10.1075a10-25. In Bergson see EC, pp. 270-271.

³⁷ Guthrie says this in two different books. I transcribe the two passages because they are clear and useful: “in introducing the conception, one must say first of all that teleology as Plato and Aristotle understood it demanded the actual existence of the *télos* or end, that is, of a perfection under whose influence the activity of the natural world takes place. This is not a necessary presupposition of the idea of ordered progress. Ordered progress is a perfectly possible conception without the assumption that the perfection, or goal to which it is tending already exists somewhere. This is indeed the idea favoured by a modern evolutionary biologist like Julian Huxley”. *The Greek Philosophers from Thales to Aristotle*. Routledge, London, 2006, pp. 130-131. 30 years later, Guthrie reformulates the same comparison, Aristotle/Huxley, so useful for our purpose, since it can be applied to my comparison Aristotle/Huxley. In the following passage, Guthrie adds a metaphor which can complete our conception of global teleology with no *télos*: “For him [Aristotle] there could be no progress that was not towards *something* and you could not progress towards something unless it existed. In the (evolutionist) metaphor in which emergent is intended here to suggest we cannot picture a light object as in the process of rising from the bottom of the sea to the surface unless there is a surface always ahead of it, up to which it is progressing. In Aristotle’s view, we and the world are like that object, ever trying to reach the surface, which remains ever above us. To apply the same metaphor to [Julian] Huxley’s, we should have to say that the world is like the level sheet of water itself, which is rising and rising –but rising into nothingness, or at least, into what was nothingness before and only exists as nature reaches it “. *A history of Greek philosophy*. VI. Cambridge University Press, 1981, pp. 117-118.

Owens³⁸ have noted the affinity between Aristotle's global teleology and global evolutionary teleologies. My argument follows their brief remarks.

My intention throughout the work will never be to force the similarity between the two. Bergson has to face his own problems, which are absent from, if not contradictory with, the whole framework of Aristotle.³⁹ Let me highlight two here. First, Bergson has to leave his transgressive teleology open, since transgression implies overcoming but not arriving at anything definite. Regarding individual transgressive teleology there is only one example: human beings. As any teleologist approach to the human being, Bergson's defends eudaimonology. The fulfillment of the human goal means happiness, and in this case, the goal is precisely to create oneself. Personal maturity involves attaining your personal goal. Although this perspective is quite regular nowadays, I believe it harbors a paradox: i.e., the possibility of a teleology towards non-existing items. Bergson's global teleology only expands the creative paradox. The teleology of the "wave which rises"⁴⁰ has a natural origin and a natural need but, again, there is no fixed *télos* to attain. This leaves room for unpredictability and freedom in the world, but also entails a paradoxical claim: namely, a teleology without a *télos*.⁴¹ The second issue I believe to be more serious, because Bergson seems to not be aware of it and because it menaces the core of his entire philosophy: individual responsibility. Given that there is freedom in Life, Bergson didn't differentiate clearly between this overarching impetus and us, mere individuals. As we will see, Bergson sometimes talks about the freest human individuals as if they emerged from nature. The notion of self-creativity presents a stringent vision of freedom and human capacities, and it can be difficult to make it fit with a more general freedom in a compatibilist way, as we have in Aristotle. One can ask, finally, to whom belongs this freedom that goes through history, the progressive impetus that prolongs the biological *élan vital*. The problem of naturalizing humans (they all have goals, like any other being) and spiritualizing nature (the particular goal of nature, understood as a whole, is like the human's goal: freedom) is that they can easily become conflated and confused.

While I enter into the highly controversial field of Aristotle's scholarly publications with a comprehensive understanding, I concentrate the polemic side of my research on the Bergsonian flank. I affirm that this topic is not merely something to be found in Bergson, but even that it permits us to read his entire work as a continuous development of the same core idea.⁴² Moreover, I see that in Bergson's work the two types of teleology, the "two irreducible

³⁸ For instance, Owens compare Teilhard De Chardin's "noosphere" evolutionary notion with Aristotle's human historical stage. Owens, Joseph. "Teleology of nature in Aristotle". *Some philosophical issues in moral matters. The collected ethical writings of Joseph Owens*. Ed. Billy-T.Kennedy. Editiones Academiae Alphonsonianae. Edalcalf, Roma, 1996.

³⁹ Bergson himself says: "the idea of creation doesn't exist in any degree in the ancient philosophy". Bergson, Henri. *L'évolution du problème de la liberté. Cours au collège de France. 1904-1905*. PUF, Paris, 2017, p. 298. See overall the sessions of the 27th of January 1905 and 3th of February of 1905.

⁴⁰ EC, p. 293

⁴¹ Deleuze noted this idea, although he does not seem to see any paradox: "There is finality because life does not operate without directions; but there is no 'goal', because these directions do not pre-exist ready-made, and are themselves created 'along with' the act that runs through them." Deleuze, Gilles. *Le bergsonisme. [Bergsonism]* Trans. Hugh Tomlinson and Barbara Habberjam. Zone Books, NY, 1991, p. 106.

⁴² According to Vieillard-Baron, Jean-Louis. "Bergson's secret," that is, the original intuition of all his philosophy, is the idea of unity of spirit and duality of the self. This author is applying to Bergson the theory of the original intuition found in "The philosophical intuition", in PM. *Le secret de Bergson*. Éditions du Félin, Paris, 2013, p. 159.

senses of life,”⁴³ are finally articulated in his last important work, DS. Thus, I hold a not only continuist but even a progressivist reading of Bergson’s career. I deduce teleology from some aspects in DI, such as personal maturity. Yet, properly speaking the teleological model, based on functions and efficiency, appears in MM with regard to individual conservative teleology. EC is, in every sense, much more focused on transgressive global teleology, although it contains some important passages on conservative teleology like embryology and ethology.⁴⁴ CV and, to a greater extent, DS are the synthesis of these two types of teleology.

⁴³ Worms, Frédéric. *Bergson ou les deux sens de la vie*. PUF, Paris, 2004, p.18-19.

⁴⁴ Viellard Baron, Jean-Louis. *Le secret de Bergson*. Op. cit., p. 162. Vieillard-Baron notes three ways of understanding the whole work of Bergson. First, the most common, he says, is to study all his essays as a succession of independent works. Secondly, there is Alain De Lattre’s and, I add, Kolakowsky’s account, which finds rupture in his works. In short, Bergson starts elaborating a philosophy of consciousness or phenomenology and turns to continue within a cosmology or philosophy of life. Thirdly, there is a “continuist” account.⁴⁴ The author mentions Thibaudet and Jankélévich,⁴⁴ and could have mentioned the more recent Riquier and Worms. Riquier, Camille. *Archéologie de Bergson*. PUF, Paris, 2009. Worms, Frédéric. *Bergson ou les deux sens de la vie*. PUF, Paris, 2004. My vision is partially continuist. I think there is a dualistic vision of teleology in Bergson. That dualistic teleology is irreducible and can be found in all his works, but it is not equally developed in all his works.

1. The reform of immanent teleology

1.1. Anti-teleological readings of Bergson

In section 1.1, I will deal with two main issues, to be addressed in the following two subsections, 1.1a and 1.1b. First, I want to lay out my overall view of Bergson in comparison with general accounts of his philosophy. I want to emphasize concepts such as substance, function, order and hierarchy in Bergson against the depiction of Bergson's world like a chaotic, blind Heraclitean flux of *pure becoming* or any kind of mysticism. I seek to introduce our topic, teleology, through that general set of traditional concepts. To be sure, Bergson is a philosopher who held a dynamic vision of the world and life, but at the same time he is a philosopher of order, which means directedness. That is, order and dynamism are both part of his philosophy.

Second, I will tackle the main issue: the anti-teleological readings of Bergson. Such interpretations, as already mentioned in the Introduction to this dissertation, consider the pages in which Bergson discusses teleological questions with regard to its method and ontological status. These scholarly readings rely upon concrete passages in EC.I and II. These two chapters are the only texts where Bergson talks about teleology as a philosophical problem. Furthermore, he is there concerned only with global teleology, not individual teleology (as one could find in MM). The anti-teleological interpretations emphasize Bergson's criticism of finalism in EC.I and II. Apart from the relevant readings of these texts, there are two short late Bergsonian texts that have attracted the attention of certain scholars: PR, an article published in 1930, and one important private letter to Floris Delattre, written in 1935. These two texts certainly deserve attention for they contain important claims.

After critically examining the anti-teleological readings, I will address my own interpretation in 1.2. Basically, I do not play down the importance of these critical accounts by Bergson, but I place them within a broader context, the context of a reform of the classical view of teleology. In 1.2 I discuss the textual basis for holding this assertion.

1.1.a. General vision of Bergson: persistence of substances and global hierarchy

It is true that in some parts of Bergson's works can be found statements in which consciousness and the universe are described as "pure becoming", "pure progress" with no direction, substances, or goals.⁴⁵ Bergson uses the metaphor of the river and the flux on several occasions talking about inner consciousness. Apparently, this has given rise to the temptation to interpret his philosophy as a certain kind of modern development of Heraclitus' theory of the universal flux of pure becoming:⁴⁶ indeed, the critical accounts written in the 40's by Bertrand Russell and Garrigou-Lagrange bring up Heraclitus when talking about

⁴⁵ "There are changes, but there are underneath the change no things which change: change has no need of a support. There are movements, but there is no inert or invariable object which moves: movement does not imply a mobile". PM, p. 304. Note 19.

⁴⁶ This interpretation of Heraclitus can be found in Plato (*Cratylus*, 402a). See: "Excursus I: On traditional interpretations of the cosmic cycle", in Kahn, Charles. *The art and thought of Heraclitus. An edition with the fragments with translation and commentary*. Cambridge University Press, 1979, p. 147. See also J. V. Luce, J. V. *An introduction to Greek philosophy*. Thames and Hudson, London, 1994.

Bergson.⁴⁷ In fact, this has become a regular assumption. In my opinion, this leads to a misinterpretation of Bergson's view of movement and time. It only emphasizes one aspect of our individual experience of the world and disregards the complete picture.

Bergson was aware of this Heraclitean reading. During his lifetime, namely, in his later years, Bergson publicly rejected the philosophical Heraclitean-flux genealogy.⁴⁸ According to Fruteau de Laclos,⁴⁹ in response to Jacques Maritain's attack in "La philosophie bergsonienne",⁵⁰ Bergson added these words in a footnote to the re-publication of *Introduction to Metaphysics*:

"From the fact that a being is action can one conclude that its existence is evanescent? What more does anyone say than I have said, in making it reside in a "substratum", which has nothing determined about it, since, by hypothesis, its determination, and consequently its essence, is this very action? Does an existence thus conceived ever cease to be present to itself, real duration implying the persistence of the past into the present and the indivisible continuity of an unfolding?"⁵¹.

In order to know the possible nature of that "evanescent" existence's doctrine it is necessary to read the subsequent note to the same text. In his later complaint, Bergson completes the earlier one, by attributing the theory to the philosopher Heraclitus:

"Let me insist I am thereby in no way setting aside *substance*. On the contrary, *I affirm the persistence of existences*. And I believe I have facilitated their representation. How was it ever possible to compare this doctrine with the doctrine of Heraclitus?"⁵²

I think this particular case is, actually, illustrative of a certain kind of assumed general vision of Bergsonism, which is still active nowadays. But Bergson had a more moderate conception of being as flux. It is a more dynamic conception of substances and, we saw, a functional conception of that dynamism.⁵³ This functional conception relies on two notions: persistence and action. One could add, action *for the sake of* persistence. Persistence in time means persistence *of* the continuity of the past *in* the present. That is, persistence has to be understood as that which is *for the sake of* existence.

On several occasions, Bergson called this active dynamism "progress". He used the term in his first essay onwards. It became one of his most used *mantras*: "We have to do here not with an object, but with a progress".⁵⁴ He repeated in similar forms that substances should actually be called progresses, since they are continually changing. Thus, our self is a progress

⁴⁷ Russell, Bertrand. Chapter 28. "Bergson" in *The history of Western philosophy*. Routledge, London, 2004, and Garrigou-Lagrange, Réginald. *Le réalisme du principe de finalité*. [*El realismo del principio de finalidad*] Trans. Joaquín Ferrandis. Desclée de Brouwer, Madrid, 1949. See the First Part, "The being, the becoming and the finality". These two books were published for the first time in 1946 and 1949, respectively.

⁴⁸ On "temporalism" Bergson refers also Heraclitus. Letter of 4 juillet 1911 to Lovejoy. Bergson, Henri. *Écrits philosophiques*, PUF, Paris, 2011, p. 405.

⁴⁹ PM, Notes, 2012, p. 442.

⁵⁰ "La philosophie bergsonienne" published by Jacques Maritain in *Études critiques* in 1913. Apparently, according to Fruteau de Laclos the article appeared in 1903. Notice that Bergson's note was added in 1934. That is, 31 years after. A pretty long period for a response.

⁵¹ Footnote 19. PM, p. 304.

⁵² Footnote 23. PM, p. 304, italics are mine.

⁵³ I take the expression from Lacey. "He [Bergson] seems to want the more moderate flux doctrine that everything is always changing in certain respects—certain definite respects, not just that everything is always changing in at least one respect". Lacey, R. *Bergson*. Routledge, London, 1989, p. 110.

⁵⁴ DI, p. 111.

in constant change. He also describes the tendency of the spirit to move throughout the brain and body for the sake of efficiency as a progress. Individual beings, substances, can also be progress.⁵⁵ And there is in Bergson the idea of common change towards better new stages in life and in cultures. That is the genuine idea of progress.

In DI, when Bergson is talking about the continuum of duration of the human soul, he seems to talk about an a-teleological stream. Especially in DI.II, duration seems to be just a flux of time. However, even there I find one hint of perfectiveness. Among the different features of human consciousness, Bergson emphasizes irreversibility and a tendency toward maturity. This is surely clearer in the third chapter. Only DI.III (the last chapter of the essay) shows what is the goal of this irreversible progress: freedom. Even in DI it can be deduced that maturity and personal growth are meant to be the flourishing point of the process. The idea of pure becoming does not fit in my view with the whole scheme of DI. It is true, on the other hand, that Bergson emphasizes throughout the text, and specially in DI.II, the idea of progress in the sense of pure becoming. Bergson keeps using the term progress in MM, and EC, and DS, for other purposes. In those essays, this term implies efficiency or growth toward some better stage. Progress is most of the times a teleological notion in Bergson.⁵⁶ His dynamic vision of reality does not entail an evanescent flux of pure becoming, but a teleological progress.⁵⁷

In general, progress is a directed movement. Progressive vision of movement presupposes an optimistic vision of natural movements, since progress is meant to be *for the better*. In this sense, progress has to do with the notion of the good, the end, perfection, and completeness. In Bergson there is progress everywhere. Something with no efficiency is unnatural, since being and functioning is the same thing.

In Bergson's view, "that which does nothing is nothing" ("ce qui ne fait rien n'est rien").⁵⁸ Things are not mere objects, static structures. They are constantly changing. They are progressing. This progress has some direction, according to Bergson. This direction is efficacy or function. All throughout Bergson's works, progress goes hand in hand with another concept which is significantly teleological. This concept is that of 'destination'. 'Destination of the body', 'destination of the soul', 'destination of laughter', 'destination of life' are some of his concepts. I examine their meaning in 4.1.

In Bergson we also find a clear hierarchy of beings, suggested by a number of claims in his texts. Despite his many concerns regarding physics, I would say that he was mainly focused on biology and anthropology.⁵⁹ The theory of action and substances has to be understood regarding biological and ethical beings, which are their paradigm. He considered the biological world as a hierarchy: amoebas, humans, dogs, Cambrian animals, wolves, Hymenopterans, carnivorous plants are considered in different degrees from the bottom to the top. So, while they are alive, as an individual or as species, they persist on earth. While they occupy different levels of the general scale, they are more or less perfect. There are thus

⁵⁵ For another approach to Bergson and substances: Waszkinel, Romuald et Hejno, Eugeniusz. "L'inspiration aristotélicienne de la métaphysique de Bergson". *Revue Philosophique de Louvain*. vol. 89, n°82, 1991

⁵⁶ Against my interpretation of progress A. François in Note 12 to the first chapter of EC. EC, 2009, p. 396.

⁵⁷ For the opposite view of "progress" in Bergson, Arnaud François in EC, 2007, note 12, p. 396.

⁵⁸ "In such a doctrine, time is still spoken of: one pronounces the word, but one does not think of the thing. For time is here deprived of efficacy, and if it *does* nothing, it *is* nothing" EC, p. 39.

⁵⁹ I would say that both material elements and artifacts occupy the lower status on that natural scale he held.

different levels of persistence, which Bergson understands in hierarchical terms. Again, there are no evanescent fluxes of pure becoming and nature can be rationalized.

At some point, around 1900, Bergson becomes an evolutionary thinker, but he remained strongly hierarchical in his view of nature. He reintegrates hierarchy together with change or evolution. In historical evolutionary terms, this hierarchy can be found in the progress from plants to animals, and that from animals to humans. In DS he does not believe those humans described at the time as primitives are by nature biologically inferior to modern citizens (and he emphasized that), but he believed that societies or cultures in history should be understood according to the biological scale of perfection. Industrial democracy is ranked on the top of the scale, and the primitive societies reported by Lévy-Bruhl or Durkheim stand at the lowest end. On the other hand, he saw a clear, but peculiar, continuity between the prehistoric hatchets discovered in Moulin-Quignon, in the 19th century, and the machine Newcomen. Each epoch fits into one hierarchical category. Despite his democratic approach to the human being, it is a matter of fact that he establishes a sharp natural distinction among humans: on one hand, there is the regular human, on the other, the spiritual genius. His anthropology and sociology cannot be understood without this distinction. It seems to me that he inherited it from his milieu in that century. Socrates, Christ, Jean of Arch, Shakespeare, San Juan de la Cruz or Rousseau all have by nature a specific task to fulfill within societies: they create the future and we, regular people, imitate them. This is Bergson's historical view, according to which the genius creates newness, we transform it in habit, and ultimately the newness is lost again.

On one hand, we have seen that, for Bergson, everything has a specific action, and there is a plurality of actions. On the other hand, there is a hierarchy of those active beings. This means both that all living beings are meant to fulfill some function and that there is a scale of activities and living beings.

1.1.b. Bergson criticizes finalism

With the foregoing in mind, I will now highlight Bergson's critiques of finalism. Afterwards, I will address the scholarly commentaries on Bergson. They are representative of the usual reading of Bergson regarding this topic. Since the discussion of teleology appears exclusively in EC.I and II, his position and the commentaries are addressed exclusively to transgressive global teleology and not conservative individual teleology. This is important, since only one part of my claims have been discussed openly by Bergson and, subsequently, his commentators. Note that my interpretation in 1.1 and 1.2 regarding the idea of critique and reform of finalism has to be addressed to global transgressive teleology, and not to conservative teleology. I claim that Bergson also was a reformer of the latter, and as far as I can tell, other commentators haven't held this opinion.

In 1.1 and 1.2, global transgressive teleology—or, in other words, the *élan vital*—will attract almost all our attention, given its importance for the usual interpretations of Bergson in this regard, which is the focus of this section. The concrete context is thus exclusively global teleology and evolution.

The question is whether the *élan vital* is a version of finalism or whether it is ultimately incompatible with finalism. According to a number of scholars in EC.I and II, Bergson rejects finalism, in the name of his own position. There, Bergson criticizes modern mechanism and any type of finalism or teleology. These scholars hold that Bergson's position stands

equidistantly from the positions of philosophical mechanism (his lifelong enemy) and global finalism, a *masked* global mechanism. On this view, Bergson's views are just alien to teleology. For Bergson, as Jankélévich points out, finalism is an "insincere defender of life".⁶⁰ General accounts agree on this, such as Jankélévich's, Troitignon's, or more recently Pearson's. According to them, the Bergsonian vision of evolution is just *different* from global teleology. Bergson's vital impulse is just Bergsonism, an original point of view, and the two other "isms" are *equally alien* to it. Even the title of the first chapter of the text leads us to think that this is correct: "The Evolution of Life: Mechanism and Finalism". This "and" is thus a geometrical midterm.

Thus, the label "finalism" cannot be applied to the author of EC. Therefore, Bergson's idea of *élan vital* or of psychological agency among insects in EC.II have then *nothing to do* with matter, atoms and inertial causal laws (mechanism). *Equally*, they have *nothing to do* with perfectiveness, general progress and the analogy between human consciousness and natural entities (teleology). Life, then, is sheer spontaneity with neither direction nor order. *Directedness is not compatible with freedom and contingency*. Moreover, Bergson's method has nothing to do with finalism, and it is just his own method, based on *intuition* and *sympathy*. Such are the upshots of this interpretation.

In my view, this frequent interpretation of the book is not just obscure, but inconsistent. It is rooted in Bergson's eventual ambivalence regarding the topic.⁶¹ In light of this, I will now check the precise texts in which Bergson attacks finalism or teleology and I will address his claims.

- Critique of fatalism.

The main passage on the topic of fatalism is the following. If everything is directed towards something, then there is no room in nature for contingency and, thus, for human freedom.

"Finalism *thus understood* is only *inverted mechanism*. It springs from the same *postulate*, with this sole difference, that in the movement of our finite intellects along successive things, whose successiveness is reduced to a mere appearance, it holds in front of us the light with which it claims to guide us, instead of putting it behind. *It substitutes the attraction of the future for the impulsion of the past*" (EC, pp. 37-38, italics are mine).

EC was published in the years of the "eclipse of Darwinism".⁶² Primarily, the book attacks the positivist and scientific conception of life itself and evolution: i.e., mechanism. According to Spencer, who represents the "false evolutionism"⁶³, Charles Darwin and Thomas Huxley conceive living beings as mechanisms, that is, part of a great mechanism, composed by matter. Bergson says:

"But if there is nothing unforeseen, no invention or creation in the universe, time is useless again. As in the mechanistic hypothesis, here again it is supposed that *all is given*".⁶⁴

⁶⁰ Jankélévich, Vladimir. *Henri Bergson*. PUF, Paris, 2008, p. 133.

⁶¹ Lacey, R. *Bergson*. Op. cit, p. 183.

⁶² Bowler, Peter. *The eclipse of Darwinism: anti-Darwinian evolution theories in the decades around 1900*. Baltimore: Johns Hopkins, 2006.

⁶³ EC, p.xiii.

⁶⁴ EC, pp. 37-38.

“All is given” is the mechanistic “postulate” referred to in the previous text above. The philosophers and biologists, in Bergson’s opinion, conceive living beings as physical matter. That is, an elementary substance, decomposable into atoms, moved basically by inertial forces of causality. This point of view posits a continual passivity in the cosmos and, in Bergson’s opinion, also denies the possibility of *real change*. Everything is pre-designed in the constitution of matter, so change does not actually occur. Therefore, thanks to this view, we humans tend to disregard the immediate data of our life: the pure progress or pure change of the deep self. The mechanistic view clashes with human consciousness, and the problem of change is close to the problem of freedom. The “all is given” assumption leads to serious problems according to Bergson. Quite temerarily, I would say, Bergson extends the “all is given” point of view to philosophers of evolution and also mere biologists of different kinds.

At this point, one might ask where exactly Darwin says that the cosmos is matter in which all is given, and that every living being is a mechanism. Very opportunely, Bergson finds a quotation by the Darwinian Thomas Huxley, sometimes known as “Darwin’s bulldog”:

“If the fundamental proposition of evolution is true, that the entire world, living and not living, is the result of the mutual interaction, according to definite laws, of the forces possessed by the molecules of which the primitive nebulousness of the universe was composed, it is no less certain that the existing world lay, potentially, in the cosmic vapor, and that a *sufficient intellect* could, from a knowledge of the properties of the molecules of that vapor, have predicted, say the state of the Fauna of Great Britain in 1869, with as much certainty as one can say what will happen to the vapor of the breath in a cold winter's day”.⁶⁵

According to Bergson, the mentioned “sufficient intellect” is a 19th century version of “Laplace’s demon”.⁶⁶ The demon is, in Bergson’s insight, the great paradigm, moreover the *myth* of science. Laplace’s demon is “a superhuman intellect [that] could calculate, for any moment of time, the position of any point of the system in space. And as there is nothing more in the form of the whole than the arrangement of its parts, the future forms of the system are theoretically visible in its present configuration”.⁶⁷ By this “sufficient intellect”, Huxley is then included in the lineage of philosophers of mechanism, which ultimately includes the various classical approaches to evolution, Spencer and Darwin among them.

In Bergson’s opinion, positivism and science tend to think that the “... living body might be treated by some superhuman calculator in the same mathematical way as our solar system, this has gradually arisen from a metaphysic which has taken a more precise form since the physical discoveries of Galileo”.⁶⁸ Thus, Bergson holds that the mechanistic view leads to fatalism. Evolutionary theories are, in general, mechanistic. Evolutionary biologists such as Huxley and evolutionary philosophers such as Spencer tend to elaborate a fatalist doctrine. Bergson considers it a “false evolutionism”.

Up until now, we have seen the context of EC. With regard to his criticism of teleology, on the other hand, Bergson holds that it can lead to fatalism. General teleology, considered as a

⁶⁵ EC, p. 38, italics are mine.

⁶⁶ Notice that the historian of biology Sober considers that Darwin can also be related to Laplace’s deterministic paradigm. Sober, Elliot. “Metaphysical and epistemological issues” in *The Cambridge Companion to Darwin*. Ed. Jonathan Hodge and Gregory Radick, Cambridge, pp. 269-270.

⁶⁷ EC, p. 7.

⁶⁸ EC, p. 20.

cosmic program of God, is what Bergson considers “radical teleology” and it is represented by Leibniz, who, in Bergson’s opinion, did not make room for real freedom.⁶⁹

If we go back to the first quotation of the section, a quotation underlined by many scholars, we see that he is exclusively referring to teleology qua fatalism. As we saw, Bergson writes: “Finalism *thus understood* is only inverted mechanism”. He is actually referring to the sentences immediately preceding that one:

“(…) radical finalism is quite as unacceptable [as mechanism], and for the same reason. The doctrine of teleology, *in its extreme form*, as we find it in Leibniz for example, implies that things and beings merely realize a program previously arranged. But if there is nothing unforeseen, no invention or creation in the universe, time is useless again. As in the mechanistic hypothesis, here again it is supposed that *all is given*”.⁷⁰

The lineage of thinkers who endorse the “all is given” claim becomes even broader now: Leibniz-Laplace-Spencer-Darwin-Huxley. Before Laplace, we had fatalist theology. Afterwards we have fatalist biology. Huxley represents the mechanistic view of the universe, in which all is given. Leibniz represents the finalistic account of the universe in which all is given. Huxley inverts Leibniz’s attraction to some already finished program, made by god, with the impulsion of a material world, devoid of god.

Leibniz’s finalism, “thus understood”, is, as we have seen, an “extreme form” of finalism. The “inverted mechanism” label is regularly stressed by Bergson’s commentators, but it is clearly applied to Leibniz, in the framework of an extrinsic and transcendent vision of teleology. Finalism is not *always* “inverted mechanism” but only “*thus understood*”. Bergson is here referring to Leibnizian nature understood as a “plan of god”.

This is the main feature for Bergson’s most common anti-teleologist characterization. According to this scholarly reading, in Bergson there are not natural goals, since they constrain real becoming, since they imply that all is given. In my view this doesn’t prove anything other than the fact that Bergson rejects extrinsic teleology, whereby God governs the world by imposing a rigid order on the material becoming.

This shows that Bergson, like Aristotle, does not believe in a providential teleology, but in an immanent one. This also shows that in Bergson’s interpretation, there is a philosophical genealogy that roots materialism within mechanical theology. Leibniz’s theological vision leads to fatalism. Equally, Spencer’s materialistic account of evolution leads to fatalism. Between them there is Laplace, who is the founder of the myth of science: the demon. Laplace’s demon, naturally, leads to fatalism. Thus, *if* teleology leads to fatalism, *then* it is indeed a reverted mechanism.

Throughout his works, fatalism is the main focus of his worries, even at the very beginning of his work.⁷¹ Bergson’s main concern is to distinguish the general tendency toward perfection that he calls *élan vital* from fatalism. Bergson considers that teleology, understood as providentialist philosophical fatalism, has “humiliated” mankind. He says this in a short text called “The possible and the real”, which deals again with the topic of global teleology:

⁶⁹ Bergson offered previously one more nuanced view of Leibniz and teleology in 7th and 14th of April, in 1905. Bergson, Henri. *L’évolution du problème de la liberté. Course au Collège de France 1904-1905*. PUF, Paris, 2017.

⁷⁰ EC, p. 39. The first emphasis is mine.

⁷¹ EL.

“Humbled heretofore in an attitude of obedience, slaves of certain vaguely-felt natural necessities, we shall once more stand erect, masters associated with a greater Master”.⁷²

- Critique of anthropomorphism

In EC we also have a critique of the finalistic method. It consists in extrapolating structural features from the intentional and rational mind to unconscious nature. Bergson is then criticizing “finalism” as an illusion based on our intellectual experience of nature. The name Leibniz is not mentioned here and it seems that this criticism can be applied to many finalist philosophers apart from Leibniz. Bergson is criticizing the finalist’s method: anthropomorphism.

“The error of radical finalism, as also that of radical mechanism, is *to extend too far the application of certain concepts that are natural to our intellect*. Originally, we think only in order to act. Our intellect has been cast in the mold of action. Speculation is a luxury, while action is a necessity. Now, in order to act, we begin by proposing an end; we make a plan, then we go on to the detail of the mechanism which will bring it to pass. This latter operation is possible only if we know what we can reckon on. We must therefore have managed to extract resemblances from nature, which enable us to anticipate the future. (...) We are born artisans as we are born geometricians, and indeed we are geometricians only because we are artisans. Thus the human intellect, inasmuch as it is fashioned for the needs of human action, is an intellect which proceeds at the same time by intention and by calculation, *by adapting means to ends and by thinking out mechanisms of more and more geometrical form*. Whether nature be conceived as an immense machine regulated by mathematical laws, or as the realization of a plan, these two ways of regarding it are only the consummation of two tendencies of mind which are complementary to each other, and which have their origin in the same vital necessities. For that reason, radical finalism is very near radical mechanism on many points. Both doctrines are reluctant to see in the course of things generally, or even simply in the development of life, an unforeseeable creation of form”.⁷³

This passage is to be understood as complementary to the previous one. It can be conceived as a confirmation of the first critique regarding fatalism. In short, the analogical method leads to fatalism. Our need to foresee, our project of controlling the environment, is the origin of the problematic assumptions. The text shows the empirical basis of the illusion of finalism.

We can ask, then, whether Bergson is against the extrapolation of mind to nature. We can wonder whether Bergson, like other philosophers, thought that the analogy between humans and the natural world is illegitimate. This rejection cannot be possible. This is obvious, since Bergson constantly proposes the analogy between the human mind and life. He even talks about consciousness and consciousness in general. “The first chapter [of EC] it is structured around a vast analogy” says Arnaud François.⁷⁴ I believe that is the case. The book would not propose to criticize analogies in general then. The critique consists in two ideas.

First, the difference stated in the text between luxury and necessity has to be considered. That is the sense of the two sorts of teleology I will develop. The artisan, the geometer, and the intellect are linked together as adaptation, and adaptation is necessity and action. That is one kind of progress. The structural basis of the technician, the thinker, and the adapted are basically the same type of tendency. On the contrary, speculation, luxury and the “unforeseeable creation of form” are left aside. They seem to be apart from action itself. They

⁷² PM, pp. 123-124.

⁷³ EC, 44-45, italics are mine.

⁷⁴ François, Arnaud. “Commentaire”, *L'évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010, p. 17.

seem not to be needed for the sake of adaptation, they are better understood as a surplus. We can see here two types of conscious experience: one is derived from action and the other is not.

At the same time, there is in EC a critique of a certain kind of anthropomorphism, related to “radical finalism”, although the method described could fit well within different kinds of finalist methods. But the possibility of establishing analogies between consciousness and nature can’t be attacked, since the whole book relies upon a vast analogy. I will show examples of this in 3.1.

Here Bergson is saying that the “unforeseeable creation of form” and the work of an artisan are *not* the same thing. Also, he is saying that if there is luxury in nature, it is not for the sake of adaptation. The analogy does not grasp the central aspect of creation. Thus, in this text, Bergson is *restricting the use of the analogy*. If we read the passage closely we can conclude that he is merely saying that nature, understood as a whole, does not function according to intellectual and technical plans. He is saying that not *every analogy* is correct.

Analogy can be used, but they cannot be used ever. Thus, Bergson believes that finalism can be rigorous but is a matter of fact that *many times* is not.

Fatalism and anthropomorphism are just examples of a *dysfunctional* finalism. The first one constrains the real immanent change in nature. The second proposes an incorrect analogy between mind and nature. I think this idea is well expressed in this text:

“But, if the evolution of life is something other than a series of adaptations to accidental circumstances [mechanism], so also it is not the realization of a plan [finalism]. A plan is given in advance. It is represented, or at least representable, before its realization. The complete execution of it may be put off to a distant future, or even indefinitely; but the idea is none the less formulable at the present time, in terms actually given. If, on the contrary, evolution is a creation unceasingly renewed, it creates, as it goes on, not only the forms of life, but the ideas that will enable the intellect to understand it, the terms which will serve to express it. That is to say that its future overflows its present, and can not be sketched out therein in an idea”.⁷⁵

The previous passages came from the first chapter of EC; in the subsequent excerpts the notion of “radical finalism” has disappeared. In EC.II, entitled “The divergent directions of the evolution of life, torpor, intelligence, instinct” Bergson talks plainly about “finalism”. Bergson’s criticism becomes more extended, it seems. One can think whether the second approach does or does not look like an exclusive reference to “radical finalism”. It seems that the critique has expanded to any kind of finalism. It is difficult, however, to specify whom exactly Bergson is referring to in the previous passages, as well as the following ones. He seems, again, to be comparing finalism to mechanism. For example:

“This favor the finalists consider as dispensed to them all at once, by the final cause; the mechanists claim to obtain it little by little, by the effect of natural selection”.⁷⁶

Thus, as I said, he seems to still be referring exclusively to Leibniz, although the term does not include the adjective “radical”.

⁷⁵ EC, p. 103.

⁷⁶ EC, p. 95.

- Critique of the illusion of harmony

In the above passage on the “plan”, Bergson talks about the delusional analogy of extrapolating rational characteristics to nature as a whole. Nature is not intelligent and, therefore, it has no plans. Saying that it has plans would be anthropomorphism and Bergson would not support it. “There is the first error of finalism,” he says. “It involves another, yet more serious.”⁷⁷ This *seriousness* comes from the vision of nature we should have if we considered nature as an intelligent designer.

I will divide the text into three parts. In the first part, Bergson raises an empirical critique of the idea of ‘plan’.

“If life realizes a plan, it ought to manifest a *greater harmony* the further it advances, just as the house shows better and better the idea of the architect as stone is set upon stone. If, on the contrary, the unity of life is to be found solely in the impetus that pushes it along the road of time, the harmony is not in front, but behind”.⁷⁸

Surely still thinking about Leibniz, Bergson states that there is no manifestation of harmony in nature. He is not talking now about adaptation, but about evolution. The history of evolution is something disordered. At the same time, he concedes a sort of unity. Every living being is part of that unity. Thus, life, considered as a unity, is one substance composed of many parts.

There is not an ordered tendency in evolution. Harmony is thus related to that original oneness. The tendency of the process is not harmonious in itself, since there is no “greater harmony the further it advances”. Here he elaborates on this idea.

“The unity is derived from a *vis a tergo*: it is given at the start as an impulsion, not placed at the end as an attraction. In communicating itself, the impetus splits up more and more. Life, in proportion to its progress, is scattered in manifestations which undoubtedly owe to their common origin the fact that they are *complementary* to each other in certain aspects, but which are none the less mutually incompatible and *antagonistic*. *So the discord between species will go on increasing*. Indeed, we have as yet only indicated the essential cause of it. We have supposed, for the sake of simplicity, that each species received the impulsion in order to pass it on to others, and that, in every direction in which life evolves, the propagation is in a straight line. But, as *a matter of fact*, there are species which are arrested; there are some that retrogress. *Evolution is not only a movement forward*; in many cases we observe a marking-time, and still more often a deviation or turning back. It must be so, as we shall show further on, and the same causes that divide the evolution movement often cause life to be diverted from itself, hypnotized by the form it has just brought forth. Thence results an increasing disorder”.⁷⁹

Thus, “complementarity” is *the finalistic feature*. Antagonism is the *non-finalistic* one. According to Bergson, harmony is not the essential element in evolution, but, on the contrary, disorder is. There is, in Bergson’s opinion, an “increasing disorder” in spite of the important deal of complementarity. For this author that is a matter of fact. Apart from that, there is something important and new in Bergson’s insight. The idea of divergence, later called “dichotomy” in DS. Bergson writes in this text: “the same causes that divide the evolution movement often cause life to be diverted from itself, hypnotized by the form it has just

⁷⁷ EC, p. 103.

⁷⁸ EC, p. 103, italics are mine.

⁷⁹ EC, p. 104-105.

brought forth”. This means that there is a plurality, and new goals arise. There is, then, no one line of evolution or “unilinearity”. Evolution itself is a tree of divergent branches. The involution of certain species is a “matter of fact” and the “deviation” of certain branches from the tendency towards perfection is something, he claims, we can “observe”. That is said as something discovered by science, something undeniable in 1900’s. Further on he also claims:

“But one of the clearest results of biology has been to show that evolution has taken place along divergent lines”.⁸⁰

We now reach an important section. In this long passage, the author nuances his general idea regarding evolution:

“The philosopher, who begins by laying down as a principle that each detail is connected with some *general plan of the whole*, goes from one disappointment to another as soon as he comes to *examine the facts*; and, as he had put everything in the same rank, he finds that, as the result of not allowing for accident, he must regard everything as accidental. For accident, then, an allowance must first be made, and a very liberal allowance. We must recognize that *all* is not coherent in nature. By so doing, we shall be led to ascertain the centers around which the incoherence crystallizes. This crystallization itself will clarify the rest; the main directions will appear, in which life is moving whilst developing the original impulse. True, we shall not witness the detailed accomplishment of a plan. *Nature is more and better than a plan in course of realization. A plan is a term assigned to a labor: it closes the future whose form it indicates.* Before the evolution of life, on the contrary, the portals of the future remain wide open. It is a creation that goes on for ever in virtue of an initial movement. *This movement constitutes the unity of the organized world—a prolific unity, of an infinite richness, superior to any that the intellect could dream of, for the intellect is only one of its aspects or products*”.⁸¹

The “facts”, he claims, just deny the idea of a general plan. At the same time, there is an original impulsion or progress. Progress implies perfection. Since it is original, we can say it is natural. There is a natural tendency towards perfection. But its model is not the plan-model.

“Nature”, I quoted “is more and better than a plan in course of realization. A plan is a term assigned to a labor: it closes the future whose form it indicates. Before the evolution of life, on the contrary, the portals of the future remain wide open”. In my opinion, here Bergson is saying that intellect imitates nature. In addition, he is implying that every analogy between mind and nature may not work. It is a matter of perfection. The goal directed activity of the artisan is not the most perfect feature of humans. This means that the teleological model *is not sufficiently perfect*. “Nature is more and better than a plan in course of realization”. This affirms that we should use another model according to its perfection.

He also thinks that there is something such as wholeness. But his problem is that harmony is not the term to express it. There is unity, in his view, but not harmony. He talks about the tendency towards perfection, about progress. “This movement constitutes the unity of the organized world”.

These passages give a name to fatalism and anthropomorphism regarding evolution: retrospective illusion. They also construct a sort of Bergsonian positive theory around some data from science. The origin of life and its divergence—that is, the Darwinian “tree of

⁸⁰ EC, p. 174.

⁸¹ EC, pp. 104-105.

life”—confronts global teleology. This “general form” of evolution in time shouldn’t be considered harmony.

Regarding Bergson’s criticism, it is important to recall two other important texts, dealt with on occasion by commentators. They deal with the same questions as EC.I and II, but in short extension.

- The possible and the “freedom of the world”

First, there is the article “The possible and the real”, in PM. In this text, the “possible” is, so to speak, the future form of the “real”, and according to Bergson the concept of the possible is an “illusion”. In his view, philosophers have privileged the “future” over the present. That turns back into the question of teleology, prediction, and the lack of freedom. Although in the text he talks about personal freedom, he finally reaches the question of global evolution. Over one paragraph he addresses same question of EC.I and II.

“If we put the possible back into its proper place, evolution becomes something quite different from the realisation of a program: *the gates of the future open wide*; freedom is offered an unlimited field. The fault of those doctrines, rare indeed in the history of philosophy, which have succeeded in leaving room for indetermination and freedom *in the world*, is to have failed to see what their affirmation implied. When they spoke of indetermination, of freedom, they meant by indetermination *a competition between possibles*, by freedom a choice between possibles, as if possibility was not *created by freedom itself*! As if any other hypothesis, by affirming an ideal pre-existence of the possible to the real, did not reduce the new to a mere rearrangement of former elements! As if it were not thus to be led sooner or later to regard that rearrangement as calculable and foreseeable! By accepting the premiss of the contrary theory one was letting the enemy in. We must resign ourselves to the inevitable: *it is the real which makes itself possible, and not the possible which becomes real*”.⁸²

Fatalism, from 1.1.b.1, is found here, as is the illusion, 1.1.b.3, and the idea of contingency, implied in divergence. The future has to be “open”. The implied assumption is this: the future has to be open, for human beings are free.

- Between Lamarck and Darwin

In his non-teleological account of EC.I and II, Pearson recalls one letter from Bergson to F. Delattre. It dates back to December 1935, so almost 30 years after the publication of EC. Bergson responds to a letter by Delattre in which EC’s *élan* is compared with the “life-force” of the anti-Darwinian Samuel Butler. This force is an impetus that works teleologically throughout evolution. Butler is then understood as a follower of global teleology. Bergson denies sharply the kinship between his notion of “*élan vital*” and Butler’s “life-force”: “... Butler (...) denies Darwin’s position and supports Lamarck’s one. But to do philosophy is to create the position of the problem and to create the solution”.⁸³

Lamarck is here understood as a finalist author. Darwin, according to this distinction, is understood as a mechanistic author. So, Lamarck is situated beside Butler, for both describe nature, and, namely, biology, as a spontaneous tendency towards perfection. Contrarily, Darwin is conceived as a materialistic author, according to which everything is inertia and

⁸² PR, in PM, p. 122, italics are mine.

⁸³ Bergson, Henri. *Mélanges*, PUF, Paris,1972, p. 1528.

causality. In this text, Bergson seems to affirm that his global account of Life is alien to both mechanism and finalism *equally*. This may reinforce the main anti-teleological reading.

When Bergson refers to mechanism and finalism he affirms:

“I don’t accept both of these points of view, which correspond to concepts made by human spirit not for the sake of an explanation of life. One has to place somewhere between the two concepts. How can determinate the place?”⁸⁴

This letter also gives a response to this “place”:

“... if there is finality in evolution, it is not in the sense that the philosophical tradition has given to the word ‘teleology’, but in a different and *new sense*, that biology and philosophy have to create, none of the ancient concepts can define it”.⁸⁵

This last passage is relevant for us. We have a word (“teleology”) and we have a “new sense”. Scientific biology has to give the data to philosophy and philosophy has to erect the doctrine. Also, we have the word “if”, at the beginning. The ancient notion of finalism or teleology is not useful.

- Scholarly interpretations

Based on these passages, the so-called regular reading concludes that for Bergson “finalism is not an alternative to mechanism, but only its inverted image”.⁸⁶ This idea of the inverted or reverted mechanism is conclusive for the anti-teleological reading of Bergson.

The book “Responses to evolution”, written by M. Vaughan, K-A Pearson and P. A. Miquel, is representative of this position. In their vision, EC.I and II, Bergson *rejects* “both mechanism and finalism”.⁸⁷ And when it comes to the moment in EC in which Bergson talks about the “signification” of evolution, he is not, they affirm, “reintroducing teleology or anthropomorphism”.⁸⁸ Shortly afterwards, they said that Bergson “is not reintroducing teleology when he locates man as the ‘end’ of evolution”.⁸⁹ In their view, “exigency of creation”⁹⁰ is that which moves the vital global impulse. It is strictly unpredictable, and, thus, the place of man in the cosmos is due sheerly to a-teleological creation. For these authors teleology implies anthropomorphism and anthropocentrism.

The non-teleological contemporary readers defend the view that in Bergson’s vision of biological evolution there is neither global teleology nor historical progress since every

⁸⁴ Ibid., p. 1526.

⁸⁵ Ibid, p. 1524.

⁸⁶ Marrati, Paola. “Time, life, concepts: the newness of Bergson”. Vol. 120. n°5. The John Hopkins University Press, 2005, p. 1105.

⁸⁷ Vaughan, M, Pearson KA and Miquel, P-A. “Responses to evolution”. *Bergsonism, phenomenology and responses to modern science*. Ed. Keith-Ansell Pearson and Alan Schrift. Routledge, London, 2010, p. 354

⁸⁸ Ibid, p. 360.

⁸⁹ Ibid., p. 360.

⁹⁰ Ibid.

process of development is led to divergence in the two branches.⁹¹ I recall 1.1.b.3. This means, again, “refusal of mechanism and finalism”.⁹²

In my vision, none of these insightful readings demonstrate necessarily that, in terms of the global understanding of evolution and the place of the human being in the cosmos, Bergson was not a teleologist. But it is certain that Bergson saw a problem in global teleology and finalism. It is clear that he rejected certain aspects of finalism. As I show in the next section, 1.2, these statements have to be understood in a larger framework.

In the last subsections we have seen that global teleology or finalism was a real philosophical problem from 1907 to 1935, in Bergson’s framework. My claim is that it was part of his approach from much earlier. I would like to recall the only writings specifically devoted to our subject and their conclusions. It is not, however, a large set of publications.

In the 30’s one monograph on finalism and Bergson was published: *La finalité morale dans le bergsonisme*.⁹³ To my knowledge, this is the first and the last monograph on this subject addressing Bergson. It is a book on practical finalism, regarding exclusively human actions in the context of his first book, DI. E. Rolland, the author, states that the theory of freedom developed there is not a theory of freedom, but of spontaneity. That is, morals and virtues are not the concern here, but unpredictability or indetermination.⁹⁴ Rolland considers that the Bergsonian position is a kind of finalism that pretends to situate itself halfway between the “traditional integral finalism” and the “materializing mechanism”,⁹⁵ although Bergson stays closer to finalism.

I agree with this interpretation: Bergson keeps himself close enough to finalism in its basic conception of teleology in ethics. There is a eudaimonist context at stake and also irreversibility, which composes with freedom a perfectivist schema of human life. But none of these claims are openly stated. These are hints of what Bergson’s philosophy of nature, on analogies and functions, is going to be.

In the approach of DI ideas such as pure becoming and no teleological progress are more stressed than that of function, perfection or analogy. In short, his naturalistic approach is still to come in 1889. Rolland’s notes, however, that although Bergson does not mention Aristotle, he is an author towards whom Bergson “reacts” in his own theory of duration.⁹⁶ Although this approach is the only one that devotes a long extension to the subject, it remains inconclusive to me and I do not follow it. In my view, the moment in which Bergson starts to elaborate a teleology is when he starts a philosophy of nature, beyond his early phenomenological approach.

⁹¹“tendance est dissociée en deux, une tendance vers e bas et une tendance vers le haut, conscience et matière (...) aucune tendance jamais n’aboutira à sa fin”: “Creativité comme tendencialité”. Vollet, Matthias in *Bergson*, Ed. Camille Riquier. Cerf, Paris, 2012, p. 371.

⁹²“tendance est dissociée en deux, une tendance vers e bas et une tendance vers le haut, conscience et matière (...) aucune tendance jamais n’aboutira à sa fin”. Ibid, p. 371.

⁹³ Rolland, E. *La finalité morale dans le bergsonisme*. Gabriel Beauchesne et ses fils, Paris, 1937.

⁹⁴ Rolland, E. Op. cit., p. 145. The translation is mine. Also: *Bergson*, Soulez, Philippe and Worms, Frédéric. PUF, Paris, 2002, pp. 206-207.

⁹⁵Ibid., p. 27, and also p. 37: “c’est en réaction consciente contre la tendance aristotelicienne que c’est constitué le point de vue métaphysique de Bergson”.

⁹⁶ Ibid., p. 37: “c’est en réaction consciente contre la tendance aristotelicienne que s’est constitué le point de vue métaphysique de Bergson”.

As far as I am concerned, there are four published texts entirely focused on the question of natural finalism in Bergson. The four of them are exclusively focused on the first chapter of EC. That is, albeit focused on natural teleology in Bergson, these texts do not consider MM or LR as containing teleological approaches. DS is neither included in the analysis. These papers comment on Bergson's account of global evolutionary finalism.

The oldest of the articles I know about finalism and Bergson was written by Cunningham⁹⁷. It has to be said that it is not really a scholarly approach, but a polemic paper, published shortly after the publication of EC. The author denies the idea of creative evolution and, against it, defends a creative finalism. The latter is, in my opinion, closer to Bergson's opinion than Cunningham himself thinks.⁹⁸

Apart from this, two scholars have published three contributions to the topic recently. All of them are focused on the global evolutionary teleology, that is, on the *élan vital*. Pearson has written exclusively about this topic in two separate places,⁹⁹ and the third one has been written by Montebello.¹⁰⁰

Pearson considers that "in exposing the limits of mechanism Bergson does not go on to embrace a finalist position. He argues that finalism is merely an inverted mechanism that also reduces time to a process of realization".¹⁰¹ We have discussed the textual basis for such a claim just now. In this sense, Pearson follows a general assumption. Both, mechanism and finalism, are situated as extremes to the central position of Bergson. Both imply fatalism, an all-is-given world.

But some lines after, Pearson says "the only notion of finality Bergson will permit, *contra* Leibniz and Kant, is a strictly *external* finality".¹⁰² This is new for us. It means that "nature exists neither purely internal finality nor absolutely distinct individuality".¹⁰³ So, everything is coordinated but does not tend toward any pre-programmed goal. "The directionality and movement of life are not, however, to be understood in terms of a simple mechanical realization of pre-existing goals".¹⁰⁴ There are natural and non-mechanical tendencies for Bergson. These tendencies are external in one sense: they involve more than individuals. These tendencies go throughout groups of individuals. One can talk about Life emerging from individuals, according to this assumption.

⁹⁷Cunningham, G. W. "Bergson's conception of finality". *Philosophical Review* 23 (6), 1914.

⁹⁸ Against Bergson, Cunningham defends a "creative finalism", *Ibid.*, p. 662. There he is defending what I think we can really find in Bergson's account.

⁹⁹ Pearson, Keith-Ansell. "Bergson and creative evolution/involution: Exposing the transcendental illusion of organismic life" in *The new Bergson*. Ed. John Mullarkey. Manchester University Press, 1999 and "Chapter 3. Duration and evolution: the time of life" and "Chapter 5. The *élan vital* as an image of thought: Bergson and Kant on finality" in *Philosophy and the adventure of the virtual. Bergson and the time of life*. Routledge, London, 2002.

¹⁰⁰ Montebello. "La question du finalisme dans le premier chapitre de *L'évolution créatrice*" dans *Disseminations de L'évolution créatrice*. Ed. Shin Abiko, Isashi Fujita and Naoki Sugiyama. Hildesheim: G. Olms, 2012.

¹⁰¹ Pearson, Keith-Ansell. *Philosophy and the adventure of the virtual. Bergson and the time of life*. Op. cit., p. 80.

¹⁰² *Ibid.*

¹⁰³ *Ibid.*, p. 89.

¹⁰⁴ *Ibid.*, p. 80.

Pearson also refers to divergence in nature: “The evolution of life becomes intelligible when it is viewed in terms of the continuation of this impetus that has split up into divergent lines”,¹⁰⁵ and the idea of a “common impulsion, not common aspiration”.¹⁰⁶

If I have understood correctly, in Pearson’s view, the *élan vital* is a Kantian reflexive judgment. But against Kant, Bergson does not consider individual beings but Life in general. According to Pearson, the *élan vital* is a hypothesis of Life in general. By using an important statement, taken from a letter of 1835 to F. Delattre, Pearson considers the *élan* not a vitalistic Butlerian “life-force”, but a reflexive judgment or a sort of progress *as if*: the *élan* is an “image of thought”.¹⁰⁷

In Pearson’s view there is an “irreducible pluralism”¹⁰⁸ in nature and biology, so every hypothesis is just a hypothesis, and there are no trends which, so to speak, lead Life’s path through matter.

Pearson thinks that: “In Bergson’s model no dominant tendency within evolution can be identified”.¹⁰⁹ Pearson thinks that divergence of trends and contingency of the tendencies means just creation with no goal. And granting that, *if* there is no “dominant tendency” in evolution, all my claims about Bergson’s global teleology have to be dismissed. On the other hand, it is difficult for me to understand that “the only notion of finality” Bergson permits is “external finality”,¹¹⁰ whereas in the end, according to the same writing, there is no finality at all.

Montebello’s account also gives importance to the idea of external finalism, but he does not question that Bergson’s vision is realistic. The Kantian link is absent here. In Montebello, Bergson’s external finalism is real, constitutive and not reflexive.

The idea of complementariness in nature is emphasized in this account. Montebello stresses the unpredictability as an essential element of the Bergsonian conception of nature. Any kind of pre-programmed end in nature is an illusion, for the sake of unpredictability. Montebello says: “In Bergson the surprising double acceptance of a real finalism and external becomes a double rejection of intellectual finalism. The first type is translated to our living participation in the movement of life conceived as a whole, while the two other types of finalism translate a limitation of our life regarding an internal monadic life or its projection as an end of a planified general life”.¹¹¹ As Montebello affirms rightly, neither monads nor intellectual plans should be considered in Bergson’s framework. By admitting a real non-reflexive external drive Montebello may have admitted a certain general tendency towards something in nature. He does not clarify that, though. He merely stresses the element of commonality in Bergson’s vision of nature: everything is linked. This is *only one part* of what Bergson says.

I agree with Montebello in regard to these remarks, since I also think that Bergson’s vision of teleology is not reflexive, but realistic. It is not individual or monadic, but external. It is not

¹⁰⁵ Ibid., p. 81.

¹⁰⁶ Ibid., p. 94.

¹⁰⁷ Ibid., pp. 135-137.

¹⁰⁸ Ibid., p. 95.

¹⁰⁹ Ibid., p. 81.

¹¹⁰ Ibid., p. 80.

¹¹¹ Montebello, Pierre. *L’autre métaphysique. Essai sur Ravaisson, Tarde, Nietzsche et Bergson*. Les presses du réel, Dijon, 2003, p. 74.

theological, but natural. And he does reject the intellectual model regarding its finalistic proposal.

I disagree with Pearson when he states that: “In Bergson’s model no dominant tendency within evolution can be identified”. I will come back to this statement in 1.2. I have to say I am much closer to Pearson’s vision in 1999, more than ten years before the text I quoted, when he admitted a “residual perfectionism and anthropocentrism” in Bergson. This time, I would only question one word of the statement: I do not think it is “residual”, and I do not think that pluralism is threatened.

Pearson asks in the text: “but is he [Bergson] in danger of taking the invention of the form of man too seriously?”¹¹² Teleology and, specifically, anthropocentric teleology, seems to be something regrettable, something to be ashamed of. “*Undeniably*, he [Bergson] admits a certain finalism”, says one of the most brilliant recent commentators of the French philosopher, Riquier.¹¹³ Old commentators, like Tonquédec, Berthélot¹¹⁴, Lovejoy,¹¹⁵ Chevalier,¹¹⁶ or Le Roy,¹¹⁷ did not have so many problems with that.

However, I concede a certain “ambivalence” in Bergson regarding our subject, as Lacey says.¹¹⁸ In the only place where Bergson deals with this philosophical issue (EC) there is a lack of terminological stability. Sometimes he refers to teleology in a critical way, as we have seen in 1.1, and in other times he refers to it in a positive way, as I show in the next section. At one point, he also attributes some of his teleological terms to a “manner of speaking”.¹¹⁹ On the one hand, Bergson was not a systematic author, and on the other, this nominal ambivalence can be clarified from the context of the passages in the text.

1.2. ‘Creative evolution’ as a treatise on the reform of the concept of teleology

Bergson is certain that he is “not coming back to the old notion of finality”.¹²⁰ In this section I explain why EC is a reform of the notion of immanent teleology, regarding psychology, flexibility, effort and external finalism.

Bergson’s thought involves the *reform*, and *not* the destruction, of this “old notion of global teleology”. The early reader of EC, William James, observes that Bergson utilizes the concept of goal-directedness “within full rights” in a new vigorous form.¹²¹

¹¹² Pearson, Keith-Ansell. “Bergson and creative evolution/involution”. Op. cit, pp. 158-159.

¹¹³ Riquier, Camille. *Archéologie de Bergson*. Op. cit., p. 396, I translate Riquier. My emphasis.

¹¹⁴ Tonquédec, Joseph. “Comment interpréter l’ordre du monde?” in *Sur la philosophie bergsonienne*. Beauchesne, Paris, 1936.

¹¹⁵ Lovejoy, Arthur. *Bergson and romantic evolutionism*. UCP, California, 1914.

¹¹⁶ Chevalier, Jacques. *Bergson*. Plon, Paris, 1947.

¹¹⁷ Le Roy, Édouard. *Une philosophie nouvelle*. Félix Alcan, Paris, 1913.

¹¹⁸ Lacey, R. *Bergson*. Op. cit., p. 183. Like this author, I think that this teleological approach becomes even clearer in DS.

¹¹⁹ Three different moments in which he tries to avoid the term “finalism” are EC, p. 96-97, EC, p. 185 and EC, p. 265.

¹²⁰ EC, p. 96-97.

¹²¹ William James wrote to Bergson a letter on the 13th of June 1907: “Un des vos traits les plus heureux, ce me semble, est d’avoir réduit l’idée de ‘fin’ (dans son acception ordinaire) à la même condition que celle de la

Is time to read the textual evidence. In EC Bergson writes:

“... the philosophy of life to which we are leading (...) claims to transcend both mechanism and finalism; but, as we announced at the beginning, it is nearer the second doctrine than the first”.¹²²

It “transcends”, he says. I want to emphasize that Bergson is here talking about reform. He is trying to reform finalism, and not mechanism. In this sense he is not equally far from both. Now I quote both in English and in its original language two texts in which the idea of reform is much clearer.

“We must now show that if mechanism is insufficient to account for evolution, the way of proving this insufficiency is not to stop at the classic conception of finality, still less to contract or attenuate it, but, on the contrary, to *go further*”.¹²³

“Le moment est venu d’établir que, si le mécanisme ne suffit pas à rendre compte de l’évolution, le moyen de prouver cette insuffisance n’est pas de s’arrêter à la conception classique de la finalité, encore moins la rétrécir ou de l’atténuer, mais au contraire d’*aller plus loin qu’elle*”.¹²⁴

This sentence gives us a clear idea of the “reform” in a genuine sense. It is a reform, because it does not attempt to contract or attenuate the classic conception of finality, but to overcome it. It means that classic finalism is, according to Bergson, right from the start. But, apparently, it is necessary to apply its principles beyond its origins, whatever they are.

The next passage has to be read in accordance to the previous statement, since it completes it. It is also philosophically richer for us:

“[a]Yet finalism is not, like mechanism, a doctrine with fixed rigid outlines. It admits of as many inflections as we like. The mechanistic philosophy is to be taken or left: it must be left if the least grain of dust, by straying from the path foreseen by mechanics, should show the slightest trace of *spontaneity*. The doctrine of final causes, on the contrary, will never be definitively refuted. If one form of it be put aside, it will take another. [b] Its principle, which is essentially *psychological*, is very flexible. [c] It is so *extensible, and thereby so comprehensive, that one accepts something of it as soon as one rejects pure mechanism*. The theory we shall put forward in this book will therefore necessarily partake of finalism to a certain extent”.¹²⁵

“[a]Toutefois le finalisme n’est pas, comme le mécanisme, une doctrine aux lignes arrêtées. Il comporte autant d’infléchissements qu’on voudra lui en imprimer. (...) La doctrine des causes finales ne sera jamais réfutée définitivement. Si l’on en écarte une forme, elle en prendra une autre. [b] *Son principe, qui est d’essence psychologique, est très souple.* [c] Il est si *extensible, et par là même si large, qu’on en accepte quelque chose dès qu’on repousse le mécanisme pur*. La thèse que nous exposerons dans ce livre participera donc nécessairement du finalisme dans une certaine mesure”.¹²⁶

"cause efficiente": c'est la couple. Vous rétablissez dans ses droits une finalité à la fois plus vague et plus vivante..." Bergson, Henri. *Mélanges*. Op. cit, p. 725.

¹²² EC, p. 50. Also EC, pp. 54-55.

¹²³ EC, p. 53, italics are mine.

¹²⁴ EC, p. 42, italics are mine.

¹²⁵ EC, p. 40, italics and additions a and b are mine.

¹²⁶ EC, 2009, p. 40, italics are mine.

Just after conceding this point to finalism, Bergson adds: “For that reason it is important to intimate exactly what we are going to take from it, and what we mean to leave”.¹²⁷ In the end, I believe, he does not indicate *exactly* what is he going to take and what he means to leave, as he promises. Neither did he explain the differences between different types of finalism that one can find in his work. From now on, despite this absence in the text, in this section I show how Bergson addresses those items.

In [a] we saw that for Bergson the theory of final causes in nature is “irrefutable”. This major claim might shed light on any “ambivalence” in the text. If Leibniz’s philosophy is “radical finalism”, it is evident that here finalism and mechanism are opposed. Once one wants to speak against mechanism (for whom the world is a sum of atoms, moved by inertial forces), one automatically becomes a finalist. Bergson is here included in that list of opponents of mechanism. There is not equal distance between both trends.

In [b] we can see why: he thinks that there is a “psychological” essence in teleology. This is crucial for us too. In mechanism there is no appeal to psychology. Moreover, in his opinion, psychology is, for the mechanists, a sort of illusion. Atoms and inertia do not compose psychology. On the contrary, finalist thinkers put psychological features at the very center of the problem and they want to give an account of that. Human consciousness or psychology can extrapolate certain aspects of itself to the world: directedness, for instance. In this sense, Bergson is clearly a finalist thinker. After DI his books are rich in analogies. He wants to challenge the problem of anthropomorphism, although he criticized some forms of analogy (see 1.1). In [c] we find that analogy is impossible to avoid and also that finalism has many forms. It seems that he is referring to history of thought there. In [a] he refers to this idea: finalism admits many inflections. In [c] he adds extensibility and comprehension as some other features.

According to [a] and [b] Bergson considers himself a finalist thinker. We are in awe that in his letter to Delattre he considers that a philosopher has to re-create its own terms, but at the same time, finalism is for him “irrefutable”. [b] shows the extraordinary affinity between finalism and Bergsonism: mind, as we experience it, has to take part of the psychological account. If we want to think about evolution, we definitely have to make room for the mind, since “life is of the psychological order”.¹²⁸ Also, as we saw in the critical section above, it has to be done according to exigent paradigms. One cannot make, for instance, the analogy between an artisan and nature itself. [c] shows clearly that Bergson is aware of the many possibilities of teleological thought. He sees it as having no rigid limits [a] and doctrinally admits inflections [a], as he previously said. In [c] Bergson returns to that idea. Moreover, he stresses his positive acknowledgement of finalism and its possibilities, since he talks about extensibility and comprehension. [c] links this discourse with the until now vague idea of *going further*.

1.2.a. Psychology

Besides these two doctrinal teleological statements, the following passages clarify the project of *going further* beyond classical finalism. They illustrate Bergson’s position regarding psychology, perfection and regarding the extension of teleology.

¹²⁷ EC, p. 40.

¹²⁸ EC, p. 257.

The first one explains something of his conception of psychology noted in [b]. We will see what is his conception of “being flexible” and “comprehensive” is. Namely, the text reveals Bergson’s dialogue with one American neo-Lamarckian, Edward Cope, and the latter’s conception of “effort”. Bergson refers to the idea of the spontaneous effort for the sake of adaptation to certain habitats.

“For it is quite conceivable that the same effort to turn the same circumstances to good account might have the same result, especially if the problem put by the circumstances is such as to admit of only one solution. But the question remains, whether the term “effort” must not then be taken in a deeper sense, a sense *even more psychological* than any neo-Lamarckian supposes”.¹²⁹

In DI Bergson thinks that “effort” is a suitable expression for giving a real account of what consciousness is, but in EC the meaning of that word becomes quite different. In one conceptual shift far beyond DI, in EC Bergson relates the effort with American neo-Lamarckism. Thus, every living being strives to adapt: according to Bergson, for giving a philosophical account of what life is, one has to give to the term effort a “more psychological meaning”.

The term is clearly psychological, given that “life is of the psychological order”. Bergson concedes that even in the neo-Lamarckian framework there is something psychological. But we need, he claims, something *more* psychological. Here Bergson is defending the view that, although it is right to transfer these anthropomorphic features to living beings, it is possible to *go further* than Cope. It is possible to find something “deeper” and more psychological than effort for the sake of adaptation.

As I said, the context of every passage is very important. Here Bergson is thinking of his general account of evolution. In this sense, effort could describe a tendency towards adaptation. Bergson does not deny the effort of conservation regarding a single niche. In this context, effort or adaptation is a second-degree force. There is something deeper. Creation is the deeper sense of effort and of psychology that he is actually talking about. The creative evolution is a deeper effort, which has to do with psychology.

We can see here that Bergson is remodeling the psychological principle found in neo-Lamarckism, and, by extension, the psychological principle in teleology.

1.2.b. Perfection

Finalism is extensible and comprehensive, since it has many forms. They all are psychological, but change regarding one thing: the understanding of perfection. In the passage above we saw that Bergson was asking for a “deeper” sense of psychology, which means a more essential and perfect sense of psychology or life. Effort was not the most perfect feature, although it can be admitted for a second degree.

The first-degree-force of human psychology and, by analogy, of biology and cosmology is creation. Creation here is one of the bases for the reform of classic teleology. In the cosmologic domain, Bergson says that nature, understood as the whole, “*is more and better than a plan in course of realization*. A plan is a term assigned to a labor: it closes the future whose form it indicates. Before the evolution of life, on the contrary, the portals of the future

¹²⁹ EC, p. 77, italics are mine.

remain wide open. It is a *creation* that goes on forever in virtue of an initial movement. This movement constitutes the unity of the organized world—a prolific unity, of an infinite richness, superior to any that the intellect could dream of...”¹³⁰

The text could not mean a rejection of final causality, since it is irrefutable, but also rejects an intellectual model as analogy. In a way, he is claiming that intellect is one form of bad anthropomorphism. That is, nature has no plans. Plans are part of human intelligence and nature is “more and better than that”. As for Aristotle, nature is better than human techniques. Nature has to be *the best*. We can see how one cannot propose any analogy between nature and consciousness.

It is pretty clear that human labor, here linked to intellect, is *not* the best. Effort, and, especially in this context, creation *are* the best. The best means perfection, natural *télos*. Bergson emphasizes dynamic features of the *télos*, always using a perfectivist language. Natural entities strive to accomplish their natural tendency. In this case, we see that in EC he uses the terms effort and the more psychological and more perfect one, called creation. He is not a systematic author, so the same teleological concept of goal or end has other names too. Notably, in the cosmic context, in EC, the concept of progress can be found too. Bergson mitigates the anthropocentric and fatalistic element of the philosophical notion, as he finds it in previous philosophers. Thus, this natural progressive or perfective tendency towards completion is defended in an open framework, where deviations, contingency and only relative accomplishment:

“No doubt there is progress, *if* progress means a *continual* advance in the general *direction* determined by a first impulsion; but this progress is *accomplished only* on the two or three great lines of evolution on which forms ever more and more complex, ever more and more high, appear; between these lines run a crowd of minor paths in which, on the contrary, deviations, arrests, and set-backs, are multiplied”.¹³¹

Life is plural, unpredictable and wasteful, not harmonious. But it is still perfective, and can be explained teleologically. As we saw “flexibility” and “comprehensibility” are features of immanent teleology, historically understood. This other excerpt becomes even clearer regarding the notion of perfection or *télos*. But now the key term is not progress or goal, but “impetus”:

Bergson attacks mechanism or materialism because “[a] it excludes absolutely the hypothesis of an *original impetus*, I mean an *internal push* that has carried life, [b] by more and more complex forms, to higher and higher destinies. [c] Yet this impetus is evident, [d] and a mere glance at fossil species shows us that life *need not have evolved* at all, or might *have evolved only in very restricted limits*, if it had chosen the alternative, much more convenient to itself, of becoming ankylosed in its primitive forms”.¹³²

Sentence [b] is clearly talking about one teleological trend “by more and more complex forms, to higher and higher destinies”. It refers to a qualitative conception: high and complex are here forms of perfection. A “higher destiny” is to be read as a *better* destiny.

¹³⁰ EC, pp. 104-105.

¹³¹ EC, p. 104, my emphasis.

¹³² EC, p. 102.

1.2.c. Individual and global teleology

Still we can give ourselves a definitive hint of what he is trying to point out by saying “to go further”. Montebello, Ansell-Pearson and Lacey have already noted the curiosity of one passage in which Bergson dialogues with the neo-vitalist philosopher Hans Driesch around the latter’s doctrine of the entelechy in individual organic beings. This will be the last text of the section.

We see that Driesch defends *only* individual teleology. Focused on embryology, he thinks that there is within every organism one immaterial element called ‘entelechy’ that leads and coordinates the relation between whole and parts towards perfection. At the same time Driesch rejects external or global teleology. Bergson criticizes Driesch. Bergson argues against Driesch not because of the use of final causality *but because of the restricted boundaries* of his conception of teleology. Now we will read a long quotation of that passage, which is the real basis for the theory of the *élan*. This text evidences that Bergson knew that he was reforming teleology, namely, global teleology:

“But, though finality cannot be affirmed either of the whole of matter or of the whole of life, might it not yet be true, says the finalist, of each organism taken separately? Is there not a wonderful division of labor, a marvellous solidarity among the parts of an organism, perfect order in infinite complexity? Does not each living being thus realize a plan immanent in its substance? *-This theory consists, at bottom, in breaking up the original notion of finality into bits.* It does not accept, indeed it ridicules, the idea of an *external* finality, according to which living beings are ordered with regard to each other: to suppose the grass made for the cow, the lamb for the wolf- that is all acknowledged to be absurd. But there is, we are told, an *internal* finality: each being is made for itself, all its parts conspire for the greatest good of the whole and are intelligently organized in view of that end. Such is the notion of finality which has long been classic. *Finalism has shrunk to the point of never embracing more than one living being at a time. By making itself smaller, it probably thought it would offer less surface for blows.*

The truth is, it lay open to them a great deal more. Radical as our own theory may appear, finality is external or it is nothing at all.

Consider the most complex and the most harmonious organism. All the elements, we are told, conspire for the greatest good of the whole. *Very well, but let us not forget that each of these elements may itself be an organism in certain cases, and that in subordinating the existence of this small organism to the life of the great one we accept the principle of an external finality.* The idea of a finality that is *always* internal is therefore a self-destructive notion. An organism is composed of tissues, each of which lives for itself. The cells of which the tissues are made have also a certain independence. Strictly speaking, if the subordination of all the elements of the individual to the individual itself were complete, we might contend that they are not organisms, reserve the name organism for the individual, and recognize only internal finality. But every one knows that these elements may possess a true autonomy. To say nothing of phagocytes, which push independence to the point of attacking the organism that nourishes them, or of germinal cells, which have their own life alongside the somatic cells—the facts of regeneration are enough: here an element or a group of elements suddenly reveals that, however limited its normal space and function, it can transcend them occasionally; it may even, in certain cases, be regarded as the equivalent of the whole.

There lies the stumbling-block of the vitalistic theories. We shall not reproach them, as is ordinarily done, with replying to the question by the question itself: the “vital principle” may indeed not explain much, but it is at least a sort of label affixed to our ignorance, so as to remind us of this occasionally, while mechanism invites us to ignore that ignorance. But the position of vitalism *is rendered very*

difficult by the fact that, in nature, there is neither purely internal finality nor absolutely distinct individuality".¹³³

The text is crucial since it shows plainly that Bergson defends a sort of finalism not only regarding individual living beings, but also regarding all living beings as a whole. So "breaking up the original notion of finality into bits" is "self-destructive" because pure individuality in the organic realm is nothing but illusion. The evolutionary framework implied in EC leads "to suppose the grass made for the cow, the lamb for the wolf—that is all acknowledged to be absurd". But what about "phagocytes, which push independence to the point of attacking the organism that nourishes them, or of germinal cells, which have their own life alongside the somatic cells?" Pure individuality is hard to find here.

Bergson has nothing against teleology: "All the elements, we are told, conspire for the greatest good of the whole. *Very well*, but let us not forget that each of these elements may itself be an organism in certain cases...". Bergson agrees with Driesch in internal finalism, but not about rejecting the external one. Cells, reproduction and evolution overcome the concept of the individual, taken from mathematics, as he defended in DI. Organisms are composed of other organisms.

"Finality will not go down any easier for being taken as a powder. Either the hypothesis of a finality immanent in life should be rejected as a whole, or it must undergo a treatment very different from pulverization".¹³⁴ It is very different indeed. Regarding the notion of psychology and the notion of perfection, he reforms the contents coherently between each other. And now we see that he accepts both individual and global teleology.

The problem of reading the anti-teleological passages as if they were addressed to any kind of teleology whatsoever is that they leave these important texts unexplained. The entire world is defined by Bergson as one "exigency of creation".¹³⁵ And "with the human being life of consciousness reaches, at least potentially, its *highest state* of emancipation from the restrictions imposed on it by matter".¹³⁶ This leads to immanent perfectivism. He also says that "consciousness lies at the origin of life",¹³⁷ which in a way links human psychology with the rest of the natural beings. Human psychology is natural, hence humans have perfective features in common. The text on Driesch makes evident that Bergson was an exhaustive teleologist, since not only individual entities can be explained teleologically, but also all of them as a whole.

The above quoted interpreters think that despite Bergson's description of the natural history, Life "remains contingent in every aspect".¹³⁸ I think there is a great deal of contingency involved, but I wouldn't say that is the case in every aspect. Nature is always an exigency of creation. When Pearson says that "on Bergson's model no dominant tendency within evolution can be identified",¹³⁹ he is then not being accurate. Although, maybe his reading of Bergson fits better with the current concerns among biologists. In Bergson some species are conceived as "culminating points" of evolution: namely humans.¹⁴⁰ The difference between

¹³³ EC, pp. 40-42, italics are mine.

¹³⁴ EC, p. 44.

¹³⁵ Vaughan, M, Pearson, K-A, Miquel,P-A, "Responses to evolution". Op. cit, p. 360.

¹³⁶ Ibid., italics are mine.

¹³⁷ Ibid.

¹³⁸ Ibid.

¹³⁹ Pearson, Keith-Ansell. *Philosophy and the adventure of the virtual. Bergson and the time of life*. Op.cit, p.81.

¹⁴⁰ EC, p. 148. Curiously, also Hymenoptera.

humans and these animals is of “kind”, not of “degree”.¹⁴¹ In EC and with more emphasis in CV and DS *there is a dominant tendency in nature*. This, again, doesn’t lead necessarily to absolute anthropocentrism. As we know, the model of immanent teleology rejects it. At the same time, there is not fatalism involved. A great sum of contingency (although not “in every aspect”) contributes to making nature unpredictable.

1.2.d Scholarly interpretations

As I mentioned in the “Introduction” some of these ideas have already been pointed out. In the chapter IV of his book *From Aristotle to Darwin and back again* entitled “Bergsonism and teleology”, Étienne Gilson says something worth mentioning now. Gilson links “inadequate finalism” with “pre-determined ends”. He does so by comparing it to “true finalism”, according to which “forms [that are] immanent in nature”, forms “working from within to incarnate themselves there by modelling in matter according to their law”. According to Gilson, Bergson and Aristotle affirm a “true finalism”.¹⁴² Gilson says: “Perhaps Bergson himself was not, moreover, so far from Aristotle’s finalism as he imagined. Quite different from the false Aristotelism which he rightly criticized, Bergson finalism is rather close to the truth. Evolutionism separates them”.¹⁴³

Some pages after, Gilson completes this statement with another one, not less interesting:

“Seeing that he [Bergson] rejected a mechanical finalism, he did not have any other choice than to have recourse to any other notion of teleology *purified of its vices*. This new notion *owed its novelty to what was a return of the ancient immanent teleology of Aristotle*, less the forms which made the latter possible. This necessarily, raised *new difficulties for the doctrine*”.¹⁴⁴

Apart from the link between the two philosophers with respect to immanent teleology, the last passage contains some important general ideas for this investigation. Novelty may be understood as reinterpreting the classics and not any Adamistic a-historical creativeness. It can imply some purification, but also new problems for the reformer. Now it is time to turn to the classic source.

The relation between Aristotle and Bergson, has barely been studied and, as far as I know, never extensively.¹⁴⁵ Apart from Gilson, the Bergsonian scholar Henri Hude has also noted this influence. In Hude’s edition of the course on Greek philosophy of 1894-1895 given by Bergson at the Lycée Henry IV we can read in footnotes enlightening remarks. Namely, it is

¹⁴¹ EC, p. 200.

¹⁴² But Bergson “overlooks the possibility of an Aristotelian universe without Platonic ideas and without a Demiurge to impose them on matter from without”. Gilson, Étienne. *D’Aristote à Darwin et retour. Essai sur quelques constantes de la biophilosophie*. Vrin, Paris, 1971. Trans. John Lyon. Notre Dame Press, 1981, p. 99.

¹⁴³ Gilson, Étienne. *From Aristotle to Darwin and back again*. Trans. John Lyon. Notre Dame Press, 1981, p. 97.

¹⁴⁴ Ibid., p. 99, italics are mine.

¹⁴⁵ Hude in Bergson, Henri. *Cours IV*. Ed. Henri Hude. PUF, 2000, pp. 110-112. “Cette contribution n’est le lieu ni d’une analyse du rôle de Plotin chez Bergson, ni de celle, peut-être encore plus nécessaire à entreprendre, du rôle d’Aristote” says Vollet, Matthias. “Bergson historien de la philosophie”, *L’évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010. p. 333. Also: Chedin, Jean-Louis, “ Deux conceptions du possible : Bergson et Aristote “, in *Revue de l’enseignement philosophique*, t. XXXVII, n° 2, décembre 1986-janvier 1987.; and Waszkinel et Hejno, Eugeniusz. “ L’inspiration aristotélicienne de la métaphysique de Bergson “. Vol. 89, N°82. 1991.

important for us since Hude comments on Bergson's lessons on Aristotle. In Bergson's lesson on *Physics*.II and the idea of teleology, Hude makes this commentary:

“Toute cette page est très suggestive pour la préhistoire de *L'évolution créatrice*. [a] On y trouve, d'une part, une comparaison, un rapprochement, pas encore nettement problématique, entre l'action de la nature et celle de l'art; [b] d'autre part, une idée de finalité, aristotélicienne sans doute, mais déjà retravaillée, et qui comprend dans ses possibles approfondissements l'idée d'un finalisme à la Bergson, (op. cit, 528 sq.) c'est-à-dire, où l'acte créateur est un acte analogue à l'acte de l'artiste et non plus à celui de l'ouvrier, un acte qui vise l'œuvre elle-même comme fin, et non plus une fin extérieure à l'œuvre dont l'œuvre ne serait que le moyen, un acte, enfin, qui tend à la perfection de l'œuvre à travers de multiples ébauches”.¹⁴⁶

This finalism *à la* Bergson completes Gilson's statements in noting that Bergson takes part in the history of teleology and that his model of immanent teleology is ultimately Aristotelian. Gilson and Hude are thus the forerunners of my work. In the text by Hude [a] there is the idea of analogy between the natural being and the artificial craft or human artisans found in *Phys.* II.1, 2, 3, 7 and 8. I agree that it is a prehistory of EC. Bergson defends there the analogy between natural beings and human consciousness. Also in that passage [section b], Hude notes that in Bergson there is natural directedness, which means a notion of perfection. As I said, only in EC the problem of teleology is faced as such, but in MM and in LR a teleological approach can also be found. Hude also considers MM to be an essay where the hylomorphic Aristotelian paradigm is implied. In this dissertation I follow up on the enlightening remarks of these two Bergsonian scholars.

¹⁴⁶ Bergson, Henri. *Cours*.IV. Op. cit., p. 269.

Conclusion of Chapter 1

As we have seen in this chapter, the texts in EC regarding teleology must be understood as part of a reform of the model of immanent teleology. In 1.1 we have seen that Bergson rejects some teleological approaches to nature and in 1.2 I have laid out his positive account of final causality. Because of the context of EC almost all these passages are devoted to discuss global teleology. Although the book does not have a systematic order and clarity, some elements of the reform of immanent teleology are clear enough. I summarize by way of conclusion:

[A] The essence of Life is an immanent impetus. Its origin is to be found in nature.

[B] The impetus can be found in living beings and in Life itself, including all the individuals and their generation, since there is a common descent.

[C] The impetus tends toward effort, regarding adaptation, and toward creation, regarding evolution. Creation is the key aspect here, since it involves transgression, indetermination and freedom. This is the goal of nature, since it is described as exigency of creation. There are some lineages in evolution that lead to a relative accomplishment of the original need. Relatively speaking, human beings are the “highest” beings on earth.

[D] The impetus can be found in ourselves. Bergson claims that its nature is psychological, which implies that human psychology is natural. Effort is a natural term for describing the living, regarding their tendency to fit within a niche, but there is another term, which Bergson finds to be “deeper”: creation.

[E] The impetus does not fulfill a pre-determined plan. Conceiving this impetus as a plan-making intellect would be anthropomorphism and wrong. The empirical data show that the impetus is not based on a growth of harmony, but still involves finality.

[A] and [B] support immanent individual teleology as well as global teleology. [C] introduces the model of perfection or *télos* as a requirement. [D] is the basis for analogy. [E] is to be understood as a result derived of the four previous elementary points. [A], [B], [C] and [D] are the theoretical bases of the reform of the model of immanent teleology. [E] advances a subject that will be addressed in the last chapter.

2. Aristotle: the model of immanent teleology

In this first chapter I first will show that Bergson developed a deep understanding of Aristotle's doctrine of immanent teleology. Next, I will provide a systematic account of Aristotle's own teleological thought. I shall find four elements in Aristotle's teleological argument (section 2.1) and two basic domains of application for teleology in Aristotle (section 2.2). This dual structure, composed of an structural section and a section on empirical domains will return in my account of Bergson in chapters 3 and 4.

Bergson's knowledge of Aristotle

Although Bergson's books contain discussions with contemporary scientists and philosophers, it can be said that ancient thought is always there. During the whole of the first part of his professional life (1883-1904) he taught, translated and commented on classical philosophy. At the same time, he did not consider ancient philosophy as something archaic, unrelated to philosophical contemporary issues. In this sense, his speculative accounts of different problems always retain a historical and genealogical perspective.

At the very beginning of his career, in 1883, we have his translation and commentary of Lucretius entitled *The Philosophy of Poetry. The Genius of Lucretius* (EL). In this account, Bergson links genealogically ancient materialism and Darwin genealogically.¹⁴⁷ Some years later, he devoted his Latin dissertation exclusively to Aristotle. The title of this academic work is *Quid Aristoteles de loco senserit* or *On the idea of place in Aristotle* (QA), defended in 1889. The whole text is about the first six chapters of the *Phys.IV*, devoted to the notion of place. The first seven sections of the dissertation are a sober commentary on Aristotle's writings, using Simplicius and Philoponus as ancient commentators, Félix Ravaisson and, especially, Eduard Zeller, as contemporary interpreters. In §8 Bergson gives a wider interpretation of the notion of *tópos*, in reference to *On the heavens*, and from § 9 to 10 the historical perspective becomes much broader. In section §9 he confronts Aristotle's conception of space with the modern conceptions of Leibniz and Kant. Bergson puts Aristotle in dialogue with the modern theories of place, proposed many centuries after.

Although later on Bergson devoted short texts to different authors (such as William James, Claude Bernard or Félix Ravaisson), this early writing, celebrated by Burnett,¹⁴⁸ is Bergson's sole rigorous scholarly commentary on any other philosopher's doctrine. Bergson has a place among Aristotelian commentators of the late XIX century. The importance of QA should not pass unnoticed,¹⁴⁹ although final causality is not involved. Only in §8, from a cosmic perspective, Bergson discusses two imitative passages of global teleology, on elementary transformation, that we will see in 2.2.

¹⁴⁷ EL, pp. 18 and 46.

¹⁴⁸ Burnett, John. "Quid Aristoteles de loco senserit by H. Bergson". *The Classical Review*, Vol. 6, No. 7. Jul., 1892, p. 322.

¹⁴⁹ In *Being and time* § 82 Heidegger underlines the influence of Aristotle in Bergson's notion of duration in DI. Apart from the interesting link between Aristotle and Bergson, I do not deal with Heidegger's interpretation since my research is focused on the topic of teleology, not on time. Moreover, I do not trace the Aristotelian roots of Bergson to the concept of time and duration. Martin. *Sein und Zeit*. Max Niemeyer Verlag Tübingen, 1967, p. 432-434. Heidegger repeats and develops this idea in *Die Grundprobleme der Phenomenologie*, in 1928, § 19. Among the scholarly publications there is one exception to this disregard: Waszkinel, Romuald et Hejno, Eugeniusz. "L'inspiration aristotélicienne de la métaphysique de Bergson". *Revue Philosophique de Louvain*. vol. 89, n°82, 1991.

Apart from that, Bergson taught ancient thought throughout his life. First, working at a high school, in general courses on ancient philosophy, like the 1894 one of Hude. These are still general introductory courses in which Aristotle did not occupy a distinctive place, so there was no place for focusing on specifics (immanent teleology, for instance). That comes later at the Collège de France. Between 1900 and 1904 Bergson occupied the chair of Ancient Philosophy. In this period, Bergson studied Aristotelian texts in which teleology plays a central role. During the academic year 1900 to 1901 he gave a course at the Collège de France on the Aristotelian ancient philosopher Alexander of Aphrodisias, on his book *On fate*. The following year, Bergson taught the second book of *Physics*, the most important Aristotelian treatise on causality and teleology. The subsequent one, from 1903 to 1904, he taught Aristotelian theology in a course on the book XII of *Metaphysics*, one of the crucial texts on global teleology, as we will see soon.

This information shows that Bergson had familiarized himself with Aristotle many years after his thesis. He was a lifelong reader of Aristotle. Alexander of Aphrodisias is also a relevant figure here. This philosopher, active in the late second and early third century, was the most important of Aristotle's commentators in Ancient times and, at the same time, he wrote creative philosophy by using Aristotelian concepts to solve new problems, originally alien to Aristotle. Namely, *On fate* is a treatise written against the Stoic philosophers of his time where freedom of action is pushed beyond anything in Aristotle.

More relevant for us is that in the two courses of 1902-1903 and 1903-1904 we can find Bergson to be a mature philosopher who is now shedding light on crucial texts of Aristotelian teleology. Notice that EC is published in 1907. Unfortunately, nowadays the contents of those lectures are lost. The same happened with most of Bergson's unpublished works, such as academic courses or conferences.

Yet, interestingly, at the Bibliothèque Littéraire Jacques Doucet in Paris, one can find the manuscripts that Bergson used. He had two copies of *Physics*, both edited only in Greek by Eduard Zeller and Hermann Bonitz in Teubner, and one copy of *Metaphysics*, edited by Wilhelm von Christ in the same German publishing house. Bergson also had Bekker's classic Aristotelian edition. One of the copies of *Phys.II* and the book *Met.XII* are both translated into French, from the beginning till the end, in pencil between lines, and annotated by Bergson himself. The other copy of *Phys.II* is translated in the same way although only between chapter 4 and chapter 6, the section on chance and fortune.¹⁵⁰ This last fact is also significant since those chapters will have a great deal of relevance for my interpretation.¹⁵¹

Recently, two of Bergson's courses from this era on general historical accounts were published, which contain interesting commentaries on Aristotle. They are *Histoire de l'idée de temps. Collège de France. 1902-1903* and *L'évolution du problème de la liberté. Cours au Collège de France. 1904-1905*. In the first one there are a number of lessons devoted to Aristotle, concerning time and theology. These Aristotelian meditations were summarized

¹⁵⁰ Regarding secondary teleology in this chapter and afterwards in 3.3, see specially BGN. 927 and 298 in Bergson Manuscripts et notes d'Henri Bergson. Bibliothèque littéraire Jacques Doucet. II-BGN-V-10 BGN 928 is the edition of the *Physics* with the complete translation and annotation of the Book II. The other volume of *Phys.*, II-BGN-V-9 BGN 927, has the translation of the three chapters on chance and luck. Also, there is II-BGN-V-8 BGN 926, with annotations in the first four chapters of the second book. BGN. 924 is the edition of *Metaphysics*, with annotations.

¹⁵¹ Regarding what I call "secondary teleology" see this chapter (2.1.d) and afterwards 3.3.

and included in EC, in its fourth chapter. In *L'évolution du problème de la liberté. Cours au Collège de France. 1904-1905* Aristotle is the most quoted author, and plays a central role among the defenders of freedom.¹⁵²

Among Bergson's published works, the "Life and work of Félix Ravaisson" contains notable general remarks on Aristotle. This article (first a lecture) for the French Academy of Moral Sciences focused on Ravaisson, is connected to Aristotle. Ravaisson's book on Aristotle, entitled *Essai sur la Métaphysique d'Aristote*, was published for the first time in 1837, and by 1900 was an important general commentary of Aristotle. Bergson himself mentions it in positive terms in the first page of his dissertation, in 1889. Ravaisson was both an Aristotelian commentator and a creative philosopher and was considered by Bergson himself one of his three masters.¹⁵³

Bergson has some general words for *Essai sur la Métaphysique d'Aristote* in the Academy text that can be useful for his historical view of the Greek philosopher. Aristotle is considered the philosopher of movement and intuition. Ravaisson even talks about the whole of nature in Aristotle as moved by one *élan*.¹⁵⁴ In general Bergson praises Ravaisson's work.¹⁵⁵ Pierre Aubenque has defended the importance of the *Essai* and also noted that Ravaisson's depiction of Aristotle is influenced by Romanticism and, even more surprisingly, is close to Bergson's own philosophy.¹⁵⁶ That is: for Aubenque, *Ravaisson's Aristotle resembles Bergson*. It is like a Bergsonian system *avant la lettre*. Ravaisson addresses Aristotle as the philosopher of intuition against Platonic conceptualism.

Leaving this striking association aside, Bergson notes that Ravaisson offers *too much* of a "closed system", while Bergson considered that Aristotle was an open system:

"Aristotle, a systematic genius if ever there was one, did not build up a system at all. He proceeded by analysis of concepts rather than by synthesis. His method consists in taking the ideas stored up in the language, in adjusting or renewing them, in circumscribing them in a definition, in cutting out their extension and comprehension according to their natural articulations, in pushing their development to its farthest possible limits. Yet he rarely accomplishes this development all at once: he comes back to it again and again, in different treatises on the same subject, following over again the same road, always advancing a little further".¹⁵⁷

¹⁵² Bergson, Henri. *L'évolution du problème de la liberté. Cours au collège de France. 1904-1905*. PUF, Paris, 2017. See e.g. the sessions of the 27th of January 1905 and 3th of February of 1905.

¹⁵³ Together with DeBiran and Plotinus. Maire, Gilbert. *Bergson, mon maître*, Editions Bernard Grasset, Paris, 1936. p. 222.

¹⁵⁴ Ravaisson, Félix. *Essai sur la Métaphysique d'Aristote*. Éditions du Cerf, Paris, 2007, p. 406.

¹⁵⁵ "When he contrasts Aristotle with the physicists, who saw in things only their material mechanism, and with the Platonists, who absorbed the whole of reality into general types, when he shows us in Aristotle the master who sought in the heart of individual beings". PM, p. 273.

¹⁵⁶ Aubenque, Pierre. "Ravaisson interprète d'Aristote", *Les études philosophiques*, 4/ 1984. Also in ed. Denis Thouard. *Aristote au XIX siècle*. Presses Universitaires du Septentrion, Villeneuve d'Ascq Cédex, 2005.

¹⁵⁷ PM, p. 262. And Bergson continues: "What are the elements implied in thought or existence? What are matter, form, causality, time, place, movement? On all these points and a hundred others he dug up the ground; from each one of them he starts a sort of subterranean gallery which he pushes out ahead, like an engineer who digs a huge tunnel by starting it simultaneously at many points. And indeed we feel that the measurements were made and the calculations performed so that everything should fit; but the junction is not always completed and often, between points which seem to us about to touch, when we flatter ourselves that all we have to do is to remove a few more shovelfuls of sand, we strike bedrock. Ravaisson did not stop at any obstacle. The metaphysics he sets forth at the end of his first volume is Aristotle's doctrine unified and reorganized. He expounds it in a language he created for it, where the fluidity of the images allows the naked idea to show

This idea of openness reappears in two texts. In the aforementioned course of 1905 and much afterwards, in the “Introduction II” to PM. The variety of meanings in Aristotle’s works refers for Bergson to the idea of open system, where everything does not fit necessarily.¹⁵⁸ This is emphasized when he ponders Ravaisson’s interpretative work: “Ravaisson did not stop at any obstacle. The metaphysics he sets forth at the end of his first volume is Aristotle’s doctrine unified and reorganized”.¹⁵⁹ Bergson also finds that all the Ravaissonian ideas come from this book on Aristotle.¹⁶⁰

Afterwards I will propose how Ravaisson could have influenced both Bergson’s reading of Aristotle and Bergson’s own view of cosmos. I will address that question in regard to Bergsonian teleological cosmology in 4.2.d. For the moment, I believe that this idea of Aristotle’s philosophy as an open system—that is, as a system which is not definitively closed and which thus remains susceptible to further developments—may be enlightening for our reformist scope.

Some of the Aristotelian texts mentioned above, the PhD thesis, and the courses at high schools pertain to an early period of Bergson’s career. They are prior to MM, the first book in time where we start to find teleology. The other texts, lessons at the Collège and the latter article were produced after MM and in the years prior to the publication of EC. That is, between 1900 and 1907. As we can see, both in his early years and in his maturity, Bergson taught, read and commented on Aristotle. In one case, the text from one lecture on Aristotle was even synthesized and included in EC.

In fact, EC is the book where Bergson increasingly quotes the name “Aristotle”. It is, by the way, the most quoted philosopher in the entire essay, closely after the word “Darwin”. That is remarkable for a book of 1907 with the word “evolution” in its title.

In Chapter 4 I will show that in EC Aristotle plays the roles of founder of biological thinking,¹⁶¹ as well as the role of founder of natural theology.¹⁶² Since EC deals with, on the one hand, biology, and, to a somewhat lesser degree, with cosmology, on the other hand, the place given to Aristotle is then difficult to overstate. Bergson openly confronts Aristotle. In

through, where the abstractions come alive and live as they lived in Aristotle’s thought. It has been possible to dispute the material correctness of some of his translations; doubts have been raised concerning certain of his interpretations; especially have we asked if the historian’s role was really to push the unification of a doctrine further than the master wished to do, and if, by readjusting the pieces so perfectly and drawing the gears so tightly, we are not in danger of distorting some of them. It is none the less true that our mind demands that unification, that the undertaking had to be attempted, and that no one after Ravaisson has dared to repeat it”. PM, pp. 262-263.

¹⁵⁸ “... intuition, as I describe it, is nothing beside the multiplicity of meanings the words “essence” and “existence” have in Spinoza, or the terms ‘form’, ‘power’, ‘act’ . . . etc., in Aristotle. Glance over the list of meanings of the word *eidōs* in the *Index Aristotelicus*: you will see how much they differ. If one considers two sufficiently divergent meanings, they will almost seem to be mutually exclusive. They are not exclusive because the chain of intermediary meanings links them up”. PM, p. 37.

¹⁵⁹ Also, Bergson considered that the Ravaissonian opposition of Plato against Aristotle was artificial. “Perhaps Ravaisson looks at Aristotle occasionally through the Alexandrians, themselves so highly colored with Aristotelianism. He may also perhaps have pushed a bit far, even to the point of converting it into a radical opposition, the frequently light and superficial, if not to say verbal, difference separating Aristotle from Plato” PM, p. 265.

¹⁶⁰ “What are the facts, what are the reasons which led Ravaisson to judge that the phenomena of life, instead of being explained wholly by physical and chemical forces, could, on the contrary, throw some light on them? All the elements of the theory are already found in the *Essay on the Metaphysics of Aristotle*”. PM, p. 284.

¹⁶¹ In 4.2.b, on EC, p. 135 and p. 174.

¹⁶² In 4.2.d, on EC, pp. 321-323.

my reading, there is an attack and also an original appropriation of Aristotle's ideas in EC. Later in 1932, Aristotle's theology also plays again the role of the paradigm of natural theology or philosophical theology in DS.III.¹⁶³

Until now my aim has been to demonstrate that Bergson mastered Aristotelian philosophy in general and had intimate knowledge of the doctrine that I will set out in the pages that follow.

Aristotelian immanent teleology: general model, elements and domains

The origin of teleology as of many other Aristotelian concepts must be looked for in Plato. Ariew explains very well the relation between Plato's teleology and Aristotle's: Aristotelian teleology "eschews Platonic designers for an inherent purposive or goal-directed force that resides in the material properties of living entities. Good arrangements are not the handiwork of a creator; rather they are due to some inner principle of change within living organisms".¹⁶⁴ In Aristotle, teleology becomes immanent in nature.

Despite the usual disputes, all the current scholars agree that Aristotle is the founder of natural teleology. As Balme says: "The novelty in Aristotle's theory was his insistence that finality is within nature", that is, "part of the natural process, not imposed upon it by an independent agent like Plato's world soul or Demiourgos".¹⁶⁵ Both Aristotle's traditionalism and his originality can be defended (as I hold also with regard to Bergson). The first does not exclude the second. As Sedley says, "most can be learnt by emphasizing, rather than minimizing, Aristotle's Platonic background and training".¹⁶⁶

Aristotle revises the Platonic purposive structure in the *Timaeus*. However, Aristotle, perhaps proud of his own originality, considers himself the real discoverer of the final causes in nature. At least, there is not reference to his master in the historical account of this topic (*Met.* I. 7. 988b6-8).¹⁶⁷

In Plato, goal-directedness implies an intelligent divine entity. Plato's demiurge produces and administrates the world, including teleology. In this schema there is providence, in Greek, *prónoia* (*Timaeus*, 30b-c). The demiurge's goodness is the principle or *archè* of the intelligent creation of the world's soul and body (*Timaeus*, 29d-30b). That is, the cause of the creation of the world in the best possible way is to be found in his goodness. Ultimately, the teleological explanations in Plato (see the case of the head in *Timaeus*, 44d-45b) may be referred to the divine good work. This means that the providential schema works with extrinsic teleology.¹⁶⁸

¹⁶³ DS, p. 243.

¹⁶⁴ Ariew, André. Chapter 9: "Teleology". *The Cambridge Companion to the Philosophy of Biology*. Cambridge University Press, 2015, p.161.

¹⁶⁵ Balme, D. M. "Teleology and necessity", in *Philosophical Issues in Aristotle Biology*. Ed. A. Gotthelf and J. G. Lennox. Cambridge: Cambridge University Press, 1987, p. 275.

¹⁶⁶ Sedley, David. "Teleology, Aristotelian and Platonic", in *Nature and life in Aristotle: Essays in honor of Allan Gotthelf*. Ed. James Lennox and Robert Bolton. Cambridge University Press, 2010, p. 5.

¹⁶⁷ For a sharp distinction between Plato and Aristotle see Bolton, Robert. "The origins of Aristotle's natural teleology in *Physics* II" in *Aristotle's 'Physics': A critical guide*. Ed. Mariska Leunissen. Cambridge University Press, 2015.

¹⁶⁸ For providence regarding human beings in Plato, see *Laws*.X. 899d and 905d. For the conception of the universe as an ordered unity also *Laws*.X. 903c, 904c.

In Aristotle there is no *prónoia*, although he accepts directionality. Natural substances tend toward the good and the best, but there is no divine intellect responsible. Thanks to this lack of providence, Aristotle's teleology is always immanent. That is, purposiveness does not mean any intentional divine predesign, theological arrangement or plan (*logismòs*, in *Timaeus*, 34a), but a feature of the natural beings as such. As we will see in due course, even Aristotle's vision of the relation between god and the world is not providential. He himself does not address an ultimate reason for that, but we can infer it, first, because of his idea of a contemplative god, and second, because in his view there is no need for evoking divine intention. Thus, Aristotelian teleology is an obvious part of nature as such, which includes human beings.

Aristotle maintains the doctrine of directedness in a sophisticated way. For Plato heavenly beings and human beings (especially males) are intelligent beings, and thus they have their own goals. But the rest of the animals are, so to speak, decadent human beings: following the literal word of *Timaeus*, 90e-92c we can say that human females, birds, quadrupeds, snakes and fishes were male human beings in the past. They became what they are through reincarnation. Aristotle rejected providence and developed the living world in an immanent way. Aristotelian teleology is more developed, richer and more complex than his master's. Aristotle is or should be a model for every philosopher who wants to defend or attack teleology.

Within Aristotle's framework, the question of teleology is a key philosophical concept. Teleology is found throughout almost all his works on natural philosophy, from ethics to biology, from biology to cosmology, from cosmology to aesthetics. One can verify the importance of teleology in general approaches to Aristotle made by scholars: almost every portrait of Aristotle tackles the "discovery" of final causes,¹⁶⁹ and still today Aristotelian teleology is the subject of a great deal of scholarly research, as I will show soon.

While accepting the importance of teleology in Aristotle it has to be said that nowadays the scholarly field concerned with Aristotle's natural teleology is highly controversial. Given the weight of teleology in Aristotle's philosophy, its importance is interpreted in divergent ways. One of the problems of addressing Aristotle's teleology is the lack of agreement, since there are as many exegetical hypotheses as investigations studying the topic.¹⁷⁰ My general perspective is comprehensive, to some extent. Let us attempt to give an overview of Aristotle's immanent teleology nonetheless.

According to Aristotle, there are three types of beings in the supralunary and infralunary realm in which he divides the whole of beings,¹⁷¹ and two of these three are naturally in movement. Being in movement in this sense means, for Aristotle, that "each [individual] has in oneself a source of change and remaining unchanged, whether in respect to place, or

¹⁶⁹ See for Guthrie, G. K. "The mind of Aristotle. Teleology and its defense". *A history of Greek philosophy*. Op. cit. 97-98. Also see: Mansion, Augustin. Cap.VII. 3. "La nature comme fin et la finalité" *Introduction à la physique aristotélicienne*. Éditions de l'institut supérieur de philosophie. Louvain-la-Neuve, 1987, p. 35. In a book on Aristotle's general vision of nature, Mansion says that finalism "dominates" his understanding of the world. In his classic essay on the philosopher, Jaeger talks, in general, about Aristotle's "teleological conception of the world". Jaeger, W. José Gaos. *Aristoteles. Grundlegung einer Geschichte seiner Entwicklung*. [Aristóteles]. Trans. José Gaos. FCE, México, 2001, p. 185, 384, 437-8.

¹⁷⁰ Quarantotto, Diana. *Causa finale, sostanza, essenza in Aristotele. Saggio sulla struttura dei processi teleologici naturali e sulla funzione del telos*. Bibliopolio, 2005, p. 19.

¹⁷¹ *Phys.*II. 7.198a17. 28-32. "Hence there are three separate studies: one of things which are unchangeable, one of things which are changed but cannot pass away, and one of things which can pass away".

growth and decay, or alteration” (*Phys.*II. 1. 192b14-16).¹⁷² This source of change is what Aristotle understands *physis* or nature to be.

In Aristotle every individual moving being has in view its own perfection, completeness and nobility. There is an innate tendency of natural beings towards what is the best for them, that is, the *télos* (τέλος). The *télos* can be translated as end, goal, perfection, function, completion, flourishing, good, the better, beauty or nobility. It is also called “that for the sake of which” or “what something is for” (*hou héneka*). “Further, it belongs to the same study to know the end or what something is for, and to know whatever is for that end. Now nature is an end and what something is for” (*Phys.*II. 194a28-29).

The main text in which Aristotle gives a doctrinal exposition of this topic is *Phys.*II, which is among other things a study of immanent causality. Contrary to Bergson and EC, the main text in which Aristotle addresses the question of immanent teleology is focused on individual teleology. In one case Aristotle says that the end considered as the better has to be put *in relation to each* substance (*hekástou ousían*). He writes: “because better thus—better not simply, but in relation to the reality of the thing concerned” (*Phys.*II.2. 198b8-9).¹⁷³ As I will show this statement is used by the defenders of individual teleology. It makes clear that in the context of the *Physics* he is referring *exclusively* to the goals of individuals. Another important approach to teleology can be found in *PA.I*, a general treatise on biology, again exclusively focused on individuals. Namely, it addresses the issue around individuals with a soul.

The concepts of the goal and the ‘for the sake of which’ are intimately related to other terms too, especially in the domain of individual teleology. These other terms complete and enrich the original one. I will mention the two most important ones: form and function. In some passages both are used as synonyms for *télos*.

In *Phys.*II, final causality is presented along with a fourfold division: final cause, formal cause, efficient cause and material cause.¹⁷⁴ They are defined altogether in *Phys.*II.3 and again in *Phys.*II.7. Aristotle adds that there is a cooperation, if not coincidence, between some of them, in some instances.¹⁷⁵ Namely, it is stated that the *télos* of something coincides with its specific form, *morphé* (μορφή) or *eidos* (εἶδος). “What a thing is, and what it is for, are one and the same” (*Phys.* II. 7. 198a17). From this point of view, the form is the goal of change and movement. It has to be understood then as perfection, completeness and nobility.¹⁷⁶

Almost all modern scholars agree that the Aristotelian forms have an ontological status. That is, whatever they are, forms are real and not merely heuristic tools and Aristotle’s teleology is

¹⁷² Aristotle distinguishes six types of movements or *kinéseis* in *Cat.* XIV. 15a13-14.

¹⁷³ This can be related with the ethical view in *NE.I*. 1152b6-27, as Johnson does. With regard to the passage from *Phys.* I. 2, see Sedley, David. “VI. Aristotle”. *Creationism and its critics in Antiquity*. California University Press, 2007, p. 197.

¹⁷⁴ For the four causes see also *Met.*I. 3 and *Met.*XII. 4 among other places.

¹⁷⁵ “... the matter, the form, the thing which effects the change, and what the thing is for. The last three often coincide”. *Phys.*II.7. 198a25. As R. Bolton notes, in *Met.*I. 3.983a31 efficient cause and final cause are opposed. Bolton, Robert. “The origins of Aristotle’s natural teleology in *Physics* II” in *Aristotle’s ‘Physics’*. *A critical guide*. Op. cit. In *C.G.I.* 7.324b13-18, they seem different.

¹⁷⁶ Aristotle understands nature as movement or change in two ways, regarding form and regarding matter, and concludes that: “The form (*morphè*) has a better claim than the matter to be called nature”. *Phys.*II. 3.193b8.

not reflective, but constitutive.¹⁷⁷ As D. Balme says, against Nussbaum and Wieland: “causes are objective things and events”.¹⁷⁸ I adopt this understanding of Aristotle’s ontology. The end and the form are thus real. The forms are found in beings composed of matter,¹⁷⁹ where matter is relative to them.¹⁸⁰ For Aristotle forms are not generated and indestructible.¹⁸¹

In other places, the *télos* is related to the *érgon* (ἔργον). This term means one specific natural function, activity or task. As Aristotle claims:

“... a thing is always determined by its function: a thing really is itself when it can perform its function; an eye, for instance, when it can see. When a thing cannot do so it is that thing only in name, like a dead eye or one made of stone, just as a wooden saw is no more a saw than one in a picture” (*Meteor.* IV.12.3909.10-21).¹⁸²

In this context we can see that the goal as function is one type of action. In sum, we can see that for Aristotle a natural being is necessarily in movement or change.¹⁸³ Movement or change always or most of the times tends towards its specific form. The form is for the sake of an activity or function. This function is identified as the fulfillment, flourishing or summit of an individual being. Hence, the concepts of goal, for the sake of which, function and form are intimately related. They display what we call Aristotelian final causality.

According to a classical line of contemporary interpretation,¹⁸⁴ M. Bastit wrote recently that “the final cause in act is the first regarding the other causes”.¹⁸⁵ Against this view, commentators such as Wieland or Boeri say that final cause is one among the four causes and that it has the same value.¹⁸⁶ Whatever the case may be, I will focus on the final cause and its importance.

¹⁷⁷The terms reflective and constitutive come from Kantian philosophy.

¹⁷⁸Balme, D. “Teleology and necessity”. in *Philosophical Issues in Aristotle Biology*. Ed. A. Gotthelf and J. G. Lennox. Cambridge University Press, 1987, p. 281.

¹⁷⁹*Phys.* II. 194b13-15

¹⁸⁰“Again, matter is something relative to something, for the matter varies with the form”. *Phys.* II. 194b8-9. Also *P.A.I.* 640b26-30 and *Phys.* II. 9. 200a31-200b5. Aristotle also seems to say that parts are the material cause of the whole in *Phys.* II. 195a15-17.

¹⁸¹For form and generation: *Met.* VII. 8 and 9: overall *Met.* VII. 8.1033b5-20.

¹⁸²With regard to dead beings, which cannot perform any function, see also *P.A.I.* 641a19-21. The idea that everything has a function can be found in many other places in Aristotle, like *Pol.* I. 2125b23-24.

¹⁸³“And whenever there is evidently an end towards which a motion goes forward unless something stands in its way, then we always assert that the motion has the end for its purpose”. *P.A.I.* 641b24-25.

¹⁸⁴I mean Düring or Mansion and Jaeger. Ingemar Düring says “La dottrina dei quattro aitia è in certo modo una attualizzazione della filosofia aristotelica del *telos*”. *Aristoteles. Darstellung und interpretation seines Denkens*. [Aristotele] Trans. Pierluigi Donini. Mursia, 1976. p. 275. Jaeger talks about the “teleological doctrine of the four causes”. Mansion, Augustin. *Introduction à la physique aristotélicienne*. Cap.VII. 3. “La nature comme fin et la finalité”. Éditions de l’institut supérieur de philosophie. Louvain-la-Neuve, 1987, p. 35: “...l’explication finaliste de la nature, qui est caractéristique de sa physique et la domaine tout entire...”.

¹⁸⁵Bastit, M. “Les quatre causes de l’être selon la philosophie première d’Aristote”. Louvain-la-Neuve, Ed. Peeters, 2002, p. 348, my translation.

¹⁸⁶Boeri, Marcelo. *Física*. Traducción, introducción y comentarios. Editorial Biblos, 1993, p. 183. The problem of teleology, p. 147. Wieland, Wolfgang. “The problem of teleology”. *Articles on Aristotle. I. Science*. Ed. Jonathan Barnes, Malcolm Schofield, Richard Sorabji. Duckworth, London, 1975, p. 177.

2.1 Structural elements in Aristotle's teleology

Aristotle's argument for teleology relies upon three structural elements: the notion of perfection, the notion of analogy and the notion of regularity. These three ideas compound the teleological argument as it can be found in *Phys.II*. 1-3, 7-8 and partially in *PA.I*. 1, 5. I call them elements, because they are part of the structure of the teleological argument. Perfection as such is an ontological claim. In the context of immanent teleology, it is linked with the idea of plurality. Analogy is essential for the teleological method. The use of analogies challenges the critique of anthropomorphism. Both perfection and analogy refer one to each other in Aristotle's writings. After analyzing them, I will discuss one implicit question: the status of human beings, the "analogy-makers", in the Aristotelian framework. Although the problem of anthropocentrism is not explicit in the texts by Aristotle, I believe it is necessary to include this philosophical issue as an element. The section "Hierarchy and the problem of anthropocentrism" completes the accounts on perfection and analogy. I develop some ideas of Johnson.

Regularity also plays the role of a structural element in Aristotle. In addition, I have added a subsequent issue in 2.1.d. Following some interpreters, I distinguish two temporal dimensions for teleology: regularity and irregularity. Primary teleology, based on regularity, is to be applied to individual teleology and global teleology. Secondary teleology is an alternative model in Aristotle for explaining lucky events. These phenomena can be interpreted and reconstructed by retrospective teleology of singular events. It does not play an important role in my account on Aristotle, who focused on regular events, but it has a role to play in Chapter 3 on Bergson.

2.1.a. Perfection and pluralism

The term *télos* has a qualitative accent and it can mean nobility. Aristotle clearly states that: "Yet the final cause (*tò hou héneka*) and the good (*tò kalòn*) are more fully present in the works of nature than in the works of art" (*PA.I*. 639b19-21). This qualitative element means that an end or goal is not every *ending* limit or conclusion of a process. The *télos* is always the flourishing of a particular nature. The *télos* is something good for the individual being involved in the process. As we have read above: "because better (*béltion*) thus—better not simply, but in relation to the reality of the thing concerned (*pròs tèn hekástou ousían*)" (*Phys.II*. 7.198b8-9). Also:

"And there are the things which stand to the rest as their end and good; for what the other things are for tends to be best and their end" (*Phys.II*. 195a23-25).

In general terms, we see that:

"Nature is for the sake of the better and the end" (*héneka dè tou beltíonous kai tou télous he physis*. *GA*. II. 4.738a37-b1)

In the following passage Aristotle refers to the notion of *télos* also in a qualitative way (the Greek term *kalós* can be translated as "beautiful"):

" (...) in not one of them [researches concerning animals of every sort and kind] is nature (*physikou*) or beauty (*kalou*) lacking. (...) in the works of nature purpose and not accident is predominant; and the purpose (*hou d'héneka*) or end (*telous*) for the sake of which those works have been constructed or

formed has its place among what is beautiful (*tou kalou*).” (PA.I. 5.645a24-27).

The concept of *télos* involves perfection, so not just *any* way whatsoever of finishing a process is necessarily *télos*. That is why non-perfective endings are named by him “*escháton*” or “*péras*”.

This sharp distinction between end (*télos*) and limit (*péras*) becomes clear, in my opinion, in *Met. V*. In this book, a philosophical dictionary, Aristotle devotes to the goal and the limit two subsequent entries. In *Met.V. 16* Aristotle talks about the *teleion*, which means “finality” or “completeness”, and also “perfection”.¹⁸⁷ In *Met.V. 17* Aristotle tries to clarify the notion of *péras*.

In *Met. V.16* the philosopher says that anything complete or perfect is:

“that which in respect of excellence and goodness (*to kai aretèn kai tò eu*) cannot be excelled in its kind; e.g. we have a complete doctor or a complete flute-player, when they lack nothing in respect of the form of their proper excellence (...) And excellence is a completion; for each thing is complete and every substance is complete, when in respect of the form of its proper excellence it lacks no part of its natural magnitude. *The things which have attained their end, this being good, are called complete; for things are complete in virtue of having attained their end.* (...) Things, then, that are called complete in virtue of their own nature are so called in all these senses, some because *in respect of goodness they lack nothing and cannot be excelled and no part proper to them can be found outside them*, others in general because they cannot be exceeded in their several classes and no part proper to them is outside them; the others [other senses] presuppose these first two kinds, and are called complete because they either make or have something of the sort or are adapted to it or in some way or other involve a reference to the things that are called complete in *the primary sense*” (*Met.V. 16. 1022a3-1021b15*my emphasis).

Being complete means attaining excellence and goodness and not just any end implies excellency and goodness. Aristotle considers that in *Met.V. 16*:

“Therefore, since the end is something ultimate, we transfer the word to bad things and say a thing has been completely spoilt, and completely destroyed, when it in no wise falls short of destruction and badness, but is at its last point. This is why death, too, is by a figure of speech called the end, because both are last things” (*Met.V. 16.1021b25-30*).

I can be more concrete. In the biological realm, for instance, death cannot be a *télos* since it has nothing to do with the actual excellence of the substance, but with its destruction. In the next chapter of *Met.V*, where Aristotle ponders the meaning of limit or *péras*: the first meaning he offers is that it “means the last point of each thing (*péras légetai to te éschaton hekáston*)” (*Met.V. 17*). This definition is precisely the one he has for an end with no perfection implied. The limit is *éschaton*. In one enlightening remark, Aristotle links the non-perfective end or limit with biology, meaning death.

We read in *Phys.II*:

“Now nature is an end and what something is for. For whenever there is a definite end to a continuous

¹⁸⁷ For instance, Ross puts “completeness” in *Met.V. 16* and in *NE.I. 7*. The older translation in “perfection” or “Perfectum” in Moerbecke’s Latin translation. *Metafisica*. Ed. tríl. Trad. Valentín García Yebra. Gredos, Madrid, 1998.

change, that last thing is also what it is for (*touto <tò> éschaton kai tò hou héneka*); whence the comical sally in the play 'He has reached the end for which he was born'—for the end should not be just any last thing, but the best (*boúletai gàr ou pan einai tò éschaton telos, allà tò béltiston*)” (*Phys.* II. 2.194a29-33).

In contrast with this non-perfect end, we can figure out how important the notion of goal is for Aristotle. The idea of *télos* involves, as we have seen, “excellence”, “completion”, also the “better”, the “best”, and also the “good”, which also can be considered as “beautiful”. In contrast with the notion of limit, the *télos* implies a specific perfection of the entity involved in the particular movement or change. Aristotle says “the process is for the sake of the actual thing (*he gar génesis héneka tes ousías*), the thing is not for the sake of the process” (*PA.I.* 640a10-19). So, there is a “for the sake of” for life, but it cannot be death, because it would not be the “for the actual thing”.

Still within the biological realm, the goal has to be maturity and never extinction. Maturity is the goal of every change or growth. That is how we should understand this passage in *Met.* XII:

“Those who suppose, as the Pythagoreans and Speusippus do, that supreme beauty and goodness are not present in the beginning, because the beginnings both of plants and of animals are causes, but beauty and completeness are in the effects of these, are wrong in their opinion. For the seed comes from other individuals which are prior and complete, and the first thing (*próton*) is not seed but the complete being (*teleion*); e.g. we must say that before the seed there is a man” (*Met.* XII.7. 1073a).

It is the man and not the seed that lives according to its nature, properly speaking. For the same reason the goal of a man could not be decay, illness or, in ethics, vice. These suggest precisely a lack of physical or moral completeness. For every organism maturity may imply survival, reproduction and well-being in all its varieties.¹⁸⁸

The notion of *télos* is relevant beyond biology. In Aristotle’s ontology and his hylomorphic doctrine we can find the use of teleology. The process of moving or changing towards the specific form is a process of actualization, which in Aristotle’s ontological framework is capital.

“For the function (*érgon*) is the end (*télos*), and the actuality (*enérgeia*) is the function. And so even the word ‘actuality’ is derived from ‘action’, and points to the complete reality” (*Met.* IX. 8.1050a21-24).¹⁸⁹

Leaving aside Aristotle’s etymological statement, both *érgon* and *enérgeia* have to be both considered in the teleological account. Hence, if in attaining the *télos* actuality is implied, we have to be aware of the ontological ground of the term “perfection”, which we are discussing. Attaining the *télos* has to be understood as an expression of actuality. Then also we could say, quoting Aristotle from his texts on that subject, that the *télos* is “more valuable” (*timióteron*) than and “prior” (*próteron*) to matter and potency.¹⁹⁰

¹⁸⁸ In the case of humans, for instance, physical maturity comes around 37 years (*Pol.* VII. 16.1335a28), and mental maturity comes around 50 years (*Pol.* VII. 16.1335b33).

¹⁸⁹ I have changed Ross’ translation in one point: instead of “action” I have written “function”, because it is the word I am using for the term *érgon*.

¹⁹⁰ See *Met.* IX.8. 1049b8-1050b7 and *Met.* IX. 9.1051a4-5.

Following Mirus¹⁹¹ and Natali,¹⁹² I wanted to give a metaphysical account of the word perfection, beyond the biological one. At the same time, having noted that, I will emphasize the value of the *télos* in the biological ground. Not only because living beings are the clearest paradigm for Aristotle, but also because it is the ontological ground on which I start for the sake of a fluent comparison between him and Bergson.

Further below, in the discussion of domains of application of Aristotelian teleology, I will come back to the notion of perfection in order to stress one aspect that I will mention here: plurality. The plurality of functions, forms, nobility or beauty in this sense, entails a polysemy of the term *télos*. In Aristotle's nature there are different kinds of natural substances. Each kind has its corresponding model of completeness and perfection. As I said, one of the main values of this kind of philosophical approach is its flexibility, its capacity to fit with any kind of natural being, without subsuming it under vast overarching principles.

In 2.2 I pose different empirical expressions of the term in the biological, human and heavenly realm. Although I will tackle the prior, inorganic stages of perfection in Aristotle's teleology, in this account of teleology I interpret the term perfection with regard to the world of living beings. Here the *télos* is related to an individual development and specific potencies. Afterwards I show that there is another view of what is perfection in the global teleology passages. The *télos* as seen there is a contribution to something much larger than individual development, but it is compatible with the plurivocity of the term goal.

2.1.b. Analogy and anthropomorphism

Usually, Aristotle establishes analogies between humans and nature.¹⁹³ Methodically speaking, analogy is the basis of teleology.¹⁹⁴ On one side, we find conscious activities and human crafts: they are both rationally directed towards something. On the other side, we find natural tendencies of nature, such as the growth of the teeth in a dog for the sake of chewing, and ultimately eating. Also, there is the unconscious work of a spider on its web, and the coordinated development of the different growing parts of a vegetable seed. The structural argument is that each phenomenon is analogous to the extent it may be understood for the sake of some ultimate perfection, at the end of the process.¹⁹⁵

However, I want to note that Aristotle did not accept every analogy. In fact, Aristotle restricted the use of analogies in philosophy, as Lloyd shows in a classic work.¹⁹⁶ In the corpus, he attacked openly different kinds of anthropomorphism, based on wrong analogies. As we will see in detail, Aristotle believes that spiders work for the sake of something

¹⁹¹ In "The metaphysical roots of Aristotle's teleology" and "Aristotle's *agathon*" by Christopher Mirus. The review of *Metaphysics* 57. June, 2004.

¹⁹² Natali, Carlo. "Problemas de la noción de causa final en Aristóteles". *Anuario Filosófico*, 32. 63. 1999.

¹⁹³ Lloyd, G. E. R. *Polarity and analogy. Two types of argumentation in early greek thought*. [*Polaridad y analogía*]. Trans. Luis Vega. Taurus, Madrid, 1987. Also Witt, Charlotte. "In defense of the craft analogy: artifacts and natural teleology", in *Aristotle's 'Physics'. A critical guide*. Ed. Mariska Leunissen. Cambridge University Press, 2015; Broadie, Sarah. "Nature and craft in Aristotelian teleology". *Aristotle and beyond. Essays on metaphysics and ethics*. Cambridge University Press, 2007.

¹⁹⁴ On analogy and teleology. Garrigou-Lagrange, Réginald. *Le réalisme du principe de finalité*. Op. cit, pp. 84-87.

¹⁹⁵ Witt, Charlotte. "In defense of the craft analogy: artifacts and natural teleology", Op. cit. Against a pedagogical interpretation of the analogy, see p. 112.

¹⁹⁶ Aristotle still used analogies frequently, but with new rigor. Lloyd, G. E. R. *Polarity and analogy*- Op. cit, p. 283. However, Lloyd finds "vitalist" remainders in Aristotle's view of the elements and psychological heavenly bodies.

perfect, but not like humans do: spiders do not deliberate. The moon is related, Aristotle says, with menstruation, but this does not entail that the moon is feminine (*HA.VII. 582a35-582b2*).

One of the clearest cases in which Aristotle seems to despise anthropomorphism is in the theological context, where “human beings model the shapes of the gods on their own” (*Pol.I. 2.1252b25*).¹⁹⁷ It would be absurd to say (with the poets) that the gods are envious (*Met.I. 2.983a-5*). It would be wrong to say that among gods there is a monarchy (*Pol.I. 2.1252.23-25*). It would be inaccurate to say that they sleep, like Endimion: but it does not mean that every analogy is absurd; gods are capable of contemplation or *theorein*, like the human philosophers (*NE.X. 8.1178b.10-20*). Also in *Met.XII. 7* and *Met.XII. 9* Aristotle lists several analogies between divine life and human psychology. So *certain* analogies are rigorous, but *not every* analogy: humans and gods are not similar because of their common human form, but because of thought (*Met.XII. 1074b-15*).¹⁹⁸

Nevertheless, Aristotle does not seem to have a problem extrapolating human actions to animal behavior or embryology, for instance. In *Phys.II*, a treatise on natural science written for the “student of nature”, Aristotle starts talking about the final cause by using exclusively human psychological examples:

“And again, a thing may be a cause as the end. That is what something is for, as health might be what a walk is for. On account of what does he walk? We answer 'To keep fit' and think that, in saying that, we have given the cause. And anything which, the change being effected by something else, comes to be on the way to the end, as slimness, purging, drugs, and surgical instruments come to be as means to health: all these are for the end, but differ in that the former are works and the latter tools” (*Phys.II. 3.194b30-195a2*).

After the example of the walker (used also for the same goal in *Met.V. 1013a32*) and the surgical instruments, we find in *Phys.II.3* the example of the statue and the statue maker. The doctor, the walker, the artist and their actions are considered models for natural explanation. Afterwards, in *Phys.II.7* Aristotle tries to summarize the doctrine of the tetralogical causality of *Phys.II.3*. Then he uses an anthropomorphic example again: the battle. He asks about the final cause of a war. “Or it is what the thing is for: they fought for dominion” (*Phys. II. 7. 198a15-20*). Dominion is then the Aristotelian example of final cause. First the action of the walker, the doctor, and the sculptor and, second, the action of the fighters are Aristotle’s models for natural causality. Maybe this can be striking for a scientist nowadays.

Implicit in this approach is a philosophy of nature and the human being. It will take this section and the next one to clarify it. It is clear that human practices and natural phenomena are analogical items for Aristotle. In two places in *Phys.II* Aristotle states that human art is an “imitation” of nature.¹⁹⁹ In this context, nature is, according to Aristotle, *better* than techniques. As we saw Aristotle says in his biological treatise *PA*: “Yet the final cause (*tò*

¹⁹⁷ For this idea of divine monarchy see *Met.II. 2.997b10*.

¹⁹⁸ Is important to remark that *Met.XII. 1074b-15* nuances the negative idea of traditional analogies. In this passage Aristotle grants philosophical value to traditional myths, despite the anthropomorphic and zoomorphic analogies.

¹⁹⁹ *Phys.II. 2.194a21* and *Phys. II.8. 199a16-17*.

hou héneka) and the good (*tò kalòn*) is more fully present in the works of nature than in the works of art” (*PA.I.* 1.639b19-21).²⁰⁰

On my reading, the argument runs as follows: teleology implies perfection. Thus, human rational actions are teleological. But nature is *more* perfect than human actions. From this perspective, human actions imitate nature in the sense that they resemble nature.

The following passage is surely one of the clearest statements of the analogy between human works and works of nature:

“Things are done for something. Therefore they are by nature such as to be for something. Thus if a house were one of the things which come to be due to nature, it would come to be just as it now does by the agency of art; and if things which are due to nature came to be not only due to nature but also due to art, they would come to be just as they are by nature. The one, then, is for the other. In general, art either imitates the works of nature or completes that which nature is unable to bring to completion. If, then, *that which is in accordance with art is for something, clearly so is that which is in accordance with nature.* The relation of that which comes after to that which goes before is the same in both” (*Phys.II.* 8.199a11-20, italics are mine).

In his teleological works, Aristotle not only talks about human activity like walking. He adds artifacts, and, in my view, precisely for the very same purpose. Crafts are the expression of human consciousness or human work.²⁰¹ Their role in Aristotle is to symbolize human actions. Human artifacts, humans and animals are potentially analogical, in this sense. A bed, an animal, a human being are analogues in *PA.I.* 640b19. At the very beginning of *Phys.II.* 1, Aristotle starts by differentiating rigidly natural beings (he mentions animals, plants and the four simple elements) and artificial beings (*Phys.II.* 1.192b10-11). The reason for this dichotomy is that the latter group, composed of artifacts, comprises beings that have no internal principle of movement. Aristotle focuses on the fact that this lack entails that crafts (in that case, beds) cannot reproduce themselves. But subsequently he establishes a solid link between one realm and the other, because of the form. Artificial beings and human activities, on one hand, and natural process, on the other, constitute the basis of this analogy, where the form is involved. Crafts, on the one hand, and natural beings, on the other, have to be understood according to their peculiar form. Aristotle begins to make this conceptual connection when he compares the form of an organic being and the form of the bed, avoiding the aforementioned difference. Among the organic beings, he says, the form is internal as a principle of movement and change; in artifacts, the form is external.

The form and function are the point of the analogy between the natural being (*physikón*) and the artificial one (*technikón*):

“A hatchet, in order to split wood, must, of necessity, be hard ; if so, then it must, of necessity, be made of bronze or of iron. Now the body, like the hatchet, is an instrument; as well the whole body as each of its parts has a purpose, for the sake of which it is; the body must therefore, of necessity, be such and such, and made of such and such materials, if that purpose is to be realized” (*PA.I.* 1.642a10-13).

In his embryological account, in *GA.II*, both the difference and the affinity between both sides is addressed in the same passage:

²⁰⁰ Four more examples: *Phys.* II. 8.199b30-31, *PA.I.* 641b11-13, *PA.I.* 639b25-640a and *PA.I.* 639b16.

²⁰¹See Broadie, Sarah. “Nature and craft in Aristotelian teleology”. Op. cit.

“...heat and cold may make the iron soft and hard, but what makes a sword is the movement of the tools employed, this movement containing the principle of the art. For the art is the starting-point and form of the product; only it exists in something else, whereas the movement of nature exists in the product itself, issuing from another nature which has the form in actuality” (GA.II. 1.734b19-735a4).²⁰²

Although there is a definite reason for sharply distinguishing crafts such as hatchets and swords, on the one hand, and natural beings, on the other,²⁰³ in the end Aristotle’s general discourse on natural causality gives more relevance to the common element. The form and the function are the common element. There is also a comparison between the matter of the bed (wood) and the matter of the organic being (flesh and bone): they are both *relative to the form*.²⁰⁴ Human actions, human artifacts and natural entities are thus analogues of each other. At least in one case, Aristotle also takes this very same analogy the other way around: the plot (*ho mythos*) of the tragedy is the *télos* of the tragedy (*Poet.*6. 1450a23), which ultimately may lead to its cathartic function. In order to explain this main feature of tragedies, which in the end is something that we construct (*synístasthai*, *Poet.*1. 1447a-2), he says that it is “like the soul” (*oion psychè*) of the artifact (*Poet.*6. 1450a39). Shortly afterwards, talking about the ordered structure of elements and magnitude, he comes back to the organic analogy (1450b35-1451a5). By no means does it entail mixing both realms. The world of artifacts is the world of extrinsic teleology, whereas the world of natural beings deals with immanent teleology. The case of the tragedies is an exception that shows the inverse use of the analogy. By *mythos* Aristotle means an especially sophisticated kind of teleological union between parts and wholes, and he recalls the case of the soul. To this extent, we can see well how art imitates nature.

It is important to notice that crafts are *not* part of immanent teleology, since their directedness is extrinsic. Crafts are excluded from immanent teleology from the beginning of the *Physics*. However, they are very useful for understanding natural teleology insofar they are an expression of human directedness. Their goal is human nature and because of their evident directedness, they offer a clear example for grasping the meaning of natural teleology.

We know now how the analogy between the realm of intentional activity and the natural unconscious realm works. It is time to explain why Aristotle proposed this in a treatise on natural causality.

As far as I am concerned, the only rejection of the possible objections of this analogy can be found in *Phys.*II.8, which is a defense of anthropomorphism or, moreover, biomorphism. In the following passage Aristotle affirms that our goal-directed actions cannot really be identified with inquiry and deliberation, since these are merely species of goal-directed actions.²⁰⁵

“The point is most obvious if you look at those animals other than men, which make things not by art, and *without carrying out inquiries or deliberation*. Spiders, ants, and the like have led people to wonder how they accomplish what they do, if not by mind. Descend a little further, and you will find

²⁰² There are at least two more analogies in *GA.*II. *GA.*II. 740b25-30 and *GA.*II. 743b15-25.

²⁰³ As he does at the beginning of *Phys.*II. 1 .

²⁰⁴ “It is also used for the shape and form which accords with a thing’s account. Just as that which is in accordance with art and artificial is called art, so that which is in accordance with nature and natural is called nature...”. *Phys.*II. 1.193a30-193b5.

²⁰⁵ *Phys.*II. 8199b27-28. See Broadie, Sarah. “Nature and craft in Aristotelian teleology”. Op. cit.

things coming to be which conduce to an end even in plants, for instance leaves for the protection of fruit. If, then, the swallow's act in making its nest is both due to nature, and the spider's in making its web, and the plant's in producing leaves for its fruit, and roots not up but down for nourishment, plainly this sort of cause is present in things which are and come to be due to nature. And since nature is twofold, nature as matter and nature as form, and the latter is an end, and everything else is for the end, the cause as that for which must be the latter" (*Phys.*II. 8.199A20-34, my emphasis).

Here Aristotle affirms that goals are in nature, sometimes far from human consciousness. It is found in entomology and also in plant growth, and it does not mean anthropomorphism. Spiders do not deliberate like humans, but they still have things in common with us. The same happened with gods: they do not dream, they are alien to envy, but they think. In this case, transferring immanent teleology to spiders and plants is right, and is not part of anthropomorphism. Aristotle himself would reject the analogy in terms of deliberation because of its anthropomorphic illegitimacy. A correct analogy may imply distinguishing similarities and differences with equal clarity.

The analogy between humans and nature is strengthened in a second way in *Phys.*II. 8: namely, with regard to failure. Natural beings tend toward their own form and function *regularly*. The problem is that sometimes there is no accomplishment in nature. Human failures and broken artifacts do not attain always their ends. The fulfillment of the proper goal happens always (*aei*) or most of the time (*hos epì tò poly*): this can be applied to human affairs and, again, also to nature. The animal born deformed is the example of "natural failure".²⁰⁶ It helps Aristotle to elaborate the analogy between the human conscious world and the natural world. Given that art imitates nature because nature is more perfect, and given that failures happen exceptionally in nature, it is legitimate to establish another analogy. I agree with Witt on calling this "argument from mistakes".²⁰⁷ In the end this analogy is derived from the regularity of the good order of nature and reason. Failure is seen as exceptional in this context.

Ultimately, I think that the constant teleological analogy between the human realm (intelligent activities and crafts) and natural phenomena is held for two reasons. The first one is only methodological. We know the human world better, since it is our perspective. And then we can move beyond through analogy. Aristotle openly defends this method at the beginning of *Phys.*I.1, when writes:

"The natural course is to proceed from what is clearer and more knowable to us, to what is more knowable and clear by nature; for the two are not the same. Hence we must start thus with things which are less clear by nature, but clearer to us, and move on to things which are by nature clearer and more knowable" (*Phys.*I. 184a17-22).

There is a more important reason for using analogies throughout these works. It is grounded in how Aristotle conceives human beings and their legitimacy for making rigorous analogies. A philosophy of man is here implied. If we resemble nature, as Aristotle says, it is because we are part of nature. Intellect is part of nature: "For just as the intellect (*ho nous*) acts for the sake of something, nature (*he physis*) acts in the same way; and this something is its end (*télos*)" (*DA.*II. 4.415b15-18).

In the argument of immanent teleology, analogy is grounded upon a regular perfection that

²⁰⁶ *Phys.*II. 8. 199a33-199b5.

²⁰⁷ Witt, Charlotte. "In defense of the craft analogy: artifacts and natural teleology". Op. cit.

different phenomena have in common. There is, as I said, a genuine plurivocity regarding the Aristotelian *télos*, but at the same time, one common meaning. There can be great differences between the specifics of that perfection, but its immanent tendency towards completeness establishes the similarity. The efficacy of a hatchet, the wise practice of a surgeon, the unconscious work of a spider, the correct development of an embryo or a seed are analogue to a certain extent: they exist all for the sake of something good. Nature is more perfect than art, but resembles it. Thus, Aristotle insists on human actions for two reasons: intelligent actions are easier to understand for the students, and human beings are part of nature too, since they tend immanently towards one *télos*.

We start with human nature, like the walker. The next step is to transfer analogically this teleological idea of tendency to non-human natural beings, like plants and spiders. They also have *their own horizon* of specific perfection. Perfection and analogy are thus intimately linked in the teleological argument.

One last issue of analogy needs to be addressed. Until now I have referred to *Phys.II*. The perspective of this treatise is individual teleology, the paradigm of teleology in Aristotle. In the examples of global teleology that we will see in 2.2, the analogy between human techniques or crafts and natural phenomena is partially absent. Although the presence of the analogy is poor there, in comparison with the individual teleology excerpts from *Phys.II*, I believe that there are still analogic elements in all these passages except one. Global teleology is philosophically less developed than the other. This means, for instance, that the analogical method is less clear, although the perfective element is rapidly noticeable.

We will see these texts in detail in 2.2, but for the moment we can say something regarding the analogies. I will tackle here only two cases of the use of analogy. One of the most important texts that support the existence of immanent global teleology in Aristotle is *Met.XII.10*. It is the only text in which Aristotle covers the whole universe within one panoramic glance. The perfective element is the good arrangement of the parts (he mentions different kinds of animals). Aristotle compares the whole universe with a household and an army, not with a human body or a human action. This microcosmos and macrocosmos analogy does not refer the universe to one organism, but to a compound of them.

I observe some precaution with respect to this organic analogy in the field of cosmology. Aristotle compares the world, an ordered and hierarchical sum of entities, with two human constructs without soul like the household and the army. Aristotelian global teleology does not imply a soul of the world. He did not accept that doctrine from the *Timaeus*. To my knowledge the idea of the universe understood as an organism is referred to once in the corpus (in *Phys.VIII. 2.252b*) and he does not reject openly the Platonic notion of *anima mundi* in this chapter concerning the origin of movement.²⁰⁸ In fact, Aristotle seems to accept a comparison between the world and an animal in this passage. The idea of the rejection of the soul of the world is mostly an argument from silence. He does not affirm such a notion anywhere. What interests us now is that Aristotle arranged an artificial compound of entities (an army) and a natural compound of entities (a household) for proposing the analogy. These two, army and household, are compounds of entities that appear to us as something “clearer”. The ground for the analogy is its paradigm of perfection: the arrangement of the parts. I think

²⁰⁸ “Aristotles seems to assume a microcosm-macrocosm analogy in all three objections”. Blyth, Dougal. *Aristotle’s ever-turning world in Physics 8: Analysis and commentary*. Brill, Leiden, Boston. 2016, p. 46.

that the lack of soul of these two examples is relevant, since it does not lead to Platonic assumptions. Aristotle's global teleology is still a particular conception of the world.

Other global passages deal with the term "imitation". Again, we will deal with them in 2.2, so the only thing I would like to briefly discuss here is the analogical element. Here the use of analogy is minimal, but there is still analogy in this "language of desire".²⁰⁹ In *Met.*IX. 8 and *GC.*II.10 Aristotle talks about imitation among inorganic beings. In the second case, the philosopher calls imitation the general cycle of elements. In *DA.*II. 4 and *GA.*II. 1 he talks about imitation regarding plants and animals through cycles of reproduction. In these cases, the only analogic element that I have found is in fact the verb. Imitation here means something different from the "imitation of nature" by art and far from aesthetics. In this case, Aristotle uses repeatedly the term imitation. It is a choice that is, now more than ever, full of Platonic echoes. In these specific cases, perishable beings reproduce themselves for the sake of something good: taking part of eternity. Perfection means here to *contribute* with individual powers to something beyond individuality. But we will deal with that later.

The original and "clearer" sense of the verb, to imitate (*mimēsthai*), is the conscious and human one. According to Aristotle, imitation is something connatural (*symphyton*) to us. We learn by imitating (*Poet.*4. 1448b5-10), and that is the context of the term in aesthetics for instance.²¹⁰ There is a second well-known use of the mimetic language, to be found in Aristotle's natural works. As we have seen above, he repeats many times that "arts imitate nature". The ultimate meaning of this Aristotelian mantra is resemblance. Aristotle is still talking about the human realm, he is talking about arts, technical skills, although he is comparing it with nature.

There is a third context of imitation. In the four texts on global teleology, the meaning of the verb takes some steps further. As we will see, Aristotle attributes imitative qualities to elements and vegetables. In this case, imitation means, as we know, an ontological contribution and participation. This teleological activity is absolutely unconscious. It has nothing to do with imitation in terms of intentionality, as we have them in the *Poetics*, and it is not the imitation of nature, attributed to human arts in *Physics*.

The five global passages that I already have introduced have analogical features, but only in the first one, *Met.*XII. 10, were they explicit. However, even in that case, the analogy was not like the analogies in *Phys.*II and other places. The entire universe is not compared with one organism, but with one household and one army. They are items without a soul. In an old publication on organic analogies, G. Conger holds that Aristotle is not a microcosmic author.²¹¹ He did not use the analogy between cosmos and organism. The most he does is to not reject it in *Phys.*VIII. 2.252b. The imitation passages also contain enough analogical elements, borrowed from rational imitation, but this is the same likeness that permit us to understand distant phenomena in a clearer way.²¹²

²⁰⁹ Kahn, Charles. "The place of the prime mover in Aristotle's teleology". *Aristotle on nature and living things*. Ed. A. Gotthelf. Bristol, 1985. For analogy and metaphor: *Poet.* 21. 1457b6-9.

²¹⁰ For the distinction between poetic imitation and the imitation of nature in technical processes, see Halliwell, Stephen. *The aesthetics of mimesis*. Princeton University Press, 2002, p. 26 Witt, p. 113. For "resemblance" in Johnson, Monte Ransome. *Aristotle on teleology*. Oxford Aristotle Studies, 2005, p. 147.

²¹¹ Conger, George. *Theories of macrocosms and microcosms in the history of philosophy*, Columbia University Press, NY. 1922. p. 10-11.

²¹² For Lloyd the passage of elementary imitation through cycles is a remainder of "vitalist notions" of the previous thinkers. However, he does not state that Aristotle is hylozoist. Lloyd, G. E. R. *Polarity and analogy*. Op. cit., p. 247, 271, 282.

2.1.c. Hierarchy and anthropocentrism

The inclusion of this section has been motivated by M. R. Johnson's monograph *Aristotle on teleology*, especially its conclusion. He writes:

“Because non-human organisms do not have conscious goals or purposes, we assume that it is anthropomorphic to attribute ends to non-human things such as animals and plants. A consequence of this avoidance of anthropomorphism is the acceptance of anthropocentrism: if only humans can be the subjects of purposes and values, then only humans can be objects of purpose or value, and thus have ends”²¹³.

Here I introduce a new term: anthropocentrism, different and even opposed to anthropomorphism. There are different kinds and degrees of anthropocentrism in the history of philosophy, as we will see soon, but what I call *absolute* anthropocentrism concedes goals and perfectiveness *only* to gods and human beings, by identifying the mind with perfectiveness. In absolute anthropocentrism human beings are not only the most perfect beings within nature, but also the only ones that have proper goals. Absolute anthropocentrism conceives nature always in relation to human goals, and hence the goal of individual natural entities is necessarily subordinated to human goals. An absolute anthropocentric position can include providence and creation, providence without creation, and can also disregard both. Perhaps the most famous anthropocentric account of nature can be found in one passage of the first book of the Bible, which includes providence and creation.²¹⁴

Until now I have addressed the notions of perfection and analogy in a pluralistic way. This means basically what Johnson says: the correct anthropomorphism, the rigorous biomorphic analogy, entails a “challenge to teleological versions of anthropocentrism”²¹⁵ I also believe that immanent teleology has some sort of ecological meaning or “biophilia”: this approach to natural philosophy entails a “recognition that other things besides humans have intrinsic value”²¹⁶.

According to anthropocentrism we cannot think about natural beings beyond their relation with human beings; according to biomorphism or a correct anthropomorphism, we should be able to. There are different kinds of perfection in nature. There is a common perfection between every living being, and life (and not mind) is the paradigm. The model of immanent teleology implies both a philosophy of nature and a philosophy of human beings. As I said, the Aristotelian conception of man is a naturalistic one. This is an implicit philosophy of anthropology that cannot be found in *Phys.II*, but I still consider it a structural element of immanent teleology. It is necessary to complete this account of Aristotelian nature and humans by nuancing the pluralism, mentioned in sections a) and b), and also defended by Johnson.

I give three examples: Plato, the Stoics and Descartes. They are influential thinkers of absolute anthropocentrism in ancient and modern philosophy.

²¹³ Monte R. Johnson, *Aristotle on teleology*, Cambridge University Press, 2008, pp. 290-293.

²¹⁴ One can interpret in this way *Genesis*. 1. 26.

²¹⁵ Monte R. Johnson, *Aristotle on teleology*. Op. cit., p. 291.

²¹⁶ *Ibid.*, pp. 293. For “biophilia”, p. 290

As I said above, Plato defends a transcendental teleology, which includes providence and also divine creation. In this framework, heavenly beings and human males are intelligent beings and thus they have their own goals. In the end, Plato's idea of a genuine goal is restricted to these two types, while the rest of the species in nature is conceived as degraded forms. According to *Timaeus*. 90e-92c the rest of animals were sinful humans in the past. Following this passage literally we can say that for Plato human females, birds, quadrupeds, snakes and fish were human males in the past and afterwards became what they are through reincarnation.²¹⁷

In Cicero we have a clear account of the Ancient Stoic anthropocentrism.²¹⁸ The passages from *On the nature of the gods* add to the question of providence a clearer conception of what anthropocentric teleology might be. The representative of Stoic thought says in this dialogue:

“For whose sake, then, would one say that the universe was formed? For the sake, undoubtedly, of those animate beings that exercise reason. These are gods and men, whom nothing assuredly transcends in excellence, since reason is the highest of all things. It is thus credibly established that the universe and everything that is in it were made for the sake of gods and men” (*De natura deorum*. II. Chap. 53. 133).²¹⁹

The last remark states clearly that the goals of natural beings are necessarily related to human and divine goals. Their value and completeness are to refer to intellectual beings. Hence everything is relative to gods' and mankind's value. The next text shows us how it can be so:

“But it will be asked for whose sake so vast a work was carried out. Was it for the sake of trees and herbs, which though without sensation are nevertheless sustained by Nature? No, that at any rate is absurd. Was it for the sake of animals? It is equally improbable that the gods went to such pains for beings that are dumb and without understanding. It must, then, be admitted that this wealth of things was provided for man, unless, perhaps, it is the great abundance and variety of fruits, and the pleasantness not only of their taste, but also of their smell and appearance, that throws a doubt upon their having been bestowed by nature upon man alone! So far are they from having been also provided for the sake of animals, that we perceive the latter to have been themselves created with a view to man. What other end do sheep serve except that of clothing men with their wool, when it has been prepared and woven?” (Cicero. *De natura deorum*. II. Chap. 63. 158).²²⁰

The last passage is relevant for us, since it clearly shows how to understand the Stoic interspecies anthropocentric teleology. It shows the role played by non-human species in the framework. Like in one Aristotelian interspecies passage,²²¹ we have here a natural scale interpreted in global teleological terms: the inferior's goal is to serve the superior. This means that plants (and their fruits) are for the sake of animals and humans, since the latter are more perfect. Animals are for the sake of humans, because the latter are *better*. As we can see here, the Stoic interprets the natural scale or ontological hierarchy in teleological terms. This allows him to conceive the whole of nature as a hierarchical web of subordinated goals. Each one is relative to the next step further in the scale, and especially “with a view to man”.

²¹⁷ To this extent Plato's anthropocentrism is human-male-centrism. For the laws of decadence through transmigration see also *Laws* X. 904c-905e.

²¹⁸ See also Crhysippus in *Stoicorum Veterum Fragmenta*. Vol. II §1157. Ed. Von Arnim. Teubner, Stuttgart, 1964, p. 333.

²¹⁹ Cicero. *On the nature of the gods*. Francis Brooks. Methuen, London, 1896, p. 155.

²²⁰ *Ibid.*, p. 143.

²²¹ I mean *Pol.I.8*. See 2.2.b. “Ecology: interspecies order”.

Descartes distrusted final causality. For him transcendental teleology is useless.²²² The founder of modern philosophy is a founder of non-providential anthropocentrism. In the biological individual realm everything is mechanics and thus animals do not have such a thing as a specific form or soul.²²³ In Descartes we can only talk about human goals, based on our spirit. But there is no point in saying that plants or animals have goals, not even in saying that those goals are “with a view to man”. Descartes dispenses with any kind of teleology in nature, he rejects extrinsic and immanent teleology.

For absolute anthropocentrism, it is impossible to understand living beings without reference to humans and in some cases above ultimately to gods. In comparison with Aristotle, these previous visions share a restricted understanding of what a natural goal is. In the case of Descartes, there is pure anthropocentrism, since only man has goals. In the case of Plato, the vast plurality of goals in nature is referred to human males, who are the paradigm of perfection (while the rest is conceived as decadent). The world of living entities, such as plants and animals created by the demiurge, has its absolute center in the human being. The two Stoic passages show how the rest of nature can have its own goals, although its value is ultimately relative to intelligent beings, like gods and humans.

Aristotle’s understanding of nature challenges the Platonic, Stoic and Cartesian conceptions of nature and human beings. Johnson is right in saying that *correct* anthropomorphism automatically implies the rejection of *absolute* anthropocentrism. In Aristotle humans are not isolated in nature. Aristotle conceives non-intelligent goals in nature.

As a consequence I believe that Aristotelian pluralism must be nuanced. In Aristotle there is neither “radical egalitarianism” nor “arbitrary relativism”.²²⁴ While he recognizes non-human life, he defends a hierarchy in which intrinsic perfection counts.²²⁵ In the very last two pages of his work Johnson addresses the question of the hierarchy and the position of human dominance, something that is a key part of Aristotelian universe. The scholar himself asks: “But does this kind of hierarchy send us right back to the position of human dominance, and so effectively amount to the anthropocentrism that we were trying to avoid?” And he continues: “One answer is that, even if it did, at least we would have a naturalized, objective basis for that apparently inevitable axiology”.²²⁶ Secondly, Johnson says that actually there is no anthropocentrism in Aristotle and gives a rough outline of what an Aristotelian environmental ethic can be: it may regard “exploitation of nature with reference to the ends of other natural entities”.²²⁷ Then the interpreter seems to link the idea of recognition with that of the notion of limit of acquisition in *Pol.I.10*. Given the recognition of value in life of any kind, exploitation would never be legitimate beyond the natural limit of acquisition, proportional to our limited necessities.

²²²Descartes, René. *Principes de la philosophie*. III. §47 and also I. §28.

²²³Descartes, René. *Discours de la méthode*. V.

²²⁴Monte R. Johnson, *Aristotle on teleology*. Op. cit., p. 293.

²²⁵I think the biologist Simpson summarizes well the opinion from the evolutionary perspective: there is no intrinsic value for establishing hierarchies. Perfection, as such, is an empty word: “Examination of the actual record of life and the evolutionary processes as these are now known raises such serious doubts the oversimple and metaphysical concept of a pervasive perfection principle that we must reject it altogether”. Simpson, George G. *The meaning of evolution. A study of the history of life and its significance for man*. Yale University Press, 1960, p. 2421. However, I think that Simpson uses some perfective concepts: adaptive powers are for Simpson a valid evolutionary criterion.

²²⁶Monte R. Johnson, *Aristotle on teleology*. Op. cit., p. 293.

²²⁷Ibid., p. 293.

I defend a middle ground position for Aristotle, one which is not so opposed to Plato. The Aristotelian human is to be found on a natural and, ultimately, ontological scale. The human being is inferior to supralunary beings (*NE.VI.7.1141b-5*), although it is prior in nature in comparison to any other being within the infralunary realm. Human beings are a recapitulation of the physical world, since all the different grounds of life are contained in his or her own nature. Second, mankind has unique characteristics. Mankind summarizes the previous stages and adds the most perfect ones, but as Rémi Brague says, this “does not mean an *absolute* anthropocentrism”.²²⁸ Also, I think that this rooting of human faculties in the natural world is what Johnson means by “naturalized”. *If* Aristotle was an anthropocentrist, it would be a *naturalized anthropocentrism*, Johnson says. But finally, he rejects that label. Johnson prefers the term “naturalized axiology”.²²⁹ The ultimate meaning of this term in Johnson is basically practical or ethical: axiology has to justify exploitation of nature. Nevertheless, apart from this possibly legitimate conclusion, there is still an ontological superiority of human beings in Aristotle.

Aristotle’s naturalized anthropocentrism mitigates the previous conceptions of human beings, and challenges, *après* or *avant la lettre*, those frameworks in which man is the goal of inferior natural beings or even the only goal of nature. However, while the term “anthropocentrism” means that human goals are *more important* than animal goals, I think it must be applied to Aristotle. Humans in Aristotle summarize or represent the rest of the faculties in nature, and also add some unique ones. Unique faculties like the intellectual ones are grounded, in Aristotle, in the biological faculties.

If the “centrism” means importance or uniqueness, this might imply a certain anthropocentrism. But notice that I add the term “mitigated”, for it is necessary to distinguish sharply this point of view from Plato’s. Again, with Johnson I think that absolute anthropocentrism is incompatible with immanent teleology, but I do not think that the same conclusion follows from the mitigated version. That is, *mitigated anthropocentrism* is a structural part of immanent teleology and it is perfectly compatible with pluralism and anthropomorphism.

Before discussing specific features of human beings in Aristotle, I want to draw attention to the notion of hierarchy implied and almost never explicit in his writings. We have to see that man is in a specific position on the natural scale. Moreover, we will see that this scale is the structure of his own knowledge: in general terms, the scale represents man’s own lower faculties. After noticing this we will be able to understand the naturalized anthropocentrism of Aristotle, where ethics and intellect are grounded on nature. Only afterwards will we be able to highlight human uniqueness, named by me as summary and uniqueness.

The scale of being is implied in multiple texts of Aristotle but he only explicitly addressed it in a few. To be sure, the Aristotelian scale is not a mere scale of living sublunary beings. It includes a wider range of entities. Among the sublunary realm it also covers the four sublunary primary bodies (fire, air, water, earth). Besides, the scale rises upwards to the heavens and up to god, the prime mover. Supralunary eternal entities like the sun, the moon,

²²⁸ “La plus grande naturalité de l’homme ne vaut que *par rapport aux animaux*, et elle n’implique pas un anthropocentrisme absolu”. Brague, Rémi. *Aristote et la question du monde*. PUF, Paris, 1988, p. 231, italics are mine. Also *ibid.*, p. 271. On recapitulation *Ibid.*, p. 234.

²²⁹ Monte R. Johnson, *Aristotle on teleology*. Op. cit., p. 293.

the stars and the first heaven also have their particular position in the scale. The scale includes elements, living beings, human being and heavenly bodies, as *DC.II. 12* suggests.²³⁰

However, I focus on living beings. Although the idea is not developed, Aristotle has in mind an rising continuum in *DA*. There is, at least, one passage that shows clearly so: “There is also this parallel between the cases of soul and of the figures: what is prior in the sequence is always implicitly present in the other figures or ensouled things (the triangle in the rectangle, the nutritive in the perceptive)” (*DA.II. 3.414b29-32*). The perspective there is that of a variety of faculties and the types of souls, simultaneously. This means both that the beings capable of perceive also have the nutritive faculty. There is a hierarchy.

The so-called rising continuum in the living realm is described only in two places in the corpus. In fact, they are the only texts in Aristotle in which he addresses the topic of nature in a panoramic way. This panorama has the form of a natural scale.

In the first case, on Ascidiarians, between plants and animals:

“For nature passes from lifeless objects to animals in such unbroken sequence (*synechos*), interposing between them beings which live and yet are not animals, that scarcely any difference seems to exist between two neighbouring groups owing to their close proximity” (*PA.IV. 5.681a10-14*).

Here there is the second passage on the natural scale of biology:

“Nature proceeds little by little from things lifeless to animal life in such a way that it is impossible to determine the exact line of demarcation, nor on which side thereof an intermediate form should lie. Thus, next after lifeless things in the upward scale comes the plant, and of plants one will differ from another as to its amount of apparent vitality; and, in a word, the whole genus of plants, whilst it is devoid of life as compared with an animal, is endowed with life as compared with other corporeal entities. Indeed, as we just remarked, there is observed in plants a continuous scale of ascent towards the animal” (*HA.VIII. 1, 588b3-7*).

These texts highlight what Lovejoy calls the “principle of continuity”. Although there is not a general exhaustive classification of biological species in Aristotle, there is in this view a *classification of faculties*.²³¹ Although he admits that there are transitional forms in Life, such as the ascidians, there are sharp distinctions between realms in his conception of biology. In *DA.II. 4* we see that nutrition, growth and reproduction are part of all the living beings. With regard to the analogy between biological forms and geometry, nutrition is the triangle. It is the most basic ground of life. That is, the vegetable life. When in *NE.I.7* Aristotle asks about the goal or function of plants, he mentions nourishment and the faculty of growth (*NE.I. 7.1098a1*).

After plants and Ascidiarians we reach animals. It is true that among animals the hierarchy is unclear. Aristotle affirms that “animals must necessarily have perception” (*DA.III. 12.22-33*), namely the sense of touch (*DA.III. 12.434b14*). In *DA.III. 10* it seems that desire is also a necessary faculty of animals. In *DA.III. 11* he mentions “imperfect animals” that have only the sense of touch (from which they can experience, incidentally, pain and pleasure) (*DA.III.*

²³⁰ *DC.II. 12.292a14-292b25*. I come back to this passage in 2.2.b, in the section called “The goal of heavenly bodies”.

²³¹ Lovejoy, Arthur. *The great chain of being: a study of the history of an idea*. Harvard University Press, Cambridge, 1964. On this topic also the brilliant article: Wolff, Francis. “L’animal et le dieu: deux modèles pour l’homme”. *L’être, l’homme, le disciple*. PUF, Paris, 2000, pp.116-122.

11.434a4). A bit further he says that while touch (and taste) are for living, “the rest of the senses are for living well” (*DA.III. 12.25-27*).²³²

It seems then that there is a hierarchy between animals, regarding their capacities. There are those that only perceive through touch, and the rest are superior. Aristotle makes this distinction in different regards. Aristotle says, “it is evident, then that perceiving and understanding are not the same thing; for all animals have a share of the former, but few of the latter” (*DA.III. 3.427b7-9*). Also, regarding imagination, he says: “while imagination is present in many beasts, *lógos* is not” (*DA.III. 3.428a28*). Memory, and hence prudence, is also present in some animals, and in some there’s not (*Met.I. 1.980a25-980b27*). *Some* animals (not many), apart from human beings, have the power of understanding and remembering; and *many* (not all) have imagination. In any case, to my knowledge, there is no classification of those superior animals that can perceive through vision or hearing and that also can imagine or move themselves. Hence, there are *superior animals* and *inferior animals* for Aristotle, although he does not provide any classification with examples.²³³

Just as the plants are to be understood according to the faculty of nutrition and reproduction, and human beings according to their intellectual capacities, the possibility of deliberation and being happy, the animal kingdom is, generally speaking, sensitive to pain and pleasure, as well as desires, which are the cause of locomotion. Again, in the function-argument or *ergon*-argument chapter of the first book of *NE*, Aristotle points out the specific function of animals and mentions sentient life (*NE.I. 7.1098a1-2*).

Finally, we reach mankind. It is at the top of the infralunary scale of beings. There are multiple texts in which Aristotle talks about man’s superiority and unique faculties,²³⁴ but the first feature I want to mention concerning Aristotle’s man is something that I have already suggested: human beings summarize the rest of the natural world. Apart from the elementary compound, it is one unique feature of humans that they participate in the rest of the biological faculties. Humans have all the faculties mentioned in the treatise *On the soul*. In my view *NE.I. 13* is one of the best examples for highlighting the idea of recapitulation in mankind. This means that humans summarize the whole scale of living beings in the infralunary realm. Moreover, as Bague suggests,²³⁵ *NE.I. 13* echoes a certain ontogeny. That means that the development of the human being, from the first embryological stage to maturity, goes through vegetable life, animal life, and, finally, human life.

While in the function-argument of *NE.I. 7.1097b35-1098a16* Aristotle recalls the natural scale and distinguishes three basic parts of it, in *NE.I.13* the philosopher links nutrition and growth, the goal of vegetable life or *phytikón* (*NE.I. 7.1098a*), to the first stage of human development, the life of the embryo. There he focuses on nutrition and dreams (*NE.I. 13.1102b-5*). In the function-argument of *NE.I. 7* the function of senses or actualization of the sensitive capacity or power (*aisthété*) is the *télos* of the animals (*NE.I. 7.1098a1*). Apart

²³² Regarding “living well” or *eu zen*, see also *DA.III. 13.20-25*.

²³³ Wolff shows that classification in Aristotle is variable and not stable: regarding habitat, the way of life, or morphology. See Wolff, Francis, “L’animal et le dieu: deux modèles pour l’homme”. *L’être, l’homme, le disciple*. Op. cit., p. 117.

²³⁴ See Clark, Stephen. *Aristotle’s man: speculations upon Aristotelian anthropology*. Clarendon Press, Oxford, 1975, and Bague, Rémi. *Aristote et la question du monde*. Op. cit. Among papers the most philosophically enlightening account of Aristotelian anthropology can be found in, again, Wolff, Francis. “L’animal et le dieu: deux modèles pour l’homme”. Op. cit..

²³⁵ Bague, Rémi. *Aristote et la question du monde*. PUF, Paris, 1988. pp. 231- 234.

from that, the faculty of desire is also implied in the animal type. It can easily be linked to the irrational principle of the human soul (*NE.I.* 13.1102b15-1103a), the *orektikòn* and *epithymetikòn*. Aristotle clarifies that the first level, the vegetable one, does not participate in reason, while the second, the animal one, does it through obedience. Already in *NE.I.* 7 the philosopher had noted that human beings both *obey* reason and *have* reason and think (*dianoúmenon*) (*NE.I.* 7.1098a2-5).

It is easy to find other passages in the corpus where Aristotle makes the analogies between children and animals clearer. Regarding the development of the body, Aristotle distinguishes mature humans from animals because of the straight posture. While they move themselves horizontally, using hands and legs, children are closer to animals (*PA.IV.* 10.686b-25).²³⁶ Aristotle is clear in saying that “children and animals” are not capable of rational deliberation,²³⁷ and in the context of chance and fortune, Aristotle states eloquently that “nothing done by an inanimate object, beast, or child, is the outcome of luck, since such things are not capable of choosing” (*Phys.II.* 6.197b7-9). Children have senses, desire and capacity of locomotion, but do not have reason. The embryo stage and childhood are linked with the natural world because human beings summarize the rest of the faculties. The progress of the human’s development shows it clearly. As I said, the vegetable faculties and the animal faculties considered in *DA* can be found in the human life.

But humans also count with privileges in Aristotle. They have unique features and faculties. We can start with physiology. Among the varied physiological peculiarities of the human beings in Aristotle’s biological approaches,²³⁸ I would say that human hands and the human’s upright position are the most meaningful.²³⁹ I think that is so because, although Aristotle himself states that nature makes each thing for one purpose (*hen pros hén*), unlike the Delphic multipurpose knife (*Pol.I.* 2.1252b-5), in the example of the hand we find an *extremely* multipurposeful organ.²⁴⁰ It is, thus, something quite special and unique. But maybe the clearer physiological uniqueness of mankind for Aristotle is the upright posture, in *PA.II.* 10.656a7-10. There Aristotle states only that humans participate in the divine (*monon metéchei tou theiou*), and that it is manifested in their upright posture. In man alone do the natural parts appear in their natural situation (*PA.II.* 10.656a12).

Once we reach the intellectual capacities of the human soul there is only uniqueness. Although some superior animals can participate in practical reason,²⁴¹ in general terms

²³⁶ Also *EN.* 1105a1 and *HA.* 588a30-588b.

²³⁷ See *NE.III.* 2.

²³⁸ On the variety of human eye colors: *H.A.I.* 10. 5-6. Humans are the only living beings that cannot move the ears: *H.A.I.* 11.21-22. They have the smallest nails and thinnest skin: *GA.II.* 6.745b15-20. They have the longest life, along with the elephant: *GA.IV.* 10.777b-5-. Human beings have a relatively perfect sense of touch: *H.A.I.* 15.494b15-20 and *PA.II.* 16.660a11-13. They have the thinnest skin. *HA.III.* 517b25-30. Other specificity is the possibility of being ambidextrous: *HA.II.* 1.498b.31, *PA.IV.* 8.684A27 and *NE.V.* 10. 1134b33. Another peculiarity is having mammals in the front: *H.A.I.* 498a. Man is the animal that dreams more: *HA.IV.* 10.537b14-15. He or she makes love at any time: *HA.V.* 8.542a27. In embryology human beings have also peculiarities, regarding the variable time of gestation and the number of fetus: *HA.VII.* 4.584a35-37 and *HA.* 585b25-30, respectively.

²³⁹ For the hand *PA.IV.* 10.687a10-688a25. For the posture *HA.I.* 15.494a27-494b, *PA.II.* 10. 656a11-13, *PA.IV.* 10. 687a5-6.

²⁴⁰ I stress “extreme” because there are in nature other things which are used for two purposes or more, like the teeth.

²⁴¹ On animals that think in Aristotle: *Met.I.* 1.980a27-b30 and *DA.II.* 3.415a7. Since friendship implies virtue or is virtue, and virtue implies any sort of reason, animal friendship, mentioned in *NE.VIII.* 1.1155a15-20, might imply some sort of virtue and reason.

animals are “idiots (*aphronéstera*) in comparison with man” (*PA.IV.* 10.686b24). The reflective capacity is exclusive to humans (*HA.I.* 488b25-27). At the top of the complex view of intellectual capacities in Aristotle can be found contemplation or *theoretiké* (*NE.X.* 7.117a18). I only need to focus on this concrete capacity. Contemplation is the most divine capacity in us (*en hemin theiótaton*, *NE.X.* 7.117a16) and entails a perfect happiness (*teleía eudaimonía*, *NE.X.* 7.117a17 and *eudaimonéstatos*, *NE.X.* 7.1178a8) and autarchy (*autárkeia*, *NE.X.* 7.1177a28). Aristotle compares it with the happiness of the divine entities (*NE.X.* 7.1177b28-1178a1, *NE.X.* 8.1178b910, *NE.X.* 8.1178b26-27). To contemplate is, for Aristotle, inaccessible for any other creature and, at the same time, the most perfect activity in the world, it is something that “in its power and value far exceeds everything” (*EN.X.* 1178a).

We have seen physiology and intellect. Another anthropological characteristic needs to be addressed. It is well known that for Aristotle humans are political animals. Sociality is a necessary characteristic of human life (*Pol.I.* 1253a-5), and the human is even more political than other political animals, more political than bees, for instance (*Pol.I.* 2.1253a7-8). In *Pol.I.2* we see that the *télos* of man, that is, “living well” or *eu zen*, only can be achieved in the polis (not in previous, imperfect or incomplete stages of communities, such as the village or the familiar tribe, *Pol.I.* 2.1252b29). This entails, among other things, that humans can contemplate *only* in the context of the city, which is the only community with autarchy or self-sufficiency. In his view, the capacity to use an articulated language shows its deeply political nature, since language can express moral or political values. This is all unique to human beings.

There is one aspect of Aristotelian anthropology in *Pol.I 2* that might reduce its superiority: another central characteristic of human beings is their *ambivalence*. A rational, well-educated individual living in the context of the city is the best *but* a vicious human being, living outside the law, virtues and cultural values is *worse than any other living being*. Human beings are for Aristotle ambivalent, since they can be the best (*béltiston*) and the worst (*cheíriston*) of nature (*Pol.I.* 2.1253a31). This so-called capacity of degradation is also another expression of human uniqueness, since vice does not have this power over any other animal.²⁴² But in any case, is important to have in mind that when I say that the human is superior to any other infralunary being in Aristotle, I do not refer to vicious specimens, since they could not qualify as such.

Now we can turn back to the main question of the section. Human beings are not *one species among others*, but rather a unique, supreme and exclusive case in nature.

A so-called mitigated anthropocentrism means also that human beings are superior to animals, *but* likewise *inferior* to other entities, such as the supralunary ones. Mitigated anthropocentrism means, thus, that pluralism is compatible with a rigid hierarchy. To some extent, there is a sharp gap between infralunary beings and human beings, and there is another one between humans and heavenly bodies. This position does not imply that animals are necessarily for the sake of humans.²⁴³ It states however that humans are by far *more perfect* than the rest of the worldly entities because of their unique capacities. At the same time, this perfection is rooted in nature. Human beings are also the hierarchical compendium

²⁴² On the contrary, animals can rise up from their natural stage to a better one while being tamed or used by human beings in higher activities. Equally, in his view, are the natural slaves or barbarians. See *Pol.I.* 5-8.

²⁴³ I am referring to Sedley and Owens, and their interpretation of *Pol.I.* 8 along with *Met.XII.* 10. See 2.2.b.

of the biological faculties. Let me use a political metaphor. Aristotle considers nature as a plurality of different entities with different goals according to their own nature. They are for their own sake, which he recognizes. It may be seen as a democratic conception of nature. At the same time, nature is not a matter of metaphysical equality where every living body is worth the same.

This account does not directly address the teleological argument, but it nonetheless helps us to understand Aristotle's pluralism better. It also explains in which sense human beings are part of nature. Thanks to their non-rational faculties there are even closer analogies in lower levels. This means that the growth of the plant is analogous to human rationality, and furthermore it is even closer to human embryonic growth. The intellect enters only after the embryo stage and the irrational childhood stage. The intellect is the end of a perfective process that starts in nature. Humans are analogous to plants, but they were *more analogous* at the beginning of their individual progress to maturity. This means that reason and humans are to be understood within nature. It explains what Johnson says about naturalizing the axiological scale. Man's excellence is, in the end, rooted in prior faculties that pertain to the world of life.

There is one more important thing to say. Almost all human faculties are natural, but some are divine. They have what I called unique faculties. The case of human upright posture can be less clear for us, since it doesn't involve any particular faculty, but the intellect is more evident. The intellect, or contemplation, is divine. This explains, for instance, why Aristotle applies his immanent teleology to the heavens, as we will see in 2.2. For the moment we have seen the basis for this analogy. Thinking means the fulfillment of human nature. It is the function of man. This *télos* can be transferred to the heavens according to Aristotle.

If uniqueness derives from anthropocentrism, the human's sum of natural faculties and unique characteristics in the infralunary realm (including his or her capacity of being the worst of all beings) point to it. Physiologically and intellectually, humans are the most perfect. They are closer than any other being to the intellectual heavenly bodies and, ultimately, to god. Aristotle's anthropology can be defined thus as a mitigated anthropocentrism, because as we saw animals and plants have their own irreducible goals too. There is more of this to be said in 2.2. In sum, humans are not alone, but they are the best.

2.1.d. Regularity *versus* luck

- Primary teleology

While perfection is the main ontological claim in the teleological argument, analogy is the basis of the teleological method. In my view, regularity is a secondary methodical element, but still crucial. It is to be found in *Phys.II.8*. Aristotle defines final causes as outcomes of a regular non-arbitrary world, opposite to luck. At that moment, lucky events have been already tackled in that treatise, in chapter 4, 5 and 6. It is natural that chapter 8 refers to them.

Basically, Aristotle says, nature tends regularly towards the best, the good, to excellence and completion.

"...because in fact we do not find any chance creature being formed from a particular seed (*spérmatos*), but A comes from a, and from b ; nor does any chance seed come from any chance individual" (*PA.I. 641b27-30*)

Regularly, new human beings are born from already existing human beings. Regularly, the sun is in a certain position, generating winter rain, for instance. Regularly, horses live horse lives, and not plant lives, for instance. Regularly, in nature, things work for the good or the best regarding specific forms. Once again, the good or the best which is attained can be understood in a wide range of phenomena: the reproduction of the species, the place of a heavenly body in the cycle or horses' habits, for instance. The point now in *Phys.II.8* is that in all these cases perfection happens regularly. There is a regular tendency toward the best among all the beings in the infralunary and even more clearly in the supralunary realm.²⁴⁴

Aristotle says:

“(…) but when a certain thing comes to be always (*aei*) or for the most part (*hos epi tò poly*), it is not a concurrent happening, nor the outcome of luck” (*Phys. II. 8. 199b23-25*).

Aristotle is pointing out the regular tendencies towards the attainment of the specific form, the actualization of the substance. “Things according to nature are as fine as can be” (*tà kata physin, hos oiòn te kállista echein, EN. I.10.1099b21-2*). Every natural being, for the most part then (if not always), is *as fine as can be*.

As I said, the argument of regularity is a methodological one, because it shows through experience that everything in nature works toward the good. But it is grounded in an ontological claim: things happen regularly for the good and not for the bad. Only afterwards do we find the “argument from mistakes”, that we saw in section 2.1.b.

- Secondary teleology: what happens only once

We have already covered the main Aristotelian texts on teleology. Now I want to add something else that will be put to good use further on in this study: Aristotle's account of chance and lucky events. This leads us to the concept of “secondary teleology”, different from the “primary” one, already known. Secondary teleology means teleology beyond the boundaries of regularity. This idea of secondary teleology is central in Chapter 3 and 4.

Augustin Mansion thinks of chance and luck as an obstacle to teleology.²⁴⁵ Against his view, Wieland was the first who avoided the opposition between *tyche* and teleology. According to Wieland, the chapters on chance and luck in *Phys.II* show what Aristotle thought about teleology in general. The result in his case was enormously exaggerated: in Wieland's view teleology suffers a severe ontological reduction. As we know the latter openly links Aristotle's doctrine of the final cause to Kant's Third *Critique* by saying that in *Phys.II* and in the whole corpus there is an *as if* teleology. For Wieland's Aristotle final causality is always retrospective, reflective and heuristic. The regular fulfillment of functions in the world is not

²⁴⁴ “We do not think that it is the outcome of luck or coincidence that there is a lot of rain in winter, but only if there is a lot of rain in August; nor that there are heatwaves in August, but only if there is a heatwave in winter. If, then, things seem to be either a coincidental outcome or for something, and the things we are discussing cannot be either a coincidental or an automatic outcome, they must be for something”.*Phys.II. 8.199b-5*. Regularity is the main thesis behind the obscure and controversial passage of rain in winter,.

²⁴⁵Mansion, Augustin. *Introduction à la physique aristotélicienne*. Op. cit.

a claim grounded in nature, but just part of the way in which we humans interpret the surrounding world.²⁴⁶

In denying the *Mansonian* assumption of obstacle to teleology in fortune, Boeri follows Wieland. Furthermore, Boeri avoids Wieland's excesses and distinguishes two teleologies. There is a primary teleology based on regular constitutive tendencies towards completeness. It is grounded in ontology and nature. It is what I have described all along these pages. It is what Mansion talks about. Boeri's account has to be understood within a line of interpretation that regards Aristotelian teleology as complex field, with alternative branches and perspectives. Also, this scholar proposes a "secondary teleology". This one is heuristic and describes the way in which we interpret accidental processes.

Take the famous example of one creditor who accidentally finds the debtor in the market.²⁴⁷ The creditor did not go to the market for the sake of finding his debtor. The converse can be said of the debtor, for sure. But after that incident, one can imagine what the creditor can think about the whole event. He will interpret and reconstruct all the process *as if* he was going to the market for the sake of recovering his money. Secondary teleology permits us to make sense of contingent things.

We can study Aristotle's idea of *tyche* or luck in his own words in *Phys.II*.²⁴⁸ In *Phys.II.6* Aristotle states that while luck happens regarding the human rational ground (the ground for bad luck –*distychía*– or good luck –*eutychía*–), there is another notion of an accidental undefined cause of singular events called *autómaton* which is not to be applied to human rational beings but to natural entities, animals and children (a horse or a human baby can have neither good nor bad luck, according to the Stagirite). While I translated *tyche* as luck, I translate *autómaton* as chance. Chance does not work in the non-rational realm, while luck does. Luck is conceived twofold: there is good luck (*eutychía*) and bad luck (*distychía*). If the creditor finally obtains his money, we have a case of good luck.

What is more important for us is that lucky or *apò tyches* events are accidental and undefined (*tò dè katà symbebekòs aóriston*, *Phys.II.196b.28. 197a8*). It is crucial to see that among these phenomena *there is no "for the sake of" or goal* (*Phys.II.197a32-35*). There is no progress towards a specific form or function neither in luck nor chance. The encounter between the debtor and the creditor could never be compared with the cases of growth or function that we have already seen. Chance and luck are not regular, like the cases of growth and function: the former cases are unstable, uncertain (*abébaios*, *Phys. II.197a.30-31*). The accidental causality of chapters 4, 5 and 6 is "obscure" (*ádelos*, *Phys.II. 5.197a10*), while the primary causality is clear in Aristotle. He considers these phenomena, causally speaking, to be secondary (*Phys.II. 198a8*). Chance and fortune are based on exceptional or singular events, so they are unpredictable or inexplicable (*parálogos*, *Phys.II. 5.197a18* and *EE.VII. 14.1247a33*). Coherently, the philosopher considers that there is no possible science of chance and luck.

Following Dudley, I defend an "indeterminist" Aristotle. This means that I do not believe that he thought of chance/luck events as being something unpredictable *for us*. I believe they are

²⁴⁶ Wieland, Wolfgang. "The problem of teleology". *Articles on Aristotle. I. Science*. Ed. Jonathan Barnes, Malcolm Schofield, Richard Sorabji. Duckworth, London, 1975.

²⁴⁷ Boeri, Marcelo. "Chance and teleology in Aristotle's Physics". *International Philosophical Quarterly* 35 (1), 1995.

²⁴⁸ Also, regarding fortune and, especially, good fortune and happiness: *EE.VIII. 2* and *NE.I. 9* and *10*.

part of nature as such, although human nature has to rely on them in a special way: *tyche* is to be found exclusively in the human practical realm.

We can distinguish a primary teleology, grounded in regularity, forms and functions, from a secondary one, which in my own terms, makes sense of singular events that cannot be repeated. Primary teleology, on which I have focused, has the status of science in Aristotle. That is not the case with the second one. I call the latter narratology, for it is a coherent account of unpredictable and singular events. It is a retrospective teleology. This alternative retrospective teleology is not relevant for Aristotle's teleology, in my view, but it will be very important when we come to Bergson's teleology, where it will be applied not to the human practical realm, but to nature as such.

2.2. Two domains of immanent teleology in Aristotle

As I already mentioned in the Introduction, I distinguish two domains of final causality in Aristotle. Since my approach to Aristotle is comprehensive, I defend that both are compatible. They diverge in the notion of perfection or *télos* that is implied. In general terms, in 2.2 I will highlight different approaches to the notion of perfection from different fields. First, there is a paradigmatic individual teleology, to be found in *Phys.II*, in *P.A.I* and also in Aristotle's works on ethics, biology or even astronomy. Then, we will look at different passages on global teleology. All these together complete the picture of immanent teleology in Aristotle.

On five occasions in the corpus, Aristotle defends a twofold understanding of the final cause.²⁴⁹ There the final cause or that for the sake of which (*hou héneka*) is seen as *hou héneka tinos* that is, “for the sake of” declined in the genitive, which is regularly considered by translators and interpreters a goal in the sense of an “aim”. And there is the final cause, *hou héneka tini*, where the teleological expression is declined in the dative. This is usually seen as a goal understood as a “beneficiary”. Without exception, these remarks are obscure and brief, and they do not shed much light on the topic. In any case, Aristotle insists five times on the twofold description of the term, so it must be considered a stable typology. Every interpreter of Aristotle has to address this problematic and uncertain question. I believe that Gelber is right in pointing out some difficulties in the common reading of the aim/genitive and the beneficiary/dative regarding some of those texts. However, to some extent I follow the line that “commentators almost universally” follow.²⁵⁰ In addition, following an important series of scholarly interpretations, that the distinction aim/beneficiary leads to a comprehensive understanding of immanent teleology, in which individual teleology and global teleology can coexist in the corpus. The goal in the sense of an aim matches with a global understanding of *télos*. And the same happens with for the sake of in terms of beneficiary.²⁵¹

²⁴⁹ See *EE.VIII. 8*, 1249b9-21, *Met.XII. 7*.1072b1-4, *DA.II. 4*.415a23-b7, in the same chapter also in *DA.II.4*. 415b15-21, *Physics.II. 2*. 194a33-6.

²⁵⁰ Gelber, Jessica. “Two ways of being for an end”. *Phronesis* 63, 2018, p. 65.

²⁵¹ “Different concepts of the final cause in Aristotle” in *Aristotle on nature and living things*, Mathesis, 1985. This theory is echoed in *Aristotle on teleology*, by M. R. Johnson, Op. cit. Some other two-fold conceptions of final cause: *Recherchez sur la notion de finalité chez Aristote*, PUF, 1969. M.P. Lerner, *Aristotle and the*

I am not as sure as Kullmann of whether the entire set of texts can be equalized in terms of meaning.²⁵² In *DA*.II. 4.415b15-21 Aristotle talks about the relation between the body and the soul, and in *Phys*.II. 2.194a33-6 about tools and their user. This is where Gelber's argument can work better. In my view *DA* II. 4.415b15-21 and *Met*.XII. 7.1072b1-2 can still be read in terms of aim and beneficiary. Both introduce the relation between one item in movement and another one stable, eternal, perfect. That happens also in *EE*.VIII.8, 1249b9-21, although the text is less clear. I will thus focus on the two mentioned passages.

First, we will read a famous passage from *DA*.2.4 on reproduction to which we will come back in the section on global teleology. On this occasion my focus is on the mentioned remark:

“It follows that first of all we must treat of nutrition and reproduction, for the nutritive soul is found along with all the others and is the most primitive and widely distributed power of soul, being indeed that one in virtue of which all are said to have life. The acts in which it manifests itself are reproduction and the use of food – reproduction, I say, because for any living thing that has reached its normal development and which is unutilated, and whose mode of generation is not spontaneous, the most natural act is the production of another like itself, an animal producing an animal, a plant a plant, in order that, as far as its nature allows, it may partake in the eternal and divine. That is the goal towards which all things strive, that for the sake of which they do whatsoever their nature renders possible. The phrase ‘for the sake of which’ is ambiguous; it may mean either the end to achieve which (*to men hou*), or the being in whose interest, the act is done (*to de hoi*)” (*DA*.II. 4.415b15-21).

In this case, the translator (J. A. Smith) writes about the end “to achieve”, which is in the genitive and might be understood as the aim. Then we have the dative, which means the beneficiary “in whose interest” we should understand the “striving”. As Gelbers says: “Scholars are in agreement that Aristotle is claiming that reproduction and whatever else living things do, such as perceive and move around, is a way of aiming or striving at sharing in what is eternal and divine”.²⁵³ I think that the basic reason for this agreement is in the clarity of the text: it does not require any speculations. In this text we see what participation can mean, in Aristotelian terms: contributing to the eternal stability of the species and taking in turn a benefit from this participation in eternity, whatever it could mean for Aristotle.²⁵⁴ This is global teleology, because the individual and perishable entity is partaking in something that goes far beyond it, something that is part of the cosmos as a whole, and namely, a central feature of the best within cosmos: eternity. It shows, in sum, the arrangement between two different levels of the Aristotelian cosmos understood as a whole, as we can find in *Met*.IX. 8 or elsewhere.

problem of value, W. J. Oates, 1963, Princeton. Also Scharle: Margaret. “Elemental teleology in Aristotle’s *Physics* 2.8”. *Oxford Studies in Ancient Philosophy*XXXIV (May 2008): 147-183. “The role of material and efficient causes in Aristotle’s natural teleology” *Apeiron* 41.3 (September 2008), pp. 27-46. Chapter 5: “Man from man, but not bed from bed: Nature, art and chance in *Physics* II”, in *Aristotle’s ‘Physics’. A critical guide*. Op. cit.

²⁵² Frans De Haas has brought to my attention the difference of ultimate meaning between these texts.

²⁵³ Gelber, Jessica. “Two ways of being for an end”. *Phronesis* 63, 2018, p. 76.

²⁵⁴ See also e.g. Johnson, who says that living beings aim at “participating in the divine and eternal, which is in turn for the benefit of (*hou heneka tini*) the living animal”. Johnson, Monte Ransome. *Aristotle on teleology*. Oxford Aristotle Studies, 2005, p. 69. In fact, that is one of the passages that Johnson accepts regarding global teleology.

In the most important book on theology, Aristotle recalls the twofold conception of final cause. This is the second passage I quote on this matter:

“For the final cause is some being for whose good an action is done (*hou héneka tini*), and something at which the action aims (*hou héneka tinos*); and of these the latter exists among unchangeable entities though the former does not” (*Met.*XII. 7.1072b1-2).

In the latter passage it is clearer that *hou héneka tini* (dative) or “for whose good an action is done” means the benefit; *hou héneka tinos* (genitive) means the aim. In this context, Aristotle gives new information: the latter, he says, is a goal that may be seen in regard with unchangeable entities (*en tois akinétois*).

As I see them, these excerpts refer to the two complementary dimensions of perfection and, thus, to Aristotelian immanent teleology as a whole. However, as I said, Aristotle’s remarks do not clarify much of how it may work. The basis of the two different domains in Aristotelian teleology can be better defended with regard to the texts and the argument within.

2.2.a. Individual immanent teleology: form and function

Individual teleology fits with the cause for the sake of which in the sense of “for what is benefitted”, it implies an ordered development in time of a certain function until its flourishing. This is the first domain of teleology. We are already familiar with it. The process of growth of an organic entity, an embryo or a seed is the paradigm of this directed progress:

“But the process of growth does not stand in this relation to nature: that which is growing, as such, is proceeding from something to something. What, then, is it which is growing? Not the thing it is growing out of, but the thing it is growing into. So the form is nature” (*Phys.*II. 1.193b15-19).

*Phys.*II shows different kinds of natural phenomena according to this model, a model restricted to singular progresses. As we have already read: “because better (*béltion*) thus— better not simply, but in relation to the reality of the thing concerned (*pròs tèn hekástou ousían*)” (*Phys.* II. 7.198b8-9).²⁵⁵ Following Lennox, Judson considers that it is the “axiom” of teleology.²⁵⁶

Perfection, that is, completeness, goodness and priority can be understood in this individual sense. The main divergence among the defenders of the exclusive individual teleology is that made by the biological reading. As we will see in the next pages, some scholars consider that only biological entities have to be teleologically understood. Some other who accept the biological reading, also think that Aristotle’s teleology covers items such as rocks or flames and, in more abstract terms, substances.

²⁵⁵ He refers to a similar statement in Aristotle in *EN*. 1152b6-27. Sedley, David. “Is Aristotle’s teleology anthropocentric?” *Phronesis*. Vol. 36. N°2. (1991). “VI. Aristotle”. *Creationism and its critics in Antiquity*. California University Press, 2007, p. 197. Also the same author in: “Chapter 11”. *Aristotle’s Metaphysics Lambda. Symposium Aristotelicum*. Ed. M. Frede/ D. Charles. Clarendon Press Oxford. 2000.

²⁵⁶ See Judson, Lindsay. “Aristotelian teleology”. *Oxford Studies in Ancient Philosophy* 29:341-66, 2005.

- Ontology and elements

Interpreters like, recently, Mirus, claim that teleology is a metaphysical conception and involves every individual being, alive or not.²⁵⁷ By stressing the metaphysical concept of “actuality” held by Aristotle in *Met.* IX. 6-8, among other places, this scholar defends a non-biological interpretation of teleology. From the field of physics (*DC.*III and IV, on the concept of natural place, and *Phys.*IV, on the concept of own place) Lang also defends the non-biological roots of actuality.²⁵⁸ Also, Berti,²⁵⁹ and Johnson defend, in much shorter length, this position.²⁶⁰

In some occasions when Aristotle talks about “things in general”, he talks about goals and functions:

“... a thing is always determined by its function: a thing really is itself when it can perform its function; an eye, for instance, when it can see. When a thing cannot do so it is that thing only in name, like a dead eye or one made of stone, just as a wooden saw is no more a saw than one in a picture”. (*Meteor.* IV.12.3909.10-21)

As I said earlier this kind of teleology can be defended, in my opinion, with enough textual basis. But in any case, it will not be conceptually fruitful in this comparative work, since I have not found anything similar in Bergson’s framework, which is so focused on the ontology of life. Whereas the point of my account of Aristotle’s immanent teleology is to highlight its contrast with Bergson’s, I shall not tackle the ontological and elemental domain. In short, these interpretations can be found in the discussion of the notion of *télos*, perfection or good. For the moment the metaphysical reading, the elementary reading and the biological one have in common one thing: perfection is to be understood regarding one substance.

- The goal of living beings: survival, reproduction and well-being

To some extent, the biological interpretation of teleology in Aristotle is uncontroversial. Again, even in this context, its origin seems to be Platonic (*Timaeus*, 44d-45b). All the Aristotelian scholars consider that the individual biological process is teleological. Survival, reproduction and well-being are included here as main cases of *érgon* and *eidos*, function and

²⁵⁷ In “The metaphysical roots of Aristotle’s teleology” and “Aristotle’s *agathon*” by Christopher Mirus (The review of *Metaphysics* 57. June, 2004) Mirus has emphasized the link between the good and actuality. See above.

²⁵⁸ When Aristotle starts *Phys.*II he considers also water, fire, earth and air in the former group (*Phys.* II. 1. 192b9-11). In *DC.*IV.311a5, Aristotle talks about the natural place as the *entelécheion*, which involves perfection, also before is said that the elements have functions or *érge* (*DC.* 307b21). Even Aristotle says that for natural non-living substances going to their natural place is like going to their form (*tò autou eídós*) (*DC.*IV.310a35-310b). The tendency towards health and growth is compared with the tendency towards a place (*DC.* 310b15-30). Lang states reasonably: “The order of nature as expressed by the relation of the elements to place is teleological because it is immediate, intrinsic, and characterized by an active orientation of the moved toward a mover that is at once its form and actuality”. Helen S. Lang. *The order of nature in Aristotle’s Physics: place and the elements*. Cambridge: Cambridge University Press, 1998. p. 265.

²⁶⁰ Berti writes: “...ciascuna cosa ha un suo proprio fine, il quale nel caso degli elementi è il raggiungimento del proprio ‘luogo naturale’ en el caso degli esseri viventi è la piena realizzazione della propria forma e la perpetuazione di essa mediante la riproduzione”. Berti, Enrico. “Ancora sulla causalità del motore immobile”. *Méthexis* XX, 2007, p. 28. Also Johnson, Monte Ransome. *Aristotle on teleology*. Op. cit., pp. 143, 140-145. *Ibid.*, p. 159.

form.

As we know, the analogy is illustrated by cases in which a craft or human action is referred to organic or ethological phenomena. There is a general agreement according to which individual living sublunary entities (from plants to humans) are the paradigm of Aristotelian teleology. Organisms and their functions are the clearest example of teleology in Aristotle. Surely, Aristotle himself was aware of this, and that is why he tended to use biological examples. For instance, we have the example above, from *Meteor*.IV.12, where he says that the dead eye has lost its function, and then it is not an eye anymore. As Allan Gotthelf says: in “almost every passage in which Aristotle introduces, discusses, or argues for the existence of final causality, his attention is focused on the generation and development of a living organism”.²⁶¹

Despite their different approaches and theses, Allan Gotthelf, James Lennox, David Balme, Lindsay Judson, Martha Nussbaum, Pierre Pellegrin and David Charles lead the contemporary reading of Aristotle’s treatises according to which *exclusively* individual living beings are interpreted teleologically.²⁶² That is: individual non-living beings are *not* accepted in this *restricted* individual teleological framework.

I think Balme represents this shared position well when he says: “sublunary elements, air, earth, fire, and water, act teleologically only when they are part of a living body; outside of that (for instance the occurrence of rainstorms) there is no final cause acting on them”.²⁶³ In this sense, the only possible interpretation of the term *télos* or perfection is survival, reproduction and well-being.²⁶⁴ It is now time to tackle these concepts.

For certain commentators, Aristotle’s teleological framework can be put in relation with the biological concept of adaptation. Since the *télos* means a natural function or activity, and that activity is to be conceived within a context or environment, immanent purposiveness implies adaptation. Lindsay Judson mentions that in his paper “Aristotelian teleology”.²⁶⁵ He notices that in *PA*.III. 14, 674a22–b5 the camel has a hard palate and several stomachs because its food is woody. In *PA*.IV. 12, 694b12–17 points out that “some birds have long legs and long toes because they live in marshes and have to walk across boggy ground, and ‘nature makes the organs to fit the function, not the function to fit the organs’”.

The link between Darwinian adaptation and classic teleology has been studied by Lennox and Gotthelf: these authors consider, in general, adaptation as a teleological concept. To this extent, while modern biology is talking about adaptation, the ancestry of Aristotle can be

²⁶¹ Gotthelf, Allan. “Aristotle’s conception of final causality” in *Teleology, first principles, and scientific method in Aristotle’s biology*. Oxford Aristotle Studies, 2012, p. 207.

²⁶² Some relevant examples: Aristotle. *De motu animalium. Interpretive essays*. Nussbaum, Balme, D. “Teleology and necessity” in *Philosophical Issues in Aristotle Biology*. Eds. A. Gotthelf and J. G. Lennox. Cambridge University Press, 1987. Judson, Lindsay. “Aristotelian teleology”. *Oxford Studies in Ancient Philosophy*. 29:341-66, 2005. Pellegrin, Pierre. “Introduction” in *Les parties des animaux*. Flammarion, Paris, 2011.

²⁶³ The expression “acting on them” is not accurate, since it sounds as if final causes act on things from the outside, which is certainly not the case. Balme, D. “Teleology and necessity”, in *Philosophical Issues in Aristotle Biology*. Ed. A. Gotthelf and J. G. Lennox. Cambridge University Press, 1987, p. 277.

²⁶⁴ Balme, D: Aristotle “makes it clearer than Plato does that ‘good’ is not an extrinsic value-judgement but means the useful or advantageous from the animal’s viewpoint”. *Ibid*, p. 277.

²⁶⁵ Judson, Lindsay. “Aristotelian teleology”. *Oxford Studies in Ancient Philosophy* 29:341-66, 2005, p. 355. Judson recalls more complex cases of seasonal migration, hibernation, and aestivation in *HA*.8. 12–17.

defended. Also the philosopher Robert Spaemann has defended teleology within the adaptive framework.²⁶⁶ Important historians of biology such as Ayala, Mayr and, afterwards, Ruse admit, in different ways, Aristotelian teleological features behind the biological concept of adaptation.²⁶⁷

The goal can be easily understood as a biological flourishing. As we saw in the section 2.1.a in *Phys.II.2*, Aristotle distinguishes the goal from the limit. In that context, death is not a goal. As David Charles says: where is the good, the best and the perfection of a stone in movement? Where is the beneficial outcome of its movements? It is more difficult to see. Thus, the “*for* what is it beneficial” final cause can’t be considered regarding living organisms here.²⁶⁸ Living beings, in Aristotle, are entities with soul.

I can recall this passage, in which Aristotle uses the intellectual analogy pointing out his teleological understanding of live:

“It is also evident that the soul is the cause as that for the sake of which. For just as the intellect acts for the sake of something, nature acts in the same way; and this something is its end” (*DA.II. 4.415b17-19*).

The soul is the goal of the living. This is, again the paradigm of immanent teleology. Aristotle explains certain aspects of biology in mechanical and non-teleological ways.²⁶⁹ In this case it is clear that final causes are for the sake of the animal’s function, but the eye color is due to another sort of causality: efficient causes and necessity. Regarding the cause of heat and cold, for instance, Aristotle himself makes the distinction: “they make flesh soft partly by necessity and partly not by necessity but for some end” (*GA.II. 734b31, 743a36b16*). He also says: “True, nature sometimes uses even excess products to advantage, but this does not justify our seeking a final cause in all – but while some things exist for the sake of an end, many other things necessarily come about too because of them” (*PA.IV. 677a17*).

Not everything in every organism is for the sake of its main goal then. But the most important things (organs, senses and parts of every organism) are for the sake of their goal, the soul. Every living being has a soul; and that covers plants, animals, humans and heavenly bodies. In general, the parts and organs of one living being and its soul have a part/whole relation.

This mereological relation appears much earlier than that of maturity. In fact, attaining maturity means attaining the goal. Aristotle applied teleology to embryology. He uses the example of the seed and its directedness towards maturity, when the being is complete and

²⁶⁶ Lennox, James. “Darwin was a teleologist”. *Biology and Philosophy*. 8. 1998 and Gotthelf, Allan. “Darwin on Aristotle”. *Journal of the History of Biology*. Volume 32, March, 1999. Spaemann, Robert. *Die Frage Wozu [Fini naturali. Storia & riscoperta del pensiero teleologico.]* Op. cit.

²⁶⁷ Mayr and Ayala defend a modern vision of teleology, and they employ the term teleonomy. The historian of biology Ruse defends the concept of teleology for adaptive frameworks. Mayr, Ernst. “The idea of teleology”. *Journal of the History of Ideas*. Vol. 53, No. 1. Jan. - Mar., 1992. “Teleological Explanations in Evolutionary Biology”, Francisco J. Ayala. *Philosophy of Science*. Vol. 37, No. 1. Mar., 1970, Ruse, Michael. “Teleology: Yesterday, Today, and Tomorrow?”. *Studies in History and Philosophy of Science Part C Studies in History and Philosophy of Biological and Biomedical Sciences* 31(1), 2000.

²⁶⁸ Charles, David. “Les quatre causes d’Aristote : origines et interprétations”. AITIA I. Ed. Cristina Viano, Carlo Natali, Marco Zingano. Peeters, Leuven, 2013, pp. 133-146.

²⁶⁹ I list here the only three I know in the whole corpus: *Met.* VIII. 4.1044b8-12, *PA.IV. 2.677a11-19* and *GA.V. 1.778a29-b19*.

when it can function according to its specific nature. Aristotle also tackled this phenomenon as such. The second book of *GA* is focused on embryology. For example:

“But how is each part formed? We must answer this by starting in the first instance from the principle that, in all products of Nature or art, a thing is made by something actually existing out of that which is potentially such as the finished product. Now the semen is of such a nature, and has in it such a principle of motion, that when the motion is ceasing each of the parts comes into being, and that as a part having life or soul. For there is no such thing as face or flesh without life or soul in it; it is only equivocally that they will be called face or flesh if the life has gone out of them, just as if they had been made of stone or wood. And the homogeneous parts and the organic come into being together”. (*GA.II.* 1.734b20-28).

In the products of art, fulfillment is to be found at the end of the activity, so in the products of organic development the structure is repeated. First we have the semen, then the parts of the organism, after that, the “finished product”. Although the *télos* comes later in chronological terms, it is ontologically prior (*GA.II.* 3.736b3-5 and *GA.II.* 6.742a20-25). I have used the metaphor of “flourishment” in relation to teleology. In the case of embryology it is not a metaphor, but a literal depiction of the phenomenon.

Aristotle used the example of the seed and the embryo many times when discussing the specific realm of life. Surely, he thought that this was a quite illustrative phenomenon of teleology. In *Met.IX.* 8—which is on the different senses of ontological priority, and specifically regarding the third sense, substantial priority—Aristotle himself uses this example:

“...because the things that are *posterior in becoming are prior in form and in substantiality* (e.g. man is prior to boy and human being to seed; for the one already has its form, and the other has not), and because everything that comes to be moves towards a principle, i.e. an end (for that for the sake of which a thing is, is its principle, and the becoming is for the sake of the end), and the actuality is the end, and it is for the sake of this that the potency is acquired” (*Met.* IX. 8.1050a5-10, my emphasis).

Thus, from the very beginning every part of the organism takes part in the activity of fulfillment of the soul. Nutrition, growth and reproduction, says Aristotle in *DA.II.* 4, are the most basic ends of the substances with soul. They can be understood as tendencies for existence, since, in the end, existing is better than not being. Then, their inner impulse to life can be interpreted as seeking perfection. Perfection is, here, being. The following statement shows deeply how teleology can be understood in a biological way:

“That they [sexes] exist because it is better and on account of the final cause, takes us back to a principle still further remote (*hos dè dià tò béltion kai tèn aitían tèn héneka tinos ánothen échei tèn archèn*). Now some existing things are eternal and divine whilst others admit of both existence and non-existence. But that which is noble and divine is always, in virtue of its own nature, the cause of the better in such things as admit of being better or worse, and what is not eternal does admit of existence and non- existence, and can partake in the better and the worse. *And soul is better than body, and living, having soul, is thereby better than the lifeless which has none, and being is better than not being, living than not living*” (*GA.II.* 1.731b20-2a1, my emphasis).²⁷⁰

In this sense, the tendency towards the best can be interpreted as a tendency towards being. Survival for the individual involves nutrition; survival for the species involves reproduction. There are different degrees of being, and, as we saw, every substance tends toward the best specific way of being, and that involves growth. As we also have seen, this relates to the

²⁷⁰ See the importance given by Johnson, Monte Ransome. *Aristotle on teleology*. Op. cit., p. 175.

concept of adaptation.

Superior animals tend also to well-being. The animal can attain its goal through the senses. Animal life is necessarily linked to sensation or *aísthesis*. Sensitive life is animal life, and its flourishing means the function of animals (*NE.I.* 7.1098a1-2). In *DA.III.* 11 Aristotle mentions “imperfect animals” that have only the sense of touch from which they can obtain pain and pleasure (*DA.III.* 11.434a4). A bit further he says that while touch (and taste) are for living, “the rest of the senses are for living well” (*DA.III.* 12.25-27). One chapter later Aristotle states: “The [superior] animal has the other senses, as was said, not for the sake of being, but for the sake of well-being (*ou tou einai héneka allà tou eu*)” (*DA.III.* 13.435b24-25).²⁷¹

At least for superior animals, nutrition may imply pleasure: he even adds that desire is desire of what generates pleasure (*he gàr epithymía tou hedéos estín*, *PA.II.* 17.661a7-9). One sense, like vision, implies one sort of good that we can relate with well-being. In any case, a superior sensitive faculty entails knowledge. Apart from its utility, for instance, we humans love them: we enjoy feeling. Above all, we love the sensations of vision (*Met.I.* 1.980a20-980b).

-The goal of human beings: happiness

As we know, the founder of immanent teleology holds a naturalistic vision of human beings. It is not surprising that I include human beings as goal-directed entities. In *NE.I.* 7 Aristotle extends the “function argument” to the human realm. It means that Aristotle seeks to find a specific goal or function, in the context of human nature. Every complex living being has among its goals survival, reproduction and well-being. Well-being for humans may mean something else, different from the well-being previously noted.

Well-being among humans has a more concrete term: it is called “happiness” or *eudaimonia*.²⁷² We can read the passage from *EN.I.* 7 in which he uses again the analogy between arts and nature. In this case, the nature of human beings:

“Happiness, then, is obviously something complete and self-sufficient, in that it is the end of what is done (*prakton*). But perhaps saying that happiness is the chief good sounds rather platitudinous, and one might want its nature to be specified still more clearly. It is possible that we might achieve that if we grasp the characteristic activity of a human being (*tò érgon tou anthrópou*). For just as the good the doing well of a flute-player, a sculptor or any practitioner of a skill, or generally whatever has some characteristic activity or action, is thought to lie in its characteristic activity, so the same would seem to be true of a human being, if indeed he has a characteristic activity” (*NE.I.* 7.1097b20-28).

This characteristic activity, goal, or function that gives happiness should involve reason or *lógos* (*NE.I.* 7.1097b30-109b7-8). That is happiness, in human terms. As Nussbaum rightly and reasonably reminds us, “we want to live a life that uses all our capacities”.²⁷³

²⁷¹ For the notion of well-being or “*eu zen*” in animals related also with sensation or “*aísthesis*”, *PA.II.* 10.656a6-7.

²⁷² On “function argument” in *EN.I* see Richardson Lear, Gabriel. *Happy lives and the Highest Good*. Princeton University Press, New Jersey, 2004 and Kenny, Anthony. *Aristotle on the perfect life*. Clarendon Press, Oxford, 1992. Also: Scharle, Margaret. “Elemental teleology in Aristotle’s *Physics* 2.8”. *Op. cit.*, p. 159.

²⁷³ Nussbaum, Martha. *Aristotle. De motu animalium. Interpretive essays*. “Appendix: The function of man”, Princeton, 1978, p. 106.

In *NE.I. 13* Aristotle emphasizes the hierarchy of faculties of the human being, according to the natural scale. As we know, the human indeed has vegetative faculties and animal faculties, but the rational one is unique to him or her, and also the best of all.

In Aristotle, the aforementioned theoretical happiness and other lower kinds of happiness in his complex account of the human being, ethics, and dianoethics can be only fulfilled in the context of the city, and not in the village nor in the tribe. Among humans the *eu zen* of human beings is unique to citizens (*Pol.I. 2.1252b30*).

For our purposes, it is important to say now that teleology does not lead to fatalism or determinism. As I say regarding *Physics II. 4-6*,²⁷⁴ Aristotle leaves room for different types of indeterminacy. Like Alexander of Aphrodisias in *On fate*, Dudley defends indetermination in the Aristotle's framework. His readings rely on phenomena such as fortune and chance (*Phys.II. 4-6*, *EE.VIII. 2*, *NE.I. 9-10*), accidents (*Met.VI. 3*) and future contingents (*De interpretatione. 9*), but also on freedom in the sense of self-determination or genuine responsibility (*EN.III. 3-5*) in Aristotle.

According to Aristotle, the uniquely-human ultimate goal, well-being, involves rationality, autarchy and living in the context of a *polis*. At the same time, the human has the capacity to choose his or her destiny, to some extent. Technically speaking, the well-being of human beings is called happiness.

- The goal of heavenly bodies: happiness

The scale of living individuals does not stop at the human level. It can ascend much further. Now we ascend upwards in the scale, thus reaching the astral beings.

Change, movement and the action of individual stars and heavens is for the sake of some immanent perfection as well. Since they are supralunary, perfect, and imperishable beings, their way of attaining their end is better than that of the infralunary human beings. They tend toward movement because movement is more perfect than the other types of change (*Phys.VIII. 7*). Their movement is circular, because, among movements, the most perfect movement is circular rotation (*Phys.VIII. 8*). Among the heavenly hierarchy, the best heavens have simpler movements than the lower heavens. According to Aristotle, heavenly bodies and heavens have psychology and their *télos* is happiness as well. The long passage below illustrates relatively clearly all these considerations:

“...since the primary body shows one motion only, that the body which is nearest to it should move with the fewest movements, say two, and the one next after that with three, or some similar arrangement. But the opposite is the case. The movements of the sun and moon are fewer than those of some of the planets. Yet these planets are farther from the centre and thus nearer to the primary body than they, as observation has itself revealed. For we have seen the moon, half-full, pass beneath the planet Mars, which vanished on its shadow side and came forth by the bright and shining part (...) we have been thinking of the stars as mere bodies, and as units with a serial order indeed but entirely inanimate; *but we should rather conceive them as enjoying life and action*. On this view the facts cease to appear surprising. For it is natural that the best-conditioned of all things should have its good without action, that which is nearest to it should achieve it by *little and simple action, and that which is farther removed by a complexity of actions*, just as with men's bodies one is in good condition without exercise at all, another after a short walk, while another requires running and wrestling and hard training, and there are yet others who however hard they worked themselves could never secure

²⁷⁴ Regarding ethical concerns, chance has an important role in *NE.I. 9-10* and *EE.VIII. 2*.

this good, but only some substitute for it “ (DC.II. 12.292a14-292b25).

The natural scale starts with elements, continues with living beings, goes on with humans and reaches heavenly bodies. From the sun to the first heaven different degrees of perfection can be found. But they are all circular or rotatory movements, and they imply a peculiarity: “Its unceasing movement, then, is also reasonable, since everything ceases to move when it comes to its proper place, but the body whose path is the circle has one and the same place for starting-point and goal” (DC.I.9). The *télos* is then attained simply.

In *Met. XII. 7* Aristotle explains the origin of movement through his theory of simple circular movements. Since the desirable (*tò orektòn*) and the intelligible (*tò noetòn*) move without being moved (*Met.XII. 7.1072a26*), the prime unmoved mover, god, moves the first heaven in this way. That is, god moves the first heaven as a beloved (*erómenon*, 1072b2) does. The first (rotatory) movement (*próte ton metabolon*) is originated by this sort of attraction (1072b10). This kind of movement is considered by Aristotle to be a final cause (1072b-2). In this case, at least when discussing the first heaven (it could involve more substances, even every substance), we see that the individual *télos* as self-movement and the *télos* as imitation coincide. Movement and imitation are the same for the first heaven.²⁷⁵

For Aristotle nutrition and reproduction are the basic faculties of the living beings. These are two examples of *télos*, since these two faculties seek to attain what is the best for a being: merely being or surviving. There are two ways of surviving, individually (nutrition) and as species (reproduction). This describes the teleological status of a plant. Upwards in the scale, we find different ways of sensibility and locomotion. They imply surviving, but they add sentient life, as we saw. Sentient life means well-being and a basic knowledge. Well-being is a broad concept in Aristotle and embraces more perfect senses, namely happiness and enjoying rational life. These two concepts, beyond pleasure, can be applied to humans and heavenly beings, from the moon till the last heaven. In the case of the heavenly bodies, enjoying involves, along with intellectual activity, rotation. This covers the biological realm, in its widest sense, in Aristotle: now we will leave this realm and we will move to the domain of culture.

- The goal of the city: autarchy

This subsection deals with one peculiar ontological level, what we call nowadays “human culture”. In the recent scholarly literature, the teleology of the city, of tragedy and of the history of philosophy are generally disregarded. I think that a complete account of Aristotelian teleology can include such entities, or at least ponder its validity, as other relevant contemporary interpreters like Aubenque have done.

Contrary to the topic of elementary teleology, I believe that this topic, teleology of culture, is more important in Bergson than regarding Aristotle. Something similar happens around secondary teleology. Since the ultimate goal of Chapter 2 is to set up the contrast with Bergson in Chapter 4, it is worth addressing this topic and its problems, at least roughly. In advance I only defend Aristotelian immanent teleology properly speaking in the case of the city.

Among all the items mentioned above, two things are common. First, there is no soul involved. So, from this moment we are out of the biological realm and biomorphism. Second,

²⁷⁵ *Met.XII. 7.1072b3- 1072b31*).

one particular being, one city, one literary genre or one theory of logic can be understood in terms of individual teleology although in a singular way. It could not qualify as global teleology, because we are not talking about nature understood as a whole or anything unperishable. The teleology of the city, the tragedy and the philosophy of history may be a *mixture between the individual and the global teleology*, for a plurality of individual substances (namely, people) take part in one process that ultimately leads to one fulfillment. Like in every other case of individual teleology there is a function and a form involved: the three examples mean fulfillment of a function. It has to be said that there is a remarkable difference between these three objects. We cannot say that they are all artificial beings. At the very least, the city qualifies in Aristotle as a natural entity, just like the household and the village.

Aristotle talks about the city in clearly teleological terms:

“... the earlier forms of society [family, village] are natural, so is the state, for it is the end of them, and the nature of a thing is its end. For what each thing is when fully developed, we call its nature, whether we are speaking of a man, a horse, or a family. Besides, the final cause and end of a thing is the best, and to be self-sufficing (*autárkeia*) is the end and the best” (*Pol.I. 2.1252b28-1253a2*).

The man, the horse (with a soul) and the family (natural but without a soul) are the analogy for this teleological claim. Self-sufficiency or autarchy is the immanent goal to attain. In other cases, Aristotle even talks about the city as analogous to people and families, but composed and prior in nature (*próteron de te physei*, 1253a19) to them:

“...the state is by nature clearly prior to the family and to the individual, since the whole is of necessity prior to the part” (*Pol.I.2.1253a19-20*).

The city is then a natural entity. It is perfective, analogous to this extent to living beings. Aristotle points out clearly which type of perfection should be attained in his case. It is compounded of humans and their families and, as he tends to do regarding biology, adds a part/whole remark.

Both Berti and Wolff are positive about the mere analytical perspective of *Pol.I.2*, a chapter in which Aristotle talks about households and families, villages and cities in three distinguished stages, subsequent in time. Berti states that Aristotle’s approach in this chapter is “clearly ideal, and doesn’t pretend historical validity”.²⁷⁶ This ideal history of the ideal city shows the growth of one population from the isolated household to the tribe, and then towards autarchy, like a living being.²⁷⁷ Given that this progress is a sort of fiction, since history is contingent and every *polis* can have a different process, what is necessary to point out clearly is that a human population can only attain its goal being a compound of families and villages. They are the material cause, like the parts in a living body. The ultimate goal of this natural entity, the city, is autarchy. Autarchy means a natural fulfillment, and the function of the final cause is affirmed clearly by Aristotle. The city is natural and its goal is clearly noted as autarchy. Then it may qualify as a teleological item in its own right.

²⁷⁶ Berti, Enrico. *Il pensiero politico di Aristotele*. [*El pensamiento politico de Aristóteles*] Trans. Helena Aguila Ruzzola. Gredos, 2012, p. 27, my translation into English. See also Wolff, Francis. *Aristote et la politique*. PUF, Paris, 2012.

²⁷⁷ Sometimes Aristotle relates natural stages with epochs. In *Pol.I. 2.1252b24* and in *Pol.III. 10.1286b4-16*.

This perfect autarkic stage is the only one where human beings can enjoy well-being (*eu zen*), and not, apparently, the previous one, the village (*Pol.I.21252b29*). Human individual teleology and individual teleology of the *polis* refer to each other.

In the domain of history, Aristotle's commentaries on the progress of tragedy, the literary genre, and on philosophy as a discipline have been read as applications of his view of the final cause. I will address the two cases as two examples of history of teleology as a whole, since both refer to the same type of problem. I shall first present the texts, first on tragedy, second on history of philosophy and then address the question of the teleology of history.

Charles Kahn in "The place of the prime mover in Aristotle's teleology"²⁷⁸ extends the domain of final causality to culture. Aristotle, he says, holds a "cosmic optimism". His "willingness to see things arranged 'for the best' not only in the heavens and in biology but in human affairs generally. For example, he finds the biological pattern of development replicated in cultural history"²⁷⁹. Then he quotes the passages from *Pol.I* that we have already seen, on the city, and also another one: "Attic tragedy".

Kahn quotes these lines:

"Tragedy advanced by slow degrees; each new element that showed itself was in turn developed. Having passed through many changes, it found its natural form (*tèn hautes physin*), and there it stopped" (*Poet.* 4. 1449a5-15).

One can wonder if, then, we should take the idea of nature in a strict sense or not. This would mean that the tragedy is like the city, which is, as we have seen, natural, according to Aristotle. Like *Pol.I.2*, Chapter 4 of the *Poetics* covers the whole development of a cultural form: from its origins until its *télos*. However, it is certainly more difficult to consider this narrative as one *idealized history*: Aristotle mentions concrete real individuals like Homer, Aeschylus and Sophocles.

A number of readers of the *Poetics* have interpreted the short remark on tragedy attaining its ontological status in a naturalistic way. For instance, in his commentary on the treatise, Lucas says: "the tragic form, like an organic growth, develops until it reaches its *télos*, when its potentiality its fully realized"²⁸⁰.

More recently, Whalley addressed the same question but noticing the problematic aspect of it. Although Whalley compares the octopus, the human and the city, he does not include tragedy, like Kahn or Lucas do. If I have understood him correctly, tragedy would only qualify as long as it is considered part of human nature or what he calls "human dynamis". It is rooted in human nature and it is made for the sake of human psychology.²⁸¹ Thus, Whalley understands it as a natural being.

²⁷⁸ Kahn, Charles. "The place of the prime mover in Aristotle's teleology". *Aristotle on nature and living things*. Ed. A. Gotthelf. Bristol, 1985.

²⁷⁹ *Ibid.*, p. 198.

²⁸⁰ Then this commentator quotes *Phys.*193a36. Aristotle. *Poetics*. Greek Text and English commentary by D. W. Lucas. Oxford University Press, 1968, p. 82.

²⁸¹ Whalley, George. *Aristotle's Poetics*. Translated and with commentary by George Whalley. Ed. John Baxter and Patrick Atherton. McGill-Queen's University Press Montreal & Kingston, London, Buffalo, 1997, pp. 22-23.

The other domain of culture that has been interpreted in teleological ways is the history of philosophy. The Hegelian hellenist Rodolfo Mondolfo calls Aristotle the “forerunner of the philosophy of history”,²⁸² in reference to 19th century philosophy. He understood Aristotle’s conception of the history of philosophy as a tendency to perfection.²⁸³ This historical teleology of human thought may be regularly stopped by cataclysms. Following Plato, Aristotle seems to think that periodical catastrophes devastate human achievements.²⁸⁴

In *Le problème de l’être chez Aristote*, Aubenque nuances this view that he calls the “eternal recurrence of cycles”: in his view historical time has *two faces* for Aristotle. On the one hand, it means natural destruction and, on the other, it is at the same time a “benevolent assistant of human action”.²⁸⁵

For Aubenque the sense of human cultural evolution has nothing to do with either regression or oblivion, as it had for Plato. He finds two stages in Aristotle’s non-regressive vision of history. First, there is an optimistic, progressive and finalistic vision of human knowledge in Aristotle at the beginning, in *On philosophy* and *Met.I*. Then in later treatises like *Met.IV* or *VI*, Aubenque finds a more pessimistic thinker of history, according to which philosophy and knowledge do not lead to an end. For this skeptical, second conception of history, Aubenque also recalls *Phys.I* and *DA.I*, texts where the previous philosophers do not take part in a sort of *historical conquest of truth* as in *Met.I.3-10*, a historical process from the primitive philosophy that only “whispers” what the late philosophy will formulate and solve clearly (*Met.I.10.993a15*). In *DA.I* or *Met.IV* the previous philosophers offer subjects and ideas for the sake of an untimely dialogue that “excludes any kind of genealogy”.²⁸⁶ Anyway, *Met.I.3-10* represents for Aubenque a sort of teleology of philosophy, in which philosophy itself leads to one single flourishing in Aristotle.

Now I will address these teleological approaches to human culture. First, as I have noted in the subsection on analogies, Aristotle carefully divided natural entities and crafts. The crafts can be expressions of human rationality and, hence, human goals, but they do not contain them. There is a sharp border between the two worlds. Since among the things in the world some “exist by nature, some from other causes. By nature the animals and their parts exist, and the plants and the simple bodies (earth, fire, air, water)—for we say that these and the like exist by nature.” And he adds: “All the things mentioned plainly differ from things which are *not* constituted by nature” (*Phys.II.2.192b9-192b12*).

Unlike families and cities, tragedies and theories cannot be called by nature. When Aristotle refers to tragedy as reaching its own nature (*tèn hautes physin*), he means its definite form and craft function. As noted, the main feature of the tragedies, the plot (*ho mythos*) is something that we construct (*synístasthai*, *Poet.1. 1447a-2*). The organic analogy between the

²⁸² Mondolfo, Rodolfo. Chapter 2: “La concepción historicista en Aristóteles” in *Problemas y métodos de la investigación en la historia de la filosofía*, Universidad de Tucumán, Argentina, 1949, p. 36, my translation. Also in *Comprensión del sujeto humano en la cultura antigua*. Buenos Aires, Imán, 1955, pp. 410-418.

²⁸³ For Aristotle on the five successive, historical and progressive stages of knowledge, *On philosophy*. Ross, frag. 8b. For Aristotle on the three progressive stages of knowledge, *Met.I*. 1. 981b20-25.

²⁸⁴ On periodic cataclysms in Aristotle: *DC.I*. 3.270b19-20, *Meteor.I*. 3.339b16-30 and I.14, *Met.XII*. 8.1074b7-14, and *Pol.VII*. 9.1329b25-31. Lindsay Judson kindly called my attention to these passages. It is important to note that these cataclysms do not mean universal devastation, but local devastation.

²⁸⁵ For the expression “eternal recurrence” in *Le problème de l’être chez Aristote* [*El problema del ser en Aristóteles*] Trad. Vidal. Taurus, Madrid, 1984, p. 73, my own translation.

²⁸⁶ Aubenque, Pierre. *Le problème de l’être chez Aristote* [*El problema del ser en Aristóteles*] Trad. Vidal. Taurus, Madrid, 1984, p. 88.

tragedy and the animal is only one analogy.²⁸⁷ As we know, Aristotle knew well the difference between one artifact and a natural being. In general, Aristotle uses the analogy the other way around: he can talk about the making of a sword for making clear the development of an embryo. In this case, Aristotle refers to an organic being with an authentic soul in order to explain the structure of tragedy. The organic model is important in Aristotle, but it does not mean a confusion. The tragedies are so sophisticated that he appeals to the biological constitution of a natural being. But the tragedies are artificial beings, made by human intellect. Nor can philosophical doctrines be considered natural entities, whatever their ontological status is in Aristotle.

Thus, they both cannot be considered to be within any domain of primary immanent teleology. They can attain, to be sure, more perfect forms, forms that better fulfill the original need of human beings. The tragedies of Sophocles can be better than Aeschylus and ultimately generate better catharsis, etc. Aristotle can regard himself as the apex of ancient philosophy, the culmination of human wisdom, etc. This would not involve the use of final causality in its primary sense, but extrinsic teleology, like any other craft. But we would need much more textual evidence to be certain.

Besides, these are examples of the teleology of history. But there is no historical teleological principle ever formulated by Aristotle. Not even in *Met.I*, where Aubenque sees a teleological approach of the history of philosophy (namely, the discovery of the four causes). Surely Aristotle praised history more than any philosopher before him, but *his conception of history is neither progressive or regressive, but empirical*. Apart from the example in *Pol.I. 2* that scholars consider ideal process, the other cases of past events and past doctrines in Aristotle do not construct a whole with a principle of development and different stages. Again, in this framework history is contingent. In this sense, there is plenty of empirical material in the corpus. There is no teleology at stake in the historical account in *Pol.III. 10-VI*, nor is there history of philosophy in the texts mentioned above concerning Aubenque, like *On philosophy* and *Met.I*. Aristotle collected large sums of data, but this does not entail a teleological structure of parts/whole.

In fact, Aristotle addressed in one place the work of the historian, and precisely what he says is that there are no historical principles. When Aristotle addresses the task of the historian (*historikòs*) he states that he is talking about particulars (*kath' hékaston*, *Poet.9.1451b7*), and nothing like general concepts, something that the philosophy of history would entail. For Aristotle the historical accounts (*historiais*) are nothing like unitarian story lines guided by principles. On the contrary, historical writings are considered summaries of events that merely happened in determinate periods, with no other relation to each other than luck (*hon hékaston hos étychen échei pro állela*, *Poet.23.1459a21-25*). This explicit denial reinforces then the lack of philosophical and teleological principles in Aristotle's view of history. As Powell says, although in Aristotle there is a rich "practice of history", there is no "systematic history".²⁸⁸

Aristotle's understanding of crafts, the lack of historical principles in his work and the vision of history in the *Poetics* make me dismiss the two latter examples of the individual teleology

²⁸⁷ He says that it is "like the soul" (*oion psychè*) of the artifact (*Poet.6.1450a39*). Shortly afterwards, talking about the ordered structure of elements and magnitude, he comes back to the organic analogy (1450b35-1451a5).

²⁸⁸ Powell, C.Thomas. "Why Aristotle has no philosophy of history?". *History of Philosophy Quarterly*. Vol. 4, n°. 3, 1987.

of non-living compound entities. In any case, interpreting history teleologically can be part of secondary teleology, the narratology of chance events *as if* they were teleological for the sake of the concluding fortunate stage (see 2.1.d).

2.2.b. Global immanent teleology: contribution and imitation

The second domain understands the term perfection within a much broader framework. Like cultural teleology, it extends the use of the final cause beyond the boundaries of the individual soul, although unlike tragedies and history we remain in the realm of nature. Furthermore, we are not in the domain of development any more. Global teleology deals with the static cosmic order. That is the opposite, then, of any sort of history.

This second domain of teleology fits with two of the passages of “*for what is aimed at*” teleology, as Kullmann noted. Scholars have called this domain of teleology secondary teleology, extrinsic teleology, intra-species teleology or second-degree teleology. In short, it considers that the *télos* is not just a fulfillment of its own form and specific function, but a *participating* in the whole of nature or general order (τάξις). The *eidos* and the *érgon* leave the stage for the *táxis*. In the end, this requires examining the very same items but from a broader perspective. One of the structural functions of living beings like reproduction can be conceived as imitation, meaning imitation for the sake of participation in something better. Equally, every natural individual fulfillment (survival or well-being) can be understood as contributing to the good order of everything. From this larger schema, the individual *télos* is put in relation with a general order, which is good and eternal.

Interpreters such as Kahn, Owens, Cooper, Sedley and, more recently, Scharle hold different visions of global Aristotelian teleology, but they are *always* compatible with the individual teleology reading. As Sedley says: “Aristotle’s teleology can be best understood by adopting a dual perspective, combining the local and the global levels of explanation”.²⁸⁹ I follow this basic assumption.

As I have said, the texts we are going to comment on are highly controversial among scholars. We already know which of them deny the existence of this kind of approach to final causality in Aristotle. One interpreter has even seen this global reading as “thoroughly un-Aristotelian”.²⁹⁰ Others like Kullmann accept its existence within the corpus, although “this finality compared with that in the organic area is deficient”.²⁹¹

I agree with Kahn when he says that the Aristotelian god, the unmoved mover, is ultimately the basis of global teleology. But as I said in the Introduction, immanent teleology has nothing to do with providentialism. Aristotle’s god is contemplative, not active. This means that he neither produces nor arranges the world. The immanent teleology model implies an active vision of nature. It is nature itself that seeks perfection. Nature has not been created by any god, in Aristotle. The Aristotelian god is the basis of global immanent teleology since it inspires in nature, in its different levels, the tendency to perfection. To this extent, the final cause is also the origin of movement in the world.

There are different ways of seeing the influence of god upon the moveable world in Aristotle.

²⁸⁹ Sedley, David. “Teleology, Aristotelian and Platonic”, in *Nature and life in Aristotle: Essays in honor of Allan Gotthelf*, ed. James Lennox and Robert Bolton. Cambridge University Press, 2010, p. 28.

²⁹⁰ Broadie, Sarah. “Nature and craft in Aristotelian teleology”, *Op. cit.*, p. 91.

²⁹¹ Kullmann, W. “Different concepts of the final cause in Aristotle”. *Op. cit.*, pp. 171-173.

Kahn finds among scholars a “narrow view”, which attributes this influence to the first heaven, based on *Met.* XII.7,9. There is a wider sense that extends this teleological aspiration to heavenly bodies. There is a third one, a “broader view”, led by Kahn himself, that defends the teleological influence of the prime mover upon the world. Elements, plants, animals, humans, and heavenly bodies are influenced by god, as separate entities and as one arranged whole as well.

According to Kahn “on this view, everything in nature aspires to the condition of deity; but each kind of thing can attain this goal only in a limited specific way”.²⁹² And: “ In following their own nature, then, the elements imitate their ontological superiors, just as living things do in reproducing their own kind ”.²⁹³

There is then a general mimetic aspiration, for this interpretative line. The infralunary cycles (transformation of elements, reproduction of plants and animals) imitate, we will see, supralunary rotatory cycles. The perishable imitates the unperishable, in Aristotle. We have seen in *GA.* II. 1 that, according to Aristotle, “being is better than not being, living than not living”. This can shed light on this idea of mimetic aspiration. Transformation of the elements and reproduction of the living perishable beings may be considered an aspiration for being beyond individual capacities.

Although I follow Kahn’s “broader view”, I do not extend the term imitation to any type of global teleology. Sometimes Aristotle uses other terms, also deeply rooted in Platonic philosophy, such as participation. In fact, to some extent imitation can be understood as one type of participation. I use the term contribution, which may contain the two meanings in their different contexts. This meaning reduces every case of global teleology to partial contributions for the sake of the everlasting stability of something within the whole or for the sake of the good order of the whole. In the first case, the model of the teleological imitation of the eternal by the perishable is the most illustrative. In the second case, it is not so.

Apart from his enlightening interpretation, in the same place Kahn gives an interesting historical account of the problem of global teleology among scholars. It can be useful to quote him again: “We find this second, broader view [of teleological influence of god upon nature] in earlier interpreters, such as Zeller and Joaquim. Recent authors tend to be more cautious, and to restrict their account of the prime mover to a narrower, more explicitly documented interpretation (...). Perhaps some will regard [the narrow view] as the more ‘scientific’ view of the prime mover, since it makes a minimal use of the metaphysical explanation of motion in terms of desire for the supreme good, limiting this principle to the eternal motion of the heavens where Aristotle has supported his doctrine by careful argument and closely tied to requirements of his astronomical theory”.²⁹⁴

I think that Kahn is right in pointing out some of the reasons for this controversial status of the global texts. First and foremost, it is clear that individual teleology is “more explicitly documented”. In comparison, it is completely true that global texts are not abundant. Second, individual teleology is more “scientific” according to Aristotle’s and also to our paradigm. Global teleology is, philosophically speaking, scarcely developed and scattered. It is maybe not very representative of the philosophy of Aristotle, but I think we cannot deny its existence. Regarding the rejection of global teleology, Cooper even detects “complex

²⁹² Kahn, Charles. *Op. cit.*, p. 184.

²⁹³ *Ibid.*, p. 189.

²⁹⁴ *Ibid.*, p. 184.

feelings” among critical commentators.²⁹⁵ For whatever reason it has been rejected, the textual basis for global teleology is sufficient.

I start from the broadest teleological passages, which are on cosmology and theology. God’s non-providential influence on the rest of the universe (meaning both supralunary and infralunary realms) can be understood in terms of order. Thus, participating actively in the order is the good and the *télos*. We will read one text on participation in a general order and another one on the dependence of the infralunary world on the supralunary one. Both are to be found in the last chapters of *Met.XII*. Afterwards I quote a text from *Met.IX* on imitation. At this level, the use of imitation does not refer to cycles, but is framed in purely abstract ontological terms: the sublunary realm, we will know from *Met.XII*, *depends* on the eternal supralunary world for its being. We will see that imitation is the term that expresses this dependence. Then I descend to physics: I quote the two passages in the corpus on elemental transformation. They show the influence of the eternal realm of cosmos upon the non-living beings of the infralunary realm. It may illustrate how the infralunary realm depends on the supralunary one. The cycle of elements fire-water-air-earth seems to be the imitation of the perfect circular motions in the supralunary realm. Then, I shall recall the two famous passages on biological reproduction. They highlight the influence of the eternal realm of cosmos on the living beings of the infralunary realm. Reproduction is the only way perishable living beings can be imperishable, just like the heavenly beings above. Aristotle holds that animals and plants participate in eternal imperishable life through their species. He uses the term imitation. Finally, I quote the only two passages on global teleology where the eternal does not appear. There is no trace of imitation. These last two texts, especially controversial among interpreters, show how global teleology can be applied only to biology. These are the only two examples of teleological ecology that can be found in Aristotle, to my knowledge. Despite the fact that ecology is a modern notion, I think it identifies correctly the subject of the two passages, that is, stability and inter-specific teleology. The teleological model of these two passages is participation and not imitation, and to this extent they are related with the first cosmological text that we will read, *Met.XII*. 10.

- The order of cosmos: the good of the whole

“We must consider also in which of two ways the nature of the universe contains the good (*agathòn*), and the highest good (*áriston*), whether as something separate and by itself, or as the order of the parts (*tèn táxin*). Probably in both ways, as an army does; *for its good is found both in its order and in its leader (kàì gàr en te táxei tò eu kàì ho strategós), and more in the latter; for he does not depend on the order but it depends on him.* And all things are *ordered together somehow (pánta dè syntéaktai pos), but not all alike*, -both fishes and fowls and plants; and the world is not such that one thing has nothing to do with another, but they are connected. *For all are ordered together to one end (pros mèn gàr hén hápanta syntéaktai)*, but it is as in a house, where the freemen are least at liberty to act at random, but all things or most things are already ordained for them, while the slaves and the animals do little for the common good (*tò eis tò koinón*), and for the most part live at random; for this is the sort of principle that constitutes the nature of each. I mean, for instance, that all must at least come to be dissolved into their elements, and there are other functions similarly in which *all share for the good of the whole (éstin hon koinonei ápanta eis tò hólon)*” (*Met. XII.10.1075a10-25*, italics are mine).

²⁹⁵ Cooper, John. “Aristotle on natural teleology”. In M. Schofield & M. C. Nussbaum (eds.) *Language and Logos*. Cambridge University Press 197-222 (1982) p. 97.

This is the most important text on global teleology in the broadest sense in Aristotle. Despite the ontological pluralism, *everything* is ordered towards something good.²⁹⁶ Being ordered by this influence everything shares in the good, harmony and being. The idea of the army appears also in the quotation of Homer (*Iliad*.II. 204) at the end of Lambda, shortly after this passage. It is a variation of what we have in *On philosophy* (ed. Ross). frag. 12b. Aristotle writes:

“... they [other philosophers] give us many governing principles (*archàs pollás*); but the world (*tà dè ónta*) refuses to be governed badly. ‘The rule of many is not good; one ruler let there be’ (*ouk agathòn polykoiraníe: eis koíranos hésto*)”.

The good or *télos* (here called “*to eu*”) is here identified with order or *táxis*, as I said. Things, plants, animals and (although not mentioned) humans are not just ordered in themselves. That is, the order in Aristotle does not consist exclusively in parts/wholes, with regard to specific functions for the sake of the being and well-being of their souls. There is a general order between substances, an arrangement of one to each other. Aristotle talks about inter-species teleology. If *Met*.XII. 6-7 shows that the prime mover or god is the source of movement, then in *Met*.XII.10 Aristotle shows that the prime mover is also the source of general order. Its direct influence is not restricted here to one heaven, but to every being, regarding order. The *télos* can be understood here as the *contribution to general order* made by fishes, plants or humans. That is how the analogy with the household could be better understood.

Anyway, in *Met*.XII.7 there is also a quite clear passage in which Aristotle holds that every living and non-living being is suspended (he uses the term *értetai*) from the prime unmoved mover. It certainly adds textual basis to the relation between individual teleology and global teleology, since it links the individual “scientific approach” to the “cosmic approach”, with god, the heavens and nature involved:

“On such a principle [first unmoved mover, which is good and generates movement], then, depend (*értetai*) the heavens and the world of nature. And it is a life such as the best which we enjoy, and enjoy for but a short time (for it is ever in this state, which we cannot be), since its actuality is also pleasure” (*Met*.XII. 7.1072b14-17).²⁹⁷

In the next text, mimesis or imitation is mentioned. The imitated/imitator relation is extended beyond the prime mover/first heaven domain to the supralunary/infralunary domain. That is, the sublunary beings imitate supralunary beings, since the latter are more perfect. This also gives a new hint as to how global teleology is linked to the individual one.

“And so the sun and the stars and the whole heaven are ever active, and there is no fear that they may sometime stand still, as the natural philosophers fear they may. Nor do they tire in this activity; for movement is not for them, as it is for perishable things, connected with the potentiality for opposites, so that the continuity of the movement should be laborious; for it is that kind of substance which is matter and potency, not actuality, that causes this. *Imperishable things are imitated by those that are involved in change*, e.g. earth and fire (*mímeitai dè tà háphtharta kai tà en metabole ónta, oion ge kai pyr*). For these also are ever active; for they have their movement of themselves and in themselves. But the other potencies, according to our previous discussion, are all potencies for opposites;” (*Met*. IX. 8. 1050b21-30).

²⁹⁶ On the contrary, Brodie, Sarah. “Nature and craft in Aristotelian teleology”. Op. cit., p. 98.

²⁹⁷ “À un tel Principe [le Bien] sont suspendus et la nature”. *Metaphysique*. Trans. Tricot, Belles Lettres, Paris, 1953. “Penden”, García Yebra. “Dependet”, in Moerbecke’s Latin translation.

In my opinion, the following text consolidates the previous vision:

“... they [supralunary beings] continue through their entire duration unalterable and unmodified, living the best and most self sufficient of lives. As a matter of fact, this word ‘duration’ (*aiòn*) possessed a divine significance for the ancients, for the fulfillment which includes the period of life of any creature (*hekastou zoes chrónon*), outside of which no natural development can fall, has been called its duration (*aión*). On the same principle the fulfillment of the whole heaven (*pantòs ouranou télos*), the fulfillment which includes all time and infinity, is ‘duration’ (*aión*) – a name based upon the fact that it is always – duration immortal and divine. *From it derive the being and life which other things, some more or less articulately but others feebly, enjoy (Hóthen kai tois állois exértetai. Tois meèn akribésteron tois d’ amauros, tò einaí te kai zen)*. So, too, in its discussions concerning the divine, popular philosophy often propounds the view that whatever is divine, whatever is primary and supreme, is necessarily unchangeable”. (*DC.I. 9.279a18-33*, italics are mine).

The last text shows again that the infralunary realm is *dependent* on the upper supralunary realm. In the infralunary ground, being, order and life are dependent on supralunary beings and, in the end all are dependent on the prime mover. In *Met.XII. 7* Aristotle uses the verb “*artáo*” and in the latter, *DC.I.9*, “*exartáo*”, which literally means ‘hanging’ or ‘physical dependence’.

As I said, Aristotle modifies the Platonic providentialist schema of the *Timaeus*: the tendency towards perfection is motivated by the eternal, but comes from nature, ontologically dependent.²⁹⁸ Thus even within this global and cosmic context, we are still in the exclusively immanent domain.

The fundamental scope of these texts is to explain order and stability in the infralunary realm as the *influence of* the eternal realm, which in this context is “the best”. In Aristotelian cosmology and theology, the infralunary realm aims and aspires to be ordered and to be eternal, and in this sense it takes part in the supralunary and divine world. Again, Aristotle’s global perspective includes an overarching god, but the relationship between god and the world is not providential since, as he affirms, god is totally occupied in self-understanding. From Ravaisson to Zeller in the 19th century, and from Zeller to Kahn, Sedley, and Scharle nowadays, the global interpretation of Aristotelian teleology does not pretend to return to Platonic theology. In fact, this vision is thus genuinely and thoroughly Aristotelian.

It is difficult to state anything clearly about the ontological status of nature understood as a whole. It is something natural, not artificial. It is a compound of substances. It has no soul. Sedley has compared Aristotle’s conception of the city-state and also the household with the universe: none of them has a soul but all are considered natural entities with parts which refer to the whole. This whole is prior to its parts.²⁹⁹

Leunissen expresses it in this way: “...the goodness, order and joint arrangement of the cosmos as a whole emerge from the goal directed actions of the individual parts of the

²⁹⁸ Natali, Carlo. “Problemas de la noción de causa final en Aristóteles”. *Anuario Filosófico* 32. 1999.

²⁹⁹ Sedley, David. “Chapter VI. Aristotle” *Creationism and its critics in Antiquity*. Op. cit., and “Chapter 11”. *Aristotle’s Metaphysics Lambda. Symposium Aristotelicum*. Ed. M. Frede/ D. Charles. Clarendon Press Oxford. 2000. For Sedley: “Nowhere does he suggest, in Platonic fashion, that the world is a living organism. But there is an alternative model which he does invoke: the comparison of the world to an army or a household, in *Met.XII. 10*. And *Pol.I. 1.1253a19*”. Sedley, David. “Is Aristotle’s teleology anthropocentric?” *Phronesis*. Vol. 36. N°2,1991, p. 192.

cosmos towards the same end, the Unmoved Mover”.³⁰⁰

- Elementary imitation: stability of non-living perishable beings.

“Coming-to-be and passing-away will, as we have said, always be continuous, and will never fail owing to the cause we stated. And this continuity has a sufficient reason on our theory. For in all things, as we affirm, nature always strives after ‘the better’. Now ‘being’ (we have explained elsewhere the exact variety of meanings we recognize in this term) is better than ‘not-being’: but not all things can possess ‘being’, since they are too far removed from the ‘originative source’. God therefore adopted the remaining alternative, and fulfilled the perfection of the universe by making coming-to-be uninterrupted: for the greatest possible coherence would thus be secured to existence, because that ‘coming-to-be should itself come-to-be perpetually’ is the closest approximation to eternal being. - *The cause of this perpetuity of coming-to-be, as we have often said, is circular motion: for that is the only motion which is continuous.* That, too, is why all the other things – the things, I mean, which are reciprocally transformed in virtue of their ‘passions’ and their ‘powers of action’ e.g. the ‘simple’ bodies imitate circular motion. For when water is transformed into air, air into fire, and the fire back into water, we say the coming-to-be ‘has completed the circle’, because it reverts again to the beginning. *Hence it is by imitating circular motion that rectilinear motion too is continuous*” (GC.II.10. 337a ss, italics are mine).

The following text, strengthens this vision:

“The whole world surrounding the earth, then, the affections of which are our subject, is made up of these bodies. This world necessarily has a certain continuity with the upper motions: consequently *all its power and order is derived from (kybernasthai, also “controlled by”) them.* (For the originating principle of all motion is the first cause. Besides, that element is eternal and its motion has no limit in space, but is always complete; whereas all these other bodies have separate regions which limit one another.) So we must treat fire and earth and the elements like them as the material causes of the events in this world (meaning by material what is subject and is affected), but must assign causality in the sense of the originating principle of motion to *the influence of the eternally moving bodies*” (Meteor.I.2.339a19-32).

The main scholar nowadays that has been working on these texts with brilliant outcomes is Scharle.³⁰¹ Following also Kullmann, Scharle distinguishes two types of teleology. In her vision, elemental teleology works with regard not only to the tendency towards natural places, but also with regard to the rotatory nature of the cycles. In this sense, Scharle’s exclusively imitative teleology develops Kahn’s regarding elemental substances. “In taking the best thing as their aim, individuals do not seek to improve or benefit the end, but they seek to improve *their own condition*: the more closely they approximate the activity of the best thing, the better they are”.³⁰² And: “In moving rectilinearly the sublunary elements cannot become the best, ... but nonetheless they can approximate the circular movement”.³⁰³

As we saw in GA.II.1.731b20-2a1 “being is better than not being, living than not living”. Although in this text Aristotle is talking about living beings, the argument could perhaps be extrapolated to non-living beings thanks to GC.II.10. 337a, where we read that “‘being’ (we have explained elsewhere the exact variety of meanings we recognize in this term) is better

³⁰⁰ Leunissen, Mariska. *Explanation and teleology in Aristotle’s science of nature.* Op. cit., p. 47.

³⁰¹ Scharle, Margaret. “Elemental teleology in Aristotle’s Physics 2.8”. *Oxford Studies in Ancient Philosophy* XXXIV, May 2008, “The Role of Material and Efficient Causes in Aristotle’s Natural Teleology” *Apeiron* 41.3, September 2008, and Chapter 5: “Man from man, but not bed from bed: Nature, art and chance” in *Physics II*, in *Aristotle’s ‘Physics’. A critical guide.* Op. cit., 2015.

³⁰² Scharle, Margaret. “Elemental teleology in Aristotle’s Physics 2.8”. Op. cit, p. 158.

³⁰³ Ibid., p. 169.

than ‘not-being’: but not all things can possess ‘being’, since they are too far removed from the ‘originative source’.

Elementary teleology is, however, not part of this account of teleology. As I said above, regarding individual elementary teleology, it would not have been possible to make a comparison with Bergson. But the latter passages have to be included in a complete account of global teleology, for the sake of imitation. For this reason, I have included elementary teleology only with regard to the cycles of transformation, which I read in a teleological way. The two texts show a general tendency to the best. The best here is being, beyond the perishable substance of the living and non-living being.

- Biological imitation: stability of perishable living beings

“For one of the most natural of works for living things (as many as are complete and not damaged, or not spontaneously generating) is to make another like itself—an animal an animal, a plant a plant—so as to partake so far as it is able in the eternal and divine. All things reach for this, and for the sake of this do whatever they do according to nature (‘for the sake of’ being twofold: *for* what is aimed at and *for* what is benefitted). Since, then, it is unable to share in the eternal and divine by way of continuity, because perishable things do not admit of persisting as the same thing and one in number, each thing shares in the way in which it is able to partake (one more, another less). So it persists not as the same thing but as one like itself, not one in number but one in form” (DA.II. 4.415a27-415b9).

And:

“Now some existing things are eternal and divine whilst others admit of both existence and non-existence. But that which is noble and divine is always, in virtue of its own nature, the cause of the better in such things as admit of being better or worse, and what is not eternal does admit of existence and non-existence, and can partake in the better and the worse. And soul is better than body, and living, having soul, is thereby better than the lifeless which has none, and being is better than not being, living than not living. These, then, are the reasons of the generation of animals. For since it is impossible that such a class of things as animals should be of an eternal nature, therefore that which comes into being is eternal in the only way possible. Now it is impossible for it to be eternal as an individual (though of course the real essence of things is in the individual) – were it such it would be eternal – but it is possible for it as a species. This is why there is always a class of men and animals and plants” (GA. II. 1, 731b20-2a1).

As Ross says: “The perpetuation of the type is the best proof of finality in nature”.³⁰⁴ These passages are certainly quite clear and have been quoted innumerable times. It is easy to note a resemblance of them with the Platonic *Symposium* (207d-209e). These biological passages, convergent in their meaning, state that Aristotelian biological infralunary species are eternal, and also that infralunary individuals are not. This is, again, due to the fact that being is better than non-living,³⁰⁵ and nature does the best among the possibilities. Survival is the individual *télos*, and reproduction is the specific *télos*. Since, for Aristotle, the species is eternal and survival is not, Ross’ statement is understandable.

³⁰⁴ Ross, D. *Aristotle. [Aristóteles]*. Trans. Francisco López Martín. Gredos, Madrid, 2013, p. 148.

³⁰⁵ Against Kahn, Gotthelf thinks that these passages mean “to assimilate generation to self-preservation (not the preservation of the species)”. Gotthelf, Allan. “Aristotle’s conception of final causality” in *Teleology, first principles, and scientific method in Aristotle’s biology*. Oxford Aristotle Studies, 2012. Footnote, 13, p. 210.

As stated in the previous section on elementary transformation, there is an imitative striving to be in a stable condition, beyond the unstable existence on earth. In this sense, reproduction is an imitation of the imperishable realm, and also is expressed by circular motion: the cycle.

Biological reproduction is easily conceived within a global framework of the “for what is it aimed at” teleology, whereas there is a “for what is it beneficial” teleology at stake too. As I see it, there is a doubly comprehensive understanding of the same function: reproduction. There are two complementary levels of the term *télos* in these two places in the corpus. As always, the individual *télos*, the benefit, and the teleology of development are clearer. Reproduction is a potency of living beings. The fulfillment of that potency means, as we know well, the goal and the function. Reproduction is, like other faculties within the biological realm, a flourishing. Besides, this fulfillment expresses a general aim, called imitation by Aristotle. Obviously, it is not a conscious imitation. Imitation, here, is an analogical term: it means an ontological dependence, as we have seen. Reproduction means contributing to something beyond the individual. This something is the stability of the biological species in the cosmos. Since the Aristotelian cosmos is eternal, the biological species within it are so too. By reproducing, individual living beings contribute to eternity, that is, stability in the time of part of that cosmos: namely, their species.

While in the text from *Met.*XII.10 natural things function for the sake of the general order, in these last cases of imitation natural beings contribute to the stability of that general order. Each global passage emphasizes one aspect of that cosmic understanding of perfection.

- Ecology: interspecies order

There are still two global texts to read. They do not include eternal supralunary items any more, hence there is no imitation at stake. They fit better with the *Met.*XII.10 global perspective.

According to Judson, the first of the following two texts is “conformist” with the basic teleological “axiom”, that is: the goal is “better with reference to the essence of each thing”.³⁰⁶ The global teleology described in *PA.*IV. 13 is conformist since the general good fits with relatively individual goods: they are compatible. The second text from *Pol.* I. 8 goes against Judson’s axiom: it could never be conformist. This example means a certain asymmetric understanding of teleological relations.

Following Judson’s useful commentary, I have distinguished the two passages with two titles:

Good for everybody:

“For in some [fishes] this is placed in front, at the very extremity of the body, while in others, as the dolphin and the Selachia, it is placed on the under surface; so that these fishes turn on the back in order to take their food. The purpose of nature in this was apparently not merely to provide a *means of salvation* for other animals, by allowing them opportunity of escape during the time lost in the act of turning – for all the fishes with this kind of mouth prey on living animals – but also to prevent these fishes from giving way too much to their gluttonous ravening after food. For had they been able to seize their prey more easily than they do, they would soon have *perished* from over-repletion. An additional reason is that the projecting extremity of the head in these fishes is round and small, and

³⁰⁶ Judson, Lindsay. “Aristotelian teleology”. *Oxford Studies in Ancient Philosophy*. 29:341-66 (2005), p. 359. From Lennox *On the parts of animals* and *Phys.*II.7.198b5-9

therefore cannot admit of a wide opening”. *PA.IV. 13. 696b25-34.*)

Good for some, bad for others:

“For some animals bring forth, together with their offspring, so much food as will last until they are able to supply themselves; of this the vermiparous or oviparous animals are an instance; and the viviparous animals have up to a certain time a supply of food for their young in themselves, which is called milk. In like manner we may infer that, after the birth of animals, plants exist for their sake (*tá te phytà ton zóon héneken einai*) and that the other animals exist for the sake of man (*kai álta zóa ton anthrópon chárin*), the tame for use and food, the wild, if not all at least the greater part of them, for food, and for the provision of clothing and various instruments. Now if nature makes nothing incomplete, and nothing in vain, the inference must be that she has made all animals for the sake of man (*ton anthrópon héneken autà pánta pepoiekénai tèn physin*). And so, in one point of view, the art of war is a natural art of acquisition, for the art of acquisition includes hunting, an art which we ought to practice against wild beasts, and against men who, though intended by nature to be governed, will not submit; for war of such a kind is naturally just”. (*Pol. I. 8. 1256b7-1256b26*).

A number of influential scholars do not accept these texts as examples of Aristotelian teleology. First, they are only two in a huge corpus.³⁰⁷ Secondly, they are not interpreted straightforwardly or literally. Balme considers the first passage, on the dolphin in *GA.IV.13*, as “sarcastic”.³⁰⁸ Regarding *Pol.I.8* he states that “it is impossible that he could have meant this literally. It comes in a rhetorical and popularizing account of the varieties in natural lifestyle”. In a similar way, Wieland calls global teleology accounts in general “concessions to popular notions”, and, especially in *Pol.I.8*, a “practical question”. In Aristotle the animals do “not [have] an innate tendency to serve man”, says Wieland.³⁰⁹ These two passages, but overall the second, are regularly read from popular perspective, as a opposed to a biological or scientific one.

There is an idea of a “web of interests” all over nature. It entails, in my reading, the compatibility of the global teleology of “*for* what is aimed at” and the individual teleology “*for* what is it beneficial”.

Aristotle states that: “For in some [fishes] this is placed in front, at the very extremity of the body, while in others, as the dolphin and the Selachia, it is placed on the under surface; so that these fishes turn on the back in order to take their food”. The purpose of nature is twofold: 1) “to provide a means of salvation for other animals, by allowing them opportunity of escape during the time lost in the act of turning – for all the fishes with this kind of mouth prey on living animals”. This can be named as the “good of other animals”. 2) “to prevent these fishes from giving way too much to their gluttonous ravening after food”. Which can be named as the “good of the dolphin and the Selachia”. 1) and 2) are the good of “*for* what is benefitted” (*érgon, eidos*) but the articulation is “*for* what is aimed at” (*táxis*).

We can take this other passage: “From it [duration immortal and divine] derive the being and life which other things, some more or less articulately but others feebly, enjoy” (*DC.I.9*). Or: “On such a principle [first unmoved mover, which is good], then, depend (*értetai*) the heavens and the world of nature. And it is a life such as the best which we enjoy, and enjoy

³⁰⁷ For this idea Pellegrin, Pierre. “Introduction”, in *Les parties des animaux*, by Aristotle. G F Flammarion. *Les parties des animaux*. Paris, 2011.

³⁰⁸ Balme, D. “Teleology and necessity”. in A. Gotthelf and J. G. Lennox (eds.), *Philosophical Issues in Aristotle Biology*, Cambridge University Press, 1987, p. 279.

³⁰⁹ Wieland, Wolfgang. “The problem of teleology”. *Articles on Aristotle. I. Science*. ED. Jonathan Barnes, Malcolm Schöfield, Richard Sorabji. Duckworth, London, 1975, p. 158.

for but a short time (for it is ever in this state, which we cannot be), since its actuality is also pleasure” (*Met.* XII. 7.1075a onwards). Furthermore, as we saw, in *Met.*XII.10 this “derivation” and “dependence” is considered “order” and “stability”, or, maybe better, “stable order”. It is the general accordance to one principle. Aristotle himself states that the idea of something “besides sensible things” is linked to the “first principle”, “order”, “becoming” and “heavenly bodies”. These major elements all presuppose each other, it seems. The one interesting thing for us, at this point, is “order”. Order, we saw, is good, it is *télos*. Against those who “give us many governing principles” Aristotle famously says the “world (*ónta*) refuses to be governed badly” (*Met.* XII.10.1076a-3).

In my view, the *Met.*XII.10 passage sheds light on *PA.*IV. 13, yet it strengthens the global teleology position (this is, precisely, Sedley’s main strategy in his controversial analysis of *Pol.*I.8 in the light of *Met.*XII.10).

The first text, *PA.*IV.13 is good in two perspectives: it provides salvation for little fish and prevents gluttony among dolphins. I do not think it “reverses” *Pol.*I.8’s chain, since in this conformist case, so to speak, they all win.³¹⁰

John Cooper quotes the *PA.*IV.13 passage as a “scientifically” valid example of Aristotelian ecology.³¹¹ I agree since it talks about interactions among species and about global stability as something good, attainable and something in which everything takes part. As Cooper says, “there is inherent in the world a fundamental tendency to preserve permanently the species of living things it contains”.³¹²

So I have titled the *PA.*IV. 13 passage as “good for everybody” and the *Pol.* I. 8 passage as “good for some, bad for others”. This emphasizes the polemic *non-conformist* aspect of our last text on Aristotelian global and immanent teleology. It deals with the problem of anthropocentrism, defended by Sedley in two insightful texts and by Owens in a single one. In *PA.*IV.13 we were talking about an order in which the two teleologies, that of the good of “for what is it beneficial” (*érgon, eidos*) and the other “for what is it aimed at” (*táxis*), are compatible, and thus conformist.

On the contrary, in *Pol.* I. 8 the first individual’s *télos* is, so to speak, “sacrificed” for the sake of the second’s, and the second’s for the sake of a third’s. The order of the substance and its *télos* is referred to its degree of perfection. Thus, plants exist for the sake of animals, and animals exist for the sake of humans. *Pol.* I.8 has to be understood in the context of the “art of acquisition”, which is the last topic in a sequence that starts with the nature of the *polis* and, subsequently, the legitimacy of natural slaves. The passage pertains then to the section on art of acquisition, and echoes the previous two. In this context, also the idea of using natural slaves is justified in the same way as hunting, etc. That is, Aristotle considers animals and slaves instruments for survival and well-being of the best (non-slave humans).³¹³ According to some scholars, this theory contradicts Aristotle’s biology, just as the theory of

³¹⁰ See Leunissen, Mariska. *Explanation and teleology in Aristotle’s science of nature*. Cambridge University Press, 2010, p. Leunissen, p. 44. See also pp. 92-99.

³¹¹ Cooper, John. “Aristotle on natural teleology” in *Language and logos*, 1984. On the “principle of the permanence of the species”, p. 220.

³¹² *Ibid.*, p. 213.

³¹³ See *Pol.*I. 8.1256a3-1256b6.

slavery contradicts his anthropology.³¹⁴

In this case, this ecological or global teleology is different from *PA.IV.13* since the good or *télos* is, on occasions, death. This raises important problems, since, we know, *télos* and *péras* are different, and death is *péras*, and never the goal.

Sedley and Owens defend both “a hierarchical teleology in nature”, in their opinion firmly rooted in Aristotle’s thought.³¹⁵ First, Sedley is right in claiming that, despite the aforementioned context, *Pol.I.8*’s passage is not *only* about human beings and nature, but also about the “art of acquisition”. At this point, rigorously basing his interpretation on Aristotle’s words, Sedley wants to debilitate popular and pragmatic readings. He is right in saying that an important part of this text talks about biology. To my knowledge, interpreters have never responded to that satisfactorily.

Notice that Aristotle says that “the vermiparous or oviparous animals are an instance; and the viviparous animals have up to a certain time a supply of food for their young in themselves, which is called milk”. Aristotle adds that “In like manner”, that is, analogically, “we may infer that, after the birth of animals, plants exist for their sake (*tá te phytà ton zóon héneken einai*)”. Milk and plants have their *télos* in another being. Analogically he states “that other animals exist for the sake of man (*kai álla zóa ton anthrópon chárin*), the tame for use and food”. Little further he reinforces this idea: “Now if nature makes nothing incomplete, and nothing in vain, the inference must be that she has made all animals for the sake of man (*ton anthrópon héneken autà pánta pepoiekénai tèn physin*)”. As I said, the context of natural slavery is still present in the background, which is clear when Aristotle adds that the art of acquisition and hunting is “an art which we ought to practice against wild beasts, and against men who, though intended by nature to be governed, will not submit; for war of such a kind is naturally just” (*Pol. I. 8. 1256b7-1256b26*).

Sedley and Owens think that Aristotle is, within the sublunary realm, anthropocentric. Everything in nature, simple elements, plants, animals and natural slaves are for the sake of Greek human beings. To be eaten can be understood as the goal of animals and plants, according to Sedley’s reading. The two scholars think that beneficiary biology and global teleology are so. Regularly, the goal of the wild animal is maturity, but *eventually*, its goal (and not only limit) *can be* death, *if this is necessary for humans*. This is the most controversial point of this non-conformist reading, but I do not support it while it is contradictory to the doctrine I have developed so far, according to which the *télos* is the completion and good.

As Sedley points out, the perspective of *Pol.I. 8* seems to include the relation between plants and animals. Second: if we consider this a popular concession, then we have to address the doctrine of the natural slave (*physei doulos*), three chapters earlier. Owens also recalls that every human being is not equally considered, and that all are to be understood regarding the contemplative philosopher, the goal of the city.

³¹⁴ Berti, Enrico. *Il pensiero politico di Aristotele*. [*El pensamiento político de Aristóteles*] Trad. Helena Aguila Ruzzola]. Gredos, Madrid, 2012, pp. 42-49.

³¹⁵ The expression is taken from Owens, Joseph. “Teleology of nature in Aristotle”. *Some philosophical issues in moral matters. The collected ethical writings of Joseph Owens*. Ed. D. Billy-T.Kennedy. Editiones Academiae Alphonsonianae. Roma, Edalcalf, Roma, 1996, p. 206.

Aristotle recalls that in physiological terms slaves are different from their owners: they are stronger and less intelligent (*Pol.* I. 5.1254a29-1254b31). According to Aristotle this is not a conventional claim: the slave is an instrument for the owner, and that seems to be grounded in nature (*Pol.*I.5.1254b20-30). At the same time, technically speaking, as Berti points out, the slave is not one species.

In that chapter, nature is seen as a web of goals, where the inferior being in the scale is subordinated to the superior one. One could however still defend the conformist perspective here: although it is difficult for us to understand it, Aristotle's conception of the slave includes flourishing and the *télos*. By contributing to the rationality of the *télos*, the slave participates in something good, which is better for him or her. This could be a way of understanding part of the section in *Pol.*I.8. But some of those uses between species in nature imply death, i.e. the plants nourishing the cows. One of the most important ideas regarding the notion of *télos*, as we saw, is that it is not like *péras* or *escháton*. The goal is not the limit of a substance's progress of any kind, but its peak. Death could never qualify as *télos*, in my reading. The death of one living entity can be a *télos* only *accidentally* since its meat means growth for another animal.

I think that the most cautious thing to say here is to affirm that wild living beings have their own goal and that they contribute in different degrees to the general good. This contribution is certainly unclear in *Met.*XII.10, but it may involve the specific function and not the death of living entities. I think Aristotle's global teleology in *Pol.*I.8 could partially respond to this question (as Sedley says) only in cases of use, when the immanent *télos* and the general inter-species order are compatible (slavery). When they are not (the trophic interpretation of the natural scale), it cannot fit with the doctrine developed above. Death can never be a goal, since it is the opposite of the survival and flourishing of a species. *Pol.*I.8 is a non-conformist passage, like the other cases of global teleology. The controversial status of the text is justified. *Pol.*I.8 is not a popular concession, as has been suggested, since it fits clearly in *Pol.*I as a whole. At the same time, I believe a global teleology scheme belongs beyond the boundaries of the immanent teleology, linked to natural forms, addressed throughout these pages. In any case, *Pol.*I.8 is one exception in Aristotle's work

Conclusion of Chapter 2

[A] According to Aristotle, teleological events are interpreted by analogy. In individual teleology, arts and crafts are the analogies used. In global teleology analogy plays a lesser role, although it is still present: the language of mimesis, the household and the army.

[B] In Aristotle, teleological phenomena are understood as perfective, as a causal tendency toward excellence, the good and completeness. This is connected to the natural form and function.

[C] The human being is the summary of the natural scale below in the sublunary world and also has unique goals. The unique goals, implied in their rational faculties, are part of a further analogy between humans and divine beings.

[D] Immanent teleology is to be found in regular events, since they happen always or for the most part.

[E] Chance and luck events are not part of primary teleology, because they do not tend toward immanent forms or functions. But for Aristotle they can be interpreted in a retrospective way *as if* they were goal directed in the realm of human praxis. This can be called secondary teleology.

[F] The model of immanent teleology has two domains. They are referred to in two of the passages that distinguish two senses of final cause, namely, the beneficiary (*hou héneka* + dative) and the aim (*hou héneka* + genitive). There is an individual teleology, philosophically developed by Aristotle in *Phys.II*, *PA.I*, in his many works on biology and also in his ethics. It is normally linked to the idea of the beneficiary. There is also a global teleology, found in a small number of texts scattered throughout the corpus. This second dimension is related to the notion of the aim of the final cause.

[G] In the domain of individual teleology, I focus on different kinds of biology. Apart from biology, I include the development of city-states as one kind of natural teleology. This does not apply to history, however.

[H] In the domain of global immanent teleology, the aims are phrased in terms of perfection, contribution, participation and imitation. Leaving aside one case (*Pol.I.8*), this domain is easily compatible with individual teleology.

3. Structural elements in Bergson's teleology

In this chapter I will address the main structural elements and issues in Bergson's conception of teleology. In 3.1 I tackle one central aspect of teleology: the analogy between the intentional world (the world of the human mind) and the natural world (the non-human world). I find that analogy and perfection, or goal, are interconnected notions, so I address both in the same section. Besides, it is true that Bergson has nothing like a consideration of the *télos*, *péras*, or the good as such, like we had in 2.1.a (although he applies the concept in concrete empirical examples throughout, as we will see). In order to pose this dual concept of analogy/perfection I gather the main examples of analogy in Bergson's work, regarding conservative or transgressive teleology. Consciousness, the embryo, and history are some of these examples that involve one proposal of analogy and one notion of what perfection is in each case. According to the previous account, 3.1 deals with pluralism (different types of perfection) and anthropomorphism (different kinds of right analogy).

3.2 deals with the problem of anthropocentrism. I tackle the place of human beings in the cosmos, derived from the philosophical model of immanent teleology. I find here, as I found in Aristotle, a mitigated anthropocentrism. I defend it is against absolute anthropocentrism, but it also states that human beings are, essentially, the *most perfect* animals (in the sublunary realm, in the case of Aristotle). In Aristotle, to a certain extent, humans sum up nature. They use vegetative faculties and animal faculties, and, besides, they have unique faculties, such as ethical and dianoethical virtues that, in one case—namely, contemplation or *theorein*—pertain to astral supralunary beings. They sum up nature and they also add something unique and divine to it. In my reading of Bergson, there is biomorphism, since there is a great variety of beings, goals and analogies: there is a common element between humans and the rest of beings. But human beings, on the one hand, also sum up nature and, on the other hand, have unique faculties. In Bergson there is a *hierarchical use of the ontological scale* for the sake of teleology, but in an evolutionary way. It is, thus, a *mitigated anthropocentrism*: humans are not the *only* goal-directed being in the world, but among the variety of goals, human goals are the *best* ones.

The third aspect I study in chapter 3 is the question of regularity. It is important for immanent classical teleology, as we saw in 2.1.d. To this extent, Bergson's conservative teleology is supposed to work always or for the most of the time. Bergson's account of attention to life or closed society tendencies, as we will see in 3.3.a, fits well with Aristotle's regular account of individual teleology.

In 3.3.b I tackle singular, unpredictable, indeterminate processes, which retrospectively can be interpreted as beneficial or not. Here is where I link Aristotle's secondary teleology with Bergson's view of evolution and history. Here also I develop one brief but enlightening remark made by the Bergsonian scholar Camille Riquier.

3.1. Perfectivism and analogy

In the "Introduction" to EC, Bergson proposes one circular philosophy. Bergson says that: "*theory of knowledge and theory of life seem to us inseparable*". Let's see how he justifies the statement:

“[a] A theory of life that is not accompanied by a criticism of knowledge is obliged to accept, as they stand, the concepts which the understanding puts at its disposal: it can but enclose the facts, willing or not, in pre-existing frames which it regards as ultimate. It thus obtains a symbolism which is convenient, perhaps even necessary to positive science, but not a direct vision of its object. [b] On the other hand, a theory of knowledge which does not replace the intellect in the general evolution of life will teach us neither how the frames of knowledge have been constructed nor how we can enlarge or go beyond them. *It is necessary that these two inquiries, theory of knowledge and theory of life, should join each other, and, by a circular process, push each other on unceasingly.*

[c] Together, they may solve by a method more sure, brought nearer to experience, the great problems that philosophy poses. For, if they should succeed in their common enterprise, they would show us the formation of the intellect, and thereby the genesis of that matter of which our intellect traces the general configuration. *They would dig to the very root of nature and of mind.* [d] They would substitute for the *false evolutionism* of Spencer—which consists in cutting up present reality, already evolved, into little bits no less evolved, and then recomposing it with these fragments, thus positing in advance everything that is to be explained—a *true evolutionism*, in which reality *would be followed in its generation and its growth*”.³¹⁶

I claim that the “true evolutionism” defended here is to be found in the reformed finalism, according to Bergson. As we saw, Bergson considers that the basis of teleology or finalism is psychological. Spencer’s progressivism does not rely on that so fully, according to Bergson. The psychological basis should refer to the theory of knowledge. This theory of knowledge should reinforce a solid theory of life. For Bergson, we should start our analysis from our daily experience of the world. Only afterwards can we build a bigger vision on that. Only from consciousness we could experience what Life is. At the same time, the theory of life gives us the broader picture. It expands psychology. It traces within nature the large roots of our inner experience.

“Theory of knowledge” implies that there is a sort of perfectionism in consciousness (we all *are* progress). In Bergson’s view, continuity, action and self-creativity are perfective features. Continuity and self-creativity were part of his doctrine of duration in D.I, and he added external action in MM. In the latter book he established the capacity of extrapolating these mind features to natural beings, such as amoebas. In MM he had already added to the “theory of knowledge” a “theory of life”, but he didn’t develop the idea. The “theory of life” examines the roots of knowledge and how knowledge could be understood within a bigger framework (bigger than the label “human theory of knowledge”). At this point I think that Bergson is developing his well-known claim according to which doing philosophy implies going *beyond human nature*.³¹⁷ Based on the theory of life we can grasp a deeper understanding of the theory of knowledge. Since life is present in all the living beings, we can understand our knowledge in comparison with them. Since Life, as such, has its own features, we can understand ourselves better in comparison to it. Life and knowledge compound a common ground for EC. The analogy illustrates that.

In sum, the theory of life entails the use of analogy, so it requires extrapolation. Bergson’s analogy can be established between human consciousness and living beings, and its aim is to show what life is as such. In MM the human organism and some parts of its consciousness are thus like other organisms to some extent. In LR human consciousness is a part of one society, and societies are organisms. In EC this analogy becomes much bigger. In addition to

³¹⁶ EC, pp. xiii-xiv. I put in italics evolutionism.

³¹⁷ PM, p. 227.

the theory of life, which concedes the possibility of establishing analogies between individual living beings and human consciousness, there is a complementary theory of life that defends the analogy between human beings and Life, understood as evolution. Hence, in EC there are analogies between human consciousness and one insect, between consciousness and one embryo and between consciousness and one plant. There are also ambitious analogies between human consciousness and Life, regarding creation.

I believe that in the introduction to EC Bergson is referring to teleological concepts, since perfection and analogy are both implied in the theory of knowledge and in the theory of life. I also consider in fact that, in the model of immanent teleology, analogy and perfection compose a circle. The theory of knowledge refers to our experience of what perfection is and the theory of life is the philosophical basis upon which the analogy can be established *legitimately*. Without perfection there is no directionality in nature. Without analogy there is no perfective model, since it is to be found in consciousness.

In general terms, the idea of analogy implies that human consciousness and human affairs *are* different parts of nature. There is analogy but also plurivocity of the same term. Hence, regarding its natural being, some common trace has to be noted between the human realm and the natural non-human one. This idea fits well with Bergson's claim that: "philosophy should be an effort to go beyond the human state".³¹⁸ It goes beyond anthropocentrism. In Bergson's world, Cartesian anthropocentrism is much closer than that of Plato and the Stoics.³¹⁹ Bergson's conception of nature challenges Descartes' and that of his heirs.

We saw that within Aristotle perfection or *télos* has several meanings, although it always refers to a certain kind of natural completeness. Regarding each case of analogy one concrete notion of what is perfection is has to be at work. In the human realm, completeness would mean the consummation of a productive action (the sculpture, the carpenter's work, the house, the health of a patient), the consummation of a faculty (sight for an eye, movement for the legs) or the fulfillment of a general goal (life according to virtue and reason, or happiness). This can be extended to nature, as we know well. According to Bergson's philosophy there are also a number of interpretations of what perfection is. All these types of perfection, according to the model of immanent teleology, can be extrapolated from human life to nature. According to that model, nature is again *more perfect* than human life.

In Bergson, the capacity of spontaneous efficiency upon the environment, temporal continuity, and free creativity are some of the mental features extrapolated to different phenomena by Bergson. In the next pages I deal with this case by case. My aim in 3.1 is not to discuss in full detail the perfective aspect, the *télos* involved. Now I will deal with the analogies in particular, and I will also give an account of the type of perfection. But I will come back to that in 4.

My aim here is just to highlight the main cases of analogy in Bergson, which can be understood in two types: a "horizontal analogy", between the individual (the organism, embryo, society) and the (human) individual, that is, analogies 3.1.a, 3.1.d and 3.1.c; and a "vertical analogy", between the human soul and the *élan*.³²⁰

³¹⁸ PM, p. 227.

³¹⁹ See 2.1.c.

³²⁰ I follow Frédéric Worms' terms. He states that there is one analogy between human duration and Life, called a vertical analogy, based on unpredictability, and a horizontal analogy, "transbiological" which "doit en quelque sorte en assurer l'unité immanente". He concludes: "Bergson ne renouvelle donc pas ici les arguments

The two most important studies on Bergson's notion of analogy are Pierre Montebello's *L'autre métaphysique* and David Lapoujade's *Puissances du temps. Versions de Bergson*. To be sure, both disregard the use of analogy for the sake of a teleological argument. Moreover, Lapoujade denies any sort of finalism in Bergson.³²¹ In fact, Lapoujade states that finalism's "raisonnement par analogie est mal fondé: ils rabattent les tous ouverts de la nature sur les systèmes fermés de l'intelligence".³²² According to this Lapoujade's account of finalism could not succeed in grasping what Life and freedom is in Bergson.

Although far from my view, I think that Lapoujade develops an interesting and useful theory of analogy in Bergson.³²³ It is not a matter of an analogy between fixed things, he says, but between tendencies. This echoes one of Bergson's mantras. Analogy is understood within a method here. Firstly, there is intuition of the self by the self.³²⁴ That is, we grasp ourselves spiritually, vitally and materially, he says. Secondly, there is extrapolation. This second step is what he calls sympathy, which is an "analogical reasoning".³²⁵

Lapoujade gives a systematic vision of these two Bergsonian terms: intuition and sympathy. I think Lapoujade is not far from my position, although I do not use the terms intuition or sympathy in my work and, besides, he rejects finalism in Bergson. Lapoujade describes a circle or a circuit of these two operations of the mind, which "presuppose themselves one another".³²⁶ According to this vision, intuition and sympathy could play a role similar to what I understand as analogy and perfection. In any case, analogy and perfection can be conceived as what Lapoujade holds thinking to be for Bergson: to jump beyond the limits of the circle in which human experience is enclosed.³²⁷ I also hold that the analogy is between tendencies, and not between fixed terms, as he claims for sympathy. In fact, Aristotle himself thinks that perfectivism is a feature of tendencies, and not things.

In *L'autre métaphysique* Montebello gives a deep account of the value of analogy in different important contemporary philosophers. Bergson is placed among Ravaisson, Schopenhauer, Gabriel Tarde and Nietzsche. Montebello shows the basis of the "most human of the metaphysics of cosmos, the most cosmic of the metaphysics of human beings"³²⁸, that is "the other metaphysics", is opposed to the modern philosophy represented by Descartes, Kant and phenomenology. "The other metaphysics", in short, places human beings within nature, and not isolated from it. In a way he claims that Descartes, Kant and phenomenology are anthropocentric. Montebello gives an extraordinary importance to the analogy as a method for the "other metaphysics". Analogy for him means that a human being is part of nature, and that, *according to proportions* there is a link between him and natural beings. There is also a

classiques en faveur de la finalité transcendante". I agree with him regarding the content of the vertical analogy and the general conclusion, although I am not totally sure about the meaning of what he calls horizontal analogy. However, I tend to think that basically, what he calls horizontal analogy is what I call by the same term. Worms, Frédéric. *Bergson ou les deux sens de la vie*. Op. cit, p. 204.

³²¹ Lapoujade, David. *Puissances du temps. Versions de Bergson* Paris Éditions de Minuit, 2010, p. 102.

³²² Ibid., p. 67.

³²³ Ibid., pp. 60-101.

³²⁴ Ibid., p.61.

³²⁵ "Raisonnement par analogie".Ibid., p. 62.

³²⁶ Ibid., p. 69.

³²⁷ Ibid., p. 101.

³²⁸ Montebello, Pierre. *L'autre métaphysique*, Desclée de Brouwer, 2003, p. 11.

link between him and the cosmos. Along with this, this “other metaphysics” conceives beings as something spontaneous, non-passive; and also, it constitutes an “evident hierarchy”.³²⁹

The “other metaphysics” implies a vision of human beings divided in different stratum of being, where analogies can be erected. It also defends the analogy between the human being and the cosmos. Here, philosophy of nature and anthropological philosophy are reciprocally elaborated between each other.³³⁰ This depiction of the *other* metaphysics is right, at least regarding Bergson. The mind is a natural issue. All natural beings, on the other hand, fall on a natural scale. There is an analogy between the cosmos and the human being, since humans are at the top of this scale. There is an inner comprehension of what nature is. In my view, this, so to speak, *natural assumption* of human consciousness is a central claim of teleological thought. Eventually, throughout his discourse, Montebello does acknowledge this intimate affinity. It is evident, however, in the case of Ravaisson, an openly finalistic thinker, and not in the case of Schopenhauer, an openly non-finalistic thinker. In any case, Montebello does not explore the essential affinity between analogy and teleology. That is my task now.

The main difference between, on the one hand, Montebello’s and Lapoujade’s accounts, and, on the other, mine consists in the fact that I consider both the cosmological assumption and the circular argument (intuition and sympathy) to pertain to the teleological tradition. Lapoujade denies any sort of finalism and Montebello remains neutral, to some extent, but both employ teleological concepts. Therefore, I follow some of their indications in this section on analogies. I also analyze the two natures of the two main analogies distinguished, a vertical one (man/macrosmos) and the horizontal one (man/organism).

3.1.a. Analogy of adaptation: attention to life

MM is focused on the human body, the human soul and, above all, their intersection. Regarding the human body, in the first chapter is to be found an analogy between it and the rest of the living bodies. Life, and its philosophical meaning, is one of the main notions of MM. The microscopic Monera³³¹, “as we rise in the organic series”,³³² the “higher vertebrates”³³³ and, at the top, the human beings all take part in life. This is the first natural scale that appears in Bergson (only MM contains three). Here he finds that “the more it develops, the more numerous and the more distant the points of space are, which brings it into relation with ever more complex motor mechanisms. In this way the scope that allows to our action enlarges: its growing perfection consists in nothing else”.³³⁴

The term “perfection” is here linked to efficiency. Note that it is not an intellectual item. Unlike Aristotle, Bergson doesn’t use the artisan’s action as model. Bergson emphasizes the perfective efficiency of the inner drive of life. Among efficiencies, the most varied and articulated efficiencies should be called *the most* perfect ones. During the first statement of

³²⁹ “[l’analogie] établit des rapports et des proportions, partout une mesure commune par des choses différentes”. Ibid., p. 31

³³⁰ “... se déploie en une philosophie de la nature (ce qui ne veut pas dire en une philosophie naturaliste) à la mesure de son projet anthropologique”. Ibid., p. 76.

³³¹ That is the name of a phylum for structureless microscopic organisms included in the Protista kingdom, the third kingdom, created by Haeckel in the 1860’s.

³³² MM, p. 28.

³³³ MM, p. 29.

³³⁴ MM, p. 34.

his own position regarding knowledge in MM,³³⁵ Bergson recalls the organic base of our being. In other words, knowledge, and especially in this case, perception, should be understood within the general framework of living beings. And living beings are centers of action,³³⁶ and namely useful action.³³⁷ These actions are to be considered spontaneous and unforeseen movements.³³⁸ This label is, again, not restricted to human bodies, but also to the “humblest body” of the humblest living being.³³⁹ Between a body with a brain and one without it there is a “difference of complication, and not a difference in kind”.³⁴⁰ The living bodies consist in useful (for the sake of conservation), spontaneous (with certain minimal independence) action. As Bergson says: “my own body and, by analogy with it, all other living bodies are those which I have the most right to distinguish in the continuity of the universe”.³⁴¹

Our experience of the world is absorbed in avoiding certain things while seeking other things, since we are living beings and we are focused on action. This experience of the world can be extrapolated to other beings, such as the monera or the vertebrates. In MM.III Bergson recalls the *ex gradibus vitae* argument. The “purely utilitarian origin of our perception of things”,³⁴² can be grasped by comparing our nervous central system with the “herbivorous animal”. Shortly after this, Bergson also calls the amoeba a “rudimentary consciousness”,³⁴³ and gives the general idea:

“...We can follow from the mineral to the plant, from the plant to the simplest conscious beings, from the animal to man, the progress of the operation by which things and beings seize from their surroundings that which attracts them, that which interests them practically, without needing any effort of abstraction, simply because the rest of their surroundings takes no hold upon them: this similarity of reaction following actions superficially different is the germ which the human consciousness develops into general ideas”.³⁴⁴

As we know, this *similarity, despite the difference*, is the basis of analogy. Finally, later in MM.IV, a chapter divided into short sub-sections, the discourse talks about inner movement in consciousness (sub-section II), and only subsequently is consciousness extrapolated to life in the “humblest being”.³⁴⁵ In the conclusion of MM (sub-section IX) Bergson refers to the scale as the “progress of living matter” which “consists in a differentiation of function which leads first to the production and then to the increasing complication of a nervous system”.³⁴⁶ The “birth of consciousness” and its progress means conservation and reproduction.

As Worms says, inner human life is part of an “analogy to the comprehension of life”.³⁴⁷ The second must be understood beyond the human psychological boundaries. The “biological foundation” of philosophy implies the use of valid analogies.³⁴⁸ But not *just* analogy, it

³³⁵ The whole argument can be found in MM, pp. 28-32.

³³⁶ MM, pp. 228 and 242.

³³⁷ I mean “vital utility”, for the sake of life itself.

³³⁸ MM, p. 248.

³³⁹ MM, p. 198.

³⁴⁰ MM, p. 29.

³⁴¹ MM, p. 198.

³⁴² MM, p. 158.

³⁴³ MM, pp. 158-159.

³⁴⁴ MM, p. 160.

³⁴⁵ MM, p. 198.

³⁴⁶ MM, p. 248.

³⁴⁷ Worms, Frédéric. *Introduction à Matière et mémoire*. PUF, Paris, 1997, pp. 296-298

³⁴⁸ *Ibid.*, p. 107.

implies analogy *and* perfection or function. The *télos* is not a mere similarity, but grounds the analogical psychological item in non-psychological nature. What there is at stake in MM is a bunch of analogies *of* functions and tendencies. There are analogies for the sake of conservation, for the sake of growth, etc.

The teleological ground of MM is basically the human body. Action and reaction are the very functions of the human body and every living body. Since it is not opportune now, I will not address the great importance of the past and memory in this section. The basis for the analogy among the different species, genera and kingdoms of biology is that, regarding their relation with the present (including here the environment, the surrounding world), they all take part in life: different types of action and reaction mean different types of fulfillment of the biological functions in certain environments.

We have also seen that Bergson's species, genera and kingdoms are conceived not just like a *mere plurality* but like a hierarchical scale or progress. The human body is at the top of that scale.

The human body/organism is the first of the innumerable series of analogies in Bergson. It implies perfection in the sense of individual teleology: human bodies, herbivorous animals, amoebas and vegetatives act for the sake of existing individually, specifically, and well. In my view, regarding human physiology, MM should be considered within a teleological framework, although Bergson does not talk about forms, *éidos* or *morphé*. In this regard, the emphasis must be put on the *érgon* or function. The philosophical schema fits with the individual teleology, established between mature living beings. Bergson coins this common orientation towards a function or *télos* as "attention to life".³⁴⁹

Also in EC.II the analogy regarding functions is suggested. There is analogy between mature insects and human beings. The *homo sapiens*—here called *homo faber*—and insects—such as the yellow-winged Sphex known by Bergson thanks to the *Souvenirs entomologiques* by Fabre—are an example I can recall.³⁵⁰ The main idea behind this is that both lineages, the one that leads to humans and the one which leads to insects, are the *most perfect* trends of nature. First, he writes: "... *instinct perfected is a faculty of using and even of constructing organized instruments; intelligence perfected is the faculty of making and using unorganized instruments*".³⁵¹ So, these "two modes of psychical activity",³⁵² and "*represent two divergent solutions, equally fitting, of one and the same problem*".³⁵³

In this level, the task to be performed is the function, which implies adaptation. Adaptation means survival, reproduction and well-being. Animal instinct attains that function, and so does intelligence among humans. Despite the naturalistic approach, it is crucial to note that Bergson does not say either in MM or in EC.II that animals and humans are *equal*. These passages just stress the similarity in terms of functionalism. His philosophy of action understands life as efficiency. It is the best example of conservative teleology, since it refers

³⁴⁹ I find a parallelism between Bergson and the vitalist author Uexküll, author of *Bausteine zu einer biologischen Weltanschauung*. He has also been compared with Aristotle in Weiss, Helene. "Aristotle's teleology and Uexküll's theory of living nature". *Classical Quarterly* 42 (1-2), 1948.

³⁵⁰ The Sphex is a type of wasp, a Hymenopteran. Bergson considers the Hymenopteran the example of "perfect instinct". EC, pp. 172-176.

³⁵¹ EC, p. 140.

³⁵² EC, p. 143.

³⁵³ EC, p. 143.

a regular efficiency for the sake of the conservation of the already living being within an already given environment. This analogy is a horizontal analogy, based on two different substances.

3.1.b. Analogy of maturity

Bergson also holds that there is an analogy, and so also an extrapolation, of perfective features between human consciousness and embryos. It is thus another case of conservative teleology based on horizontal analogies. The function or action for the sake of conservation in one environment is less clear here. The analogy is based on the continuum of the flux of consciousness and the development of the embryo. This analogy establishes duration (originally one of the central concepts of the young Bergson) and a process of biological growth. The specific action or function here is mere survival, development and being. First, we can see the meaning of duration in DI, before Bergson's philosophy of nature (and, hence, before his reformist teleological project).

The continuum of heterogeneous qualities was, along with irreversibility and creative freedom one of the main features of human psychological duration in DI.II. Duration as one continuum composed of heterogeneous unmeasurable qualities seems to be some sort of *pure becoming*. But this would not offer a complete depiction of Bergson's essay. The perfective features in this early work are for me undeniable, and at the same time less explicit. Teleology is not rejected at all in that early framework. In short, quality, simplicity, continuity, irreversibility and free will (later on called "creativity" by Bergson) compose a general description of what maturity is. The teleological horizon of this work is a self-determined choice and decision made by the "whole soul".³⁵⁴ This is that ontological peak called maturity. He even says that many men are not even capable of fulfilling that goal and also adds that we are "rarely free".³⁵⁵ In this framework, freedom is, in sum, the specific function of the human being. Here freedom is to be considered as one specific moment of a process: it is a moment of certain flourishing.

In my reading of DI *irreversibility means directionality and free will is young Bergson's model of perfection*. But in DI the approach to the notion of duration is not natural immanent teleology since there is no analogy beyond human experience, apart from one example on the experience of space.³⁵⁶ In DI the author remains psychological. To be sure, in Bergson's account of duration there were suggested analogies with the natural realm, whereas he rejects any sort of analogy with mathematics. For him, we cannot measure deep feelings, while the major "ideas" that guide our life play the role that cells play in an organism.³⁵⁷ His view of consciousness as an interpenetrated amount of qualities has an organic model. Psychology is the world of life and "free action drops from it like an over-ripe fruit".³⁵⁸

Apart from these suggestions, in general terms, the external world is considered there as pure space. One would have to wait until MM for a proper philosophy of nature (and also a subsequent development of his idea of consciousness). The model of immanent teleology

³⁵⁴ DI, p. 167.

³⁵⁵ DI, p. 231.

³⁵⁶ In DI.II, p. Bergson argues that insects and dogs experience space in a non-intellectual way, but rather qualitatively.

³⁵⁷ DI, p. 135.

³⁵⁸ DI, p. 176.

finds human consciousness and its perfectivity as analogous to other beings. It is a natural philosophy. In DI there are only hints of that.

In EC Bergson constantly projects psychological features onto different phenomena of biology, since he considers that human psychology is a central part of Life. At the beginning of EC.I Bergson recalls his old notion of duration. In comparison with DI, something important has changed: there is an analogy at stake with natural implications. In the first pages of EC he makes an analogy between one embryo and human consciousness by stressing the feature of continuity in time. This is the first analogy in EC. Again, this case does not reproduce what the author said in DI, because in EC he wants to elaborate a philosophy of nature, something more ambitious than the DI scope. It is maybe not very representative of EC in itself, since it is not based on a transgressive or creative *télos*, but on *the most conservative* example of all his conservative teleology.

The embryo growth is a process for the sake of completeness, perfection and fulfillment of specific faculties. The embryo's progress is not an *a-teleological* progress. Consciousness and the embryo's development is not pure becoming, but a tendency towards maturity. We can read the passage now:

“If I consider my body in particular, I find that, like my consciousness, it matures little by little from infancy to old age; like myself, it grows old. Indeed, maturity and old age are, properly speaking, attributes only of my body; it is only metaphorically that I apply the same names to the corresponding changes of my conscious self. Now, if I pass from the top to the bottom of the scale of living beings, from one of the most to one of the least differentiated, from the multicellular organism of man to the unicellular organism of the Infusorian, I find, even in this simple cell, the same process of growing old”³⁵⁹.

The DI concept of irreversibility seems at stake, but as applied to every living being. The body, and consciousness mature. Later on, Bergson introduces the scale of living beings (just like he did before in MM). It is true that Bergson emphasizes now the features of progress and growth in terms of a pure becoming:

“The cause of growing old must lie deeper. We hold that there is unbroken continuity between the evolution of the embryo and that of the complete organism. The impetus which causes a living being to grow larger, to develop and to age, is the same that has caused it to pass through the phases of the embryonic life. The development of the embryo is a perpetual change of form. Any one who attempts to note all its successive aspects becomes lost in an infinity, as is inevitable in dealing with a continuum. Life does but prolong this prenatal evolution. The proof of this is that it is often impossible for us to say whether we are dealing with an organism growing old or with an embryo continuing to evolve; such is the case, for example, with the larvae of insects and crustacea. On the other hand, in an organism such as our own, crises like puberty or the menopause, in which the individual is completely transformed, are quite comparable to changes in the course of larval or embryonic life—yet they are part and parcel of the process of our ageing. Although they occur at a definite age and within a time that may be quite short, no one would maintain that they appear then *ex abrupto*, from without, simply because a certain age is reached, just as a legal right is granted to us on our one-and-twentieth birthday”³⁶⁰.

It is clear that Bergson is stressing here the aspect of change. The “perpetual change of form” is related to duration from DI. At the end, Bergson uses the case of menopause and puberty as

³⁵⁹ EC, pp. 15-16.

³⁶⁰ EC, pp. 18-19.

examples of biological transformation. They don't imply perfection, but crisis. Maturity is between these two crises. But he refers to irreversibility also in material items, like bodies. There is continuity and change. Only the implicit aspect of irreversibility contains the teleological substratum.

We know how Aristotle shows the process of an embryo: first appears the figure and, always afterwards, the color and hardness or softness of the material: nature works just like a painter³⁶¹. *Like in the case of "attention to life", the intelligent artisan analogy is absent.* Furthermore, to age for a mature being is not the same as the perpetual change of form. According to Aristotle's major teleological claim, the later steps in the embryo's development are better than the previous ones: while, *ontologically* speaking, the perfection is prior, *chronologically* speaking, it comes the last (GA.II. 736b4-5).³⁶²

We have seen that he is using the scale exactly as he used it in MM and the analogical perspective. The issue here is the meaning of perfection. In these passages Bergson is using the concept of continuum used in DI, in MM.III and IM. In the case of EC.I, there is space to interpret the text.

As I said, DI seems to be alien to the topic of teleology. The concepts involved there, especially in its chapter II, were that of continuum, heterogeneity, quality, irreversibility and, finally, self-creativity or freewill, dealt with in chapter III. I will leave aside heterogeneity and quality for now. In my opinion, irreversibility and continuum compose a framework in which maturity is possible. Moreover, maturity is the basis for self-creativity or freewill.

In the example from EC.I, Bergson is removing this human feature, the continuum of consciousness, from living organisms. Bergson says that "it is often impossible for us to say whether we are dealing with an organism growing old or with an embryo continuing to evolve" and that "there is unbroken continuity between the evolution of the embryo and that of the complete organism". My argument doesn't change with regard to DI. Irreversibility and maturation are implicit concepts of Bergson's idea of duration. The concept as such is unchanged in EC, but now one analogy is involved.

The analogy as such, the feature that we are currently looking for, only appears in EC. It is, by the way, far from Aristotle's embryology. It establishes explicitly what can be traced back to DI. Although Bergson emphasizes the continuum-becoming element, irreversibility (associated with duration from the beginning) points in the direction of maturity, and, thus, to the goal or perfection. We will deal with embryology again in 4.1, in the section where I tackle the different kinds of perfection. It is part of what I call conservative teleology. In this case, it tends implicitly towards maturity.

3.1.c. Analogy of adaptation: the community

The special feature of this type of analogy relies on the class of individual involved here: the community. It is a special individual analogy since for us one society is not an individual living substance, but a compound of other individuals (namely citizens). Bergson considers

³⁶¹ GA.II. 743b15-25.

³⁶² Met.IX. 8: "...because the things that are *posterior in becoming* are *prior in form and in substantiality* (e.g. man is prior to boy and human being to seed; for the one already has its form, and the other has not),...: Met. IX. 8.1050a5-10, my emphasis.

human communities natural entities. Influenced by the biological perspective of his epoch, Bergson goes beyond Aristotle and considers the community not just a natural being, but also a living being. I think that Bergson is never completely clear about this question, since although he states that, as we will see, he does not nuance or clarify this idea.

In Bergson each individual is a part for the sake of the whole. Some part of our psychological life and also our moral life is deeply rooted in this whole. Bergson's essay on laughter and his later approach to what he called "closed society", DS.II, analyses the relationship between the individual and that whole. In both essays he tackles the *functions of concrete individual societies for the sake of their conservation or survival*.

In the case of laughter, the philosopher clearly talks about the relation between the individual members. Society's impulse through the comic is to be understood as a tendency to social politeness. In Bergson's view, laughter's essence is to intimidate by humiliating. It is a reaction against different disintegrative habits, of very different levels.³⁶³ As I will show in 4.1."Destination of the community", a conservative teleology is there at stake. But the main point here is that he establishes the analogy between an organism and a society.

In DS he poses a clearer analogy between society and the living being:

"The members of a civic community hold together like the cells of an organism and habit, served by intelligence and imagination, introduces among them a discipline resembling, in the interdependence it establishes between separate individuals, the unity of an organism of anastomotic cells".³⁶⁴

Furthermore, Bergson used this analogy within a more concrete political context. Between LR and DS, he gave one of his "war lectures" in 1916, called "On personality" ("La personnalité").³⁶⁵ There he tackled this topic, but focused on national societies. "As long as one society has grown and matured, as long as it has reached to become aware of itself, it is one person. As long as one society has its traditions, its laws, its institutions, which synthetically are past, they play the same role as memory does in every individual. One society that has its own form, its peculiar character, which imposes this form and this character to the actions that it realizes, is one person".³⁶⁶

But the relevant element of this text is the analogy between the human mind (person) and human groups, such as societies and nations. To some extent, societies are *like* persons. In line with the Romantic conceptions of nation and politics, Bergson believes that behind the

³⁶³ "We have seen that the more society improves, the more plastic is the adaptability it obtains from its members; while the greater the tendency towards increasing stability below, the more does it force to the surface the disturbing elements inseparable from so vast a bulk" LR, p. 61a. "Every small society that forms within the larger is thus impelled, by a vague kind of instinct, to devise some method of discipline or 'breaking in', so as to deal with the rigidity of habits that have been formed elsewhere and have now to undergo a partial modification. (...) society holds suspended over each individual member, if not the threat of correction, at all events the prospect of a snubbing, which, although it is slight, is none the less dreaded. Such must be the function of laughter. Always rather humiliating for the one against whom it is directed, laughter is, really and truly, a kind of social 'ragging'". LR, p.42a.

³⁶⁴ DS, pp. 13-14.

³⁶⁵ For the term "war lectures", see Soulez. The lectures on personality were given in Madrid, the 6th of May in 1916. See in Bergson, Henri. *Écrits philosophiques*, PUF, 2011, pp. 508-535 and *Études Bergsoniennes*, IX; translated into Spanish by Manuel García Morente, and re-translated into French by M. Gauthier. pp. 57-118. It is my own translation into English.

³⁶⁶ Bergson, Henri. *Écrits philosophiques*, Op. cit., p. 530.

State there are *organic peoples*.³⁶⁷ “Societies with traditions”,³⁶⁸ are *like* humans. The three dimensions of spiritual time, past, present and future, are present regarding national societies. This analogy focuses on the conservation of the being through time, among other things. It is also easy to interpret the already quoted words, from “On personality”, in a teleological way: maturity, fulfillment and growth. Past, present and “destiny” or “mission” are both parts of one person and one country.³⁶⁹

Throughout DS there is a constant analogy between individual souls and human community. This late essay also represents a systematic nuancing of the two teleological strivings. For the first time, Bergson articulates conservative teleology and transgressive teleology (which I will address in Chapter 4). Both tendencies are grounded in human consciousness and expanded to communities and universal history through analogy. First, he defines the two tendencies in our consciousness. One of them is obligation, pressure, impulsion or compulsion, which is basis for conservative teleology. Here Bergson revises his concept of society in LR. The other tendency is emotion, aspiration or attraction, which is a basis for transgressive teleology. The two articulate our behavior and ethics: “Pressure and attraction, specifying their objectives, would lead to anyone of these systems of maxims, since each of them aims at the attainment of an end both individual and social”.³⁷⁰ These two perfective tendencies are “two forces to which society owes its stability and its mobility”.³⁷¹

The analogy that we have to see now is impulsion. As Bergson says, its outcome is stability in society, but also survival. It is expressed very clearly in myths from the beginning of history. Bergson addresses this topic in DS.II. But what is interesting for us now is said in DS.I: in human consciousness there is a correspondence in obligation or impulsion. Society has a compulsory power on human consciousness. Human beings only have to accept the commandment of their society, in different degrees, from the family to the country. Society here has to be understood not only in static terms, but also as something individual.

Given this conception of society, it is clear that he endorsed this analogy. In terms of entity, there is a new example, because we have not seen the function of societies until now in Bergson. But in terms of perfection, here we are talking about the survival and well-being of the society. That is, in this case we remain in conservative teleology.

3.1.d. Analogy of creation

After the analogy of self/embryo there is, in EC, a second one, much more ambitious. It establishes an analogy between our soul and the cosmos.³⁷² It is difficult to determine the concrete scope of this statement. In any case, EC deals with the analogy between something more concrete, although extraordinarily ambitious: self and Life, Life in general, also called Consciousness or Supra-consciousness.³⁷³ More famously, this is the *élan vital* and it is only expressed by biology, in the universe. It is what I call a vertical analogy, since it is established between the part and the whole. This is an analogy of

³⁶⁷ See also “Quelques mots sur la philosophie française et sur l’esprit français”, in 1934. Ibid., p. 675.

³⁶⁸ Ibid., p. 531, the italics are mine.

³⁶⁹ Ibid., p. 533.

³⁷⁰ DS, p. 91.

³⁷¹ DS, p. 91.

³⁷² EC, p. 241: “The universe is an assemblage of solar systems which we have every reason to believe analogous to our own”.

³⁷³ EC, p. 261.

macrocosmos/microcosmos, which is foreign to Aristotle. It is also part of the transgressive domain of Bergsonian teleology, since the ultimate scope of it is neither stability nor survival. The goal at stake is change, progress, transgression, with no particular beneficiary.

We can read again the following claim: “In reality, life is of the psychological order, and it is of the essence of the psychical to enfold a confused plurality of interpenetrating terms”.³⁷⁴

The psyche is a plurality of interpenetrating qualities in DI, and now that is translated into something else. He gives more detail in the same analogical direction: “The elements of a [n evolutionary] tendency are not like objects set beside each other in space and mutually exclusive, but rather like psychic states”.³⁷⁵

The history of evolution is the history of Life, and with “elements of a tendency” he means the general features of one development. For instance, the central tendency in his view is the development of the central nervous system. As I said very briefly in the Introduction, Life has one origin and is spread out in different species and lineages through millions of years. Our own personal and individual history is not a replica but has important traits in common with the history of life and the history of humans³⁷⁶

This analogy is not based on a certain community between one individual and another, for instance, the human mind and an embryo. In this case, Bergson is referring to the analogy between one living individual (or part) and Life itself (or the whole). The human being and, specifically, its consciousness represent the whole of living beings to some extent. This link between the best part (human life) and the whole (Life) is not a horizontal analogy, but a vertical one (Worms).

“Consciousness, or supra-consciousness, is the name for the rocket whose extinguished fragments fall back as matter; consciousness, again, is the name for that which subsists of the rocket itself, passing through the fragments and lighting them up into organisms. But this consciousness, which is a *need of creation*, is made manifest to itself only where creation is possible. It lies dormant when life is condemned to automatism; it awakens as soon as the possibility of a choice is restored”.³⁷⁷

I think this passage is useful to us for two reasons. It shows, firstly, which is the main teleological element of Life: it is for the sake of creation. There is also another thing: it “lies dormant” and it is “condemned to automatism”. Which means that when Life does not fulfill its scope it is condemned to automatism. What is automatism here? In my interpretation the opposite of transgression or evolution from one species to another is non-variation and adaptation, with no tendency to change to higher degrees of life (the development of the central nervous system, for instance).

In human life, creation—that is, in this context, freewill—is the perfective element to link through analogy with Life, since both humans and Life have the same *need* and, more importantly, have it as a *natural tendency*. As Bergson says: “...the root of life there is an effort to engraft on to the necessity of physical forces the largest possible amount of *indetermination*”.³⁷⁸ *Here the notion of indetermination plays the role of the télos.* In nature,

³⁷⁴ EC, p. 257.

³⁷⁵ EC, p. 118.

³⁷⁶ For human history, see the next subsection.

³⁷⁷ EC, p. 261.

³⁷⁸ EC, p. 114.

indetermination means overcoming certain unforeseeable limits. That is precisely what Bergson sees as perfect. For Bergson that is the highest capacity. It is much higher or more perfect than the other kinds of perfection, such as efficiency or adaptation. It is certainly higher than the conservative continuum.

As I noted, Bergson finds this unique capacity of transgression both in nature or Life and in human individual life. Human beings are for the sake of indetermination, because our maturity is or should be an unforeseen self-creation.

In Bergson, as we saw in DI, few of us are really free. So also among human beings there is an inequality regarding this faculty. Bergson then has to choose one type of human being for the sake of a correct understanding of the microsocos/macosocos analogy of human/Life. Bergson's choice is clear: the artist is the best example in Bergson for addressing this analogy. The genius of the artist is surely the central example of EC and one of the most important in Bergson's philosophy:

“If life is a creation, we must represent it by analogy with the creations it is given us to observe, that is to say, with those we ourselves achieve. Now, in artistic creation, for example, it seems that the materials we have to work with, words and images for the poet, forms and colors for the painter, rhythms and harmonies for the musician, range themselves spontaneously under the idea they are to express, drawn, as it were, by the charm of a superior ideality. Is it not a similar movement, is it not also a state of fascination we should attribute to material elements when they are organized into living beings?”³⁷⁹

For Bergson, Life is like an artist, since both tend to perfection. In this context of transgressive teleology, it means newness, unpredictability, and simplicity.

He opens the book stressing the artist's unpredictability.³⁸⁰

“The finished portrait is explained by the features of the model, by the nature of the artist, by the colors spread out on the palette; but, even with the knowledge of what explains it, no one, not even the artist, could have foreseen exactly what the portrait would be, for to predict it would have been to produce it before it was produced—an absurd hypothesis which is its own refutation. Even so with regard to the moments of our life, of which we are the artisans. Each of them is a kind of creation. And just as the talent of the painter is formed or deformed—in any case, is modified—under the very influence of the works he produces, so each of our states, at the moment of its issue, modifies our personality, being indeed the new form that we are just assuming. It is then right to say that what we do depend on what we are; but it is necessary to add also that we are, to a certain extent, what we do, and that we are creating ourselves continually”³⁸¹

But maybe the clearest statement regarding the analogy between nature and the artist is to be found in PR, in the context of seeing life as the “continuous creation of unforeseeable novelty”:

³⁷⁹ VOFR, in PM, p. 282. Among the books that I take most into account, LR is rich with considerations about art. LR, 47b: “We should all, were it so, be novelists or poets or musicians”. LR.III, p. 46b: “between ourselves and our own consciousness a veil is interposed: a veil that is dense and opaque for the common herd (...) almost transparent, for the artist and the poet”. LR, p. 48b: “Art is certainly only a more direct vision of reality. But this purity of perception implies a break with utilitarian convention, an innate and especially localized disinterestedness of sense or consciousness, in short, a certain immateriality of life, which is what has always been called idealism”.

³⁸⁰ PM, p. 158, italics are mine. Also PM, p. 117 and CV, in ES, pp. 25-26, 29.

³⁸¹ EC, pp. 6-7.

“Take the concrete and complete world, with the life and consciousness it encloses; consider nature in its entirety, nature the generator of new species as novel and original in form as the design of any artist: in these species concentrate upon individuals, plants or animals, each of which has its own character - I was going to say its personality (for one blade of grass does not resemble another blade of grass any more than a Raphael resembles a Rembrandt)”³⁸².

There is another similar feature between the activity of the artist and the tendency of Life. That is simplicity, which appears first in IM and in VOFR.³⁸³

“[a]An artist of genius has painted a figure on his canvas. We can imitate his picture with many-colored squares of mosaic. And we shall reproduce the curves and shades of the model so much the better as our squares are smaller, more numerous and more varied in tone. But an infinity of elements infinitely small, presenting an infinity of shades, would be necessary to obtain the exact equivalent of the figure that the artist has conceived as a simple thing, which he has wished to transport as a whole to the canvas, and which is the more complete the more it strikes us as the projection of an indivisible intuition. Now, suppose our eyes so made that they cannot help seeing in the work of the master a mosaic effect. Or suppose our intellect so made that it cannot explain the appearance of the figure on the canvas except as a work of mosaic. We should then be able to speak simply of a collection of little squares, and we should be under the mechanistic hypothesis. We might add that, beside the materiality of the collection, there must be a plan on which the artist worked; and then we should be expressing ourselves as finalists. But in neither case should we have got at the real process, for there are no squares brought together. It is the picture, *i.e.* the simple act, projected on the canvas, which, by the mere fact of entering into our perception, is *decomposed* before our eyes into thousands and thousands of little squares which present, as *recomposed*, a wonderful arrangement. [b] So the eye, with its marvelous complexity of structure, may be only the simple act of vision, divided *for us* into a mosaic of cells, whose order seems marvelous to us because we have conceived the whole as an assemblage”³⁸⁴.

In [a] Bergson is talking about the artist, and in [b] Bergson is talking about an evolutionary process. In his view, both are made by a simple impulse impossible to grasp by intelligence. In IM, where he talks about the *Iliad*,³⁸⁵ in EC he recalls the example: the work of literary art and the alphabet. The atoms are the letters and the harmony and evolution of them is simplicity.³⁸⁶

Rather, Bergson places together the idea of unpredictability and the idea of simplicity in the same statement:

“Every human work in which there is invention, *every voluntary act in which there is freedom, every movement of an organism that manifests spontaneity, brings something new into the world.* True, these are only creations of form. How could they be anything else? *We are not the vital current itself; we are this current already loaded with matter, that is, with congealed parts of its own substance which it carries along its course.* In the composition of a *work of genius*, as in a simple free decision, we do, indeed, stretch the spring of our activity to the utmost and thus create what no mere assemblage of materials could have given (what assemblage of curves already known can ever be

³⁸² PR, p. 121, in PM.

³⁸³ VOFR, p. 270.

³⁸⁴ EC, simplicity, pp. 89-90.

³⁸⁵ IM, in PM, p. 203. Also, in IM, Bergson gives a similar example. The novelist multiplies the traits of one character, in different actions and different discourses, but “all this has not the same value as the simple and indivisible feeling I should experience if I were to coincide for a single moment with the personage himself”. IM, in PM, p. 187.

³⁸⁶ EC, pp. 239-240, italics are mine.

equivalent to the pencil-stroke of a great artist?) but there are, none the less, elements here that pre-exist and survive their organization. But if *a simple arrest of the action that generates form* could constitute matter (are not the original lines drawn by the artist themselves already the fixation and, as it were, congealment of a movement?), a creation of matter would be neither incomprehensible nor inadmissible”.³⁸⁷

Human beings are *in the highest degree natural*, because they can do certain things which are unique only to them. These unique faculties have to be related with spontaneity and creation. Humans are in the highest degree natural because they are in the highest degree free.

Also in EC, we find the unforeseeable novelty of the piece of work itself:

“We say of astronomical phenomena that they manifest an admirable order, meaning by this that they can be foreseen mathematically. And we find an order no less admirable in a symphony of Beethoven, which is genius, originality, and therefore unforeseeability itself”.³⁸⁸

We have seen two types of analogy, the horizontal one and the vertical one. Regarding some aspects of human consciousness, Bergson links one part of nature (human consciousness) to another part of nature, like one animal organism or one embryo, or even one community. This is an analogy between individuals and their individual functions or tendencies. Insofar as one human is natural and has one specific *télos* and another being is also natural and has its own *télos*, the analogy can be established. There is another possibility in Bergson. It is the possibility to establish an analogy between one exclusive type of part (only human consciousness) and the whole of nature. This is a vertical analogy. Now we can see that this analogy exists.

Apparently, we all have not developed the creative faculty, although it is present in all of us *in potentia*. That specific part is creativeness or freedom. The artists and poets are a sort of paradigm of freedom and creativeness for Bergson. To this extent we all try to imitate the great geniuses. Precisely because we are only partially poets and creative can we understand their talent.

The idea of simple and non-decomposable, creative, sudden effort, and the unforeseen efficacy of his work, not led by any sort of “plan”, is considered here perfection. Bergson considers that simplicity and unpredictability are to be found regarding human freedom, also in moral matters. But his proposal uses those two traits for a general extrapolation to Life and the cosmos. It is not part of what I called conservative teleology, but of transgressive teleology. The human individual is neither free nor creative for the sake of surviving or even well-being, but for the sake of contributing to something bigger. I will come back to this idea especially in 4, but we can say for the moment that a creative contribution (an advance, a discovery, etc.) entails in this framework some sort of well-being (such as joy). This remains within the participation model. In this case we are talking about participating in the progress of the cosmos, and *not* in its *stability*, as we found in Aristotle to whom perfection was something different.

Between Life and individual human life (and also history, as we will see in the next case of analogy) the analogy works, according to Bergson:

³⁸⁷EC, p. 239, italics are mine.

³⁸⁸ EC, p. 244.

“... in a general way, in the evolution of life, just as in the evolution of human societies and of individual destinies, the greatest successes have been for those who have accepted the heaviest risks”.³⁸⁹

The self and Life are linked by one image: *successful creation*. Bergson’s post-romantic universe bestows to the artistic genius the role of central analogy. There’s still one possible analogy that, following the very same terms (self and Life), relies not on a case of success (creation), but on failure.

I want to note this deflationary or negative version of the vertical analogy. As in Aristotle,³⁹⁰ in Bergson there exists the analogy between nature and human failure. In EC.II he addresses his vision of the history of evolution: the continual overcoming of one species from one into another, is the characteristic of the vital impulse.³⁹¹ But there is also an opposite tendency. Bergson sees this tendency as a decline. It is the tendency toward i) adaptation or ii) toward vegetative torpor. I will explain this obscure vision in Chapter 4, but we can say in advance that every species has to adapt itself to the circumstances. Once some new species has adopted one form and conserves its own being by succeeding in reproducing itself, then we can talk about success. For Bergson in EC, in comparison with the “movement” that leads spontaneously (not by chance) to new species, the movement of adaptation is ontologically secondary. Also, and more emphatically, he considers the lineage that leads from animals to what he understands by vegetative torpor, decadence. For instance, the fungi group and the animal parasites represent in EC.II this tendency. The two most opposite tendencies are consciousness (which means an ascent) and unconsciousness (which means a descent).³⁹²

As I said, adaptation and, above all, decline, is no creative art. Bergson does not talk about simplicity and unpredictability whilst talking about adaptation and decline. Yet it is a tendency of Life, according to Bergson. In CV he talks about Life in very illustrative terms, about risk and adventure, but also about another trend, which means a “tranquil, unenterprising existence”,³⁹³ but should be more literally translated as “tranquil, gentrified existence”, since Bergson writes “bourgeoise”.³⁹⁴ The hero and the gentry are a Romantic expression of what Bergson considers the two main tendencies in Life. I believe one can say that Bergson is a son of the 19th century Romanticism, as Lovejoy holds.³⁹⁵

As I recalled, for Aristotle the analogy between nature and art does not only rely on fulfillment, but also on error. The cases of error happen in both grounds. Leaving aside the differences at this point, Bergson also considers that. Human beings also decay. This is part of our everyday experience. Thus, the vertical analogy is not focused exclusively on transgression, but also on stability and “retrograded”.³⁹⁶ Just as there is imitation and repetition in our everyday life and moral life, there is imitation and repetition in nature. Sleep is the real loss of vitality in a lineage:

³⁸⁹ EC, p. 132.

³⁹⁰ See section 2.1.b, on *hamartia* in *Phys.*II. 8.199a33-199b5.

³⁹¹ EC, basically pp. 106-135.

³⁹² EC, p. 112.

³⁹³ ES, p. 16.

³⁹⁴ ES, 1964, p.12.

³⁹⁵ Lovejoy, Arthur. *Bergson and Romantic evolutionism*. UCP, California, 1914

³⁹⁶ CV, in ES, p. 25.

“Just as among primitive organisms there were some that turned towards animal life by refusing to manufacture organic out of inorganic material and taking organic substances ready made from organisms that had turned toward the vegetative life, so, among the animal species themselves, many contrived to live at the expense of other animals. For an organism that is animal, that is to say mobile, can avail itself of its mobility to go in search of defenseless animals, and feed on them quite as well as on plants. So, the more species became mobile, the more they became voracious and dangerous to one another. Hence a sudden arrest of the entire animal world in its progress towards higher and higher mobility (...) If the plant renounced consciousness in wrapping itself in a cellulose membrane, the animal that shut itself up in a citadel or in armor condemned itself to a partial slumber. In this torpor the echinoderms and even the molluscs live today. Probably arthropods and vertebrates were threatened with it too. They escaped, however, and to this fortunate circumstance is due the expansion of the highest forms of life”.³⁹⁷

Obviously, Bergson is talking here in analogy with human psychology. This is, again, a clear challenge of the critique of anthropomorphism. The plants did not renounce consciousness, primitive organisms did not turn towards animal life, mollusks did not shut themselves up in a citadel *literally*, but *metaphorically*. Let me tackle one of these examples, the last one: becoming a parasite. As I said, for Bergson a lineage of animal evolution becoming a parasite is a clear case of retrogression. It is the case of animal torpor. Bergson describes it in a psychological way: it is like “falling asleep”.³⁹⁸ The opposite direction, towards vertebrates, means enhancement. The tendency to *mobile living* preludes human psychology in his view, because it initiates the long path of indetermination throughout Life. The tendency toward movement, like “human armaments” becomes more and more mobile.³⁹⁹ In the case of the end of a lineage, Bergson says that matter has “hypnotized” Life.⁴⁰⁰

In general terms, we see, Bergson writes about it in a dualistic way, where matter and Life are two tendencies, which are at some time opposed: “Matter bends it to its own automatism, falls it to sleep in its own unconsciousness”.⁴⁰¹ Retrogression and automatism express one of the tendencies of Life. And, what is central for us now, they are part of ourselves as well.

Automatism and unconsciousness are tendencies of our psychic life. Human beings can or even should *escape* from this and reach freedom. Through freedom they contribute to the general trend of “forward movement of life”. As he says: “Automatism and repetition, which prevail everywhere except in man, should warn us that living forms are only halts: this work of marking time is not the forward movement of life”.⁴⁰² Human beings are not repetitions of a model. At least, according to Bergson, they should not be so. Freedom and creativeness are the main or most perfect goal of both Life and human beings.

Automatism and repetition are the *negative* version of the *genuine* impulse, simple, creative and unforeseeable.⁴⁰³

We saw that human consciousness and Life have something in common. It is a vertical analogy, between the part of the whole and the whole itself. It is the methodical basis for transgressive teleology. Regarding the specific notion of perfection, it seems that Bergson

³⁹⁷ EC, pp. 130-131.

³⁹⁸ EC, p. 130.

³⁹⁹ EC, p. 132.

⁴⁰⁰ EC, p. 137.

⁴⁰¹ CV, in ES, p. 25.

⁴⁰² CV, in ES, p. 31.

⁴⁰³ See the argument from mistakes in Aristotle in 2.1.b.

stresses unpredictability and simplicity. Since in this section I just want to show the terms of the analogy, I will leave the discussion of this concrete interpretation of what is perfection for section 4, where I tackle the issue straightforwardly.

3.1.e. Analogy of impulsion-attraction

In this subsection we have to extend the vertical analogy mind/Life to mind/human history. We move from EC and CV to DS, Bergson's account of history. I recall this sentence from EC:

"... in a general way, in the evolution of life, just as in the evolution of human societies and of individual destinies, the greatest successes have been for those who have accepted the heaviest risks".⁴⁰⁴

We have seen the analogy Life/human soul ("individual destinies", in the passage), but we have still to talk about the other analogy between Life and "the evolution of human societies". As we saw Bergson himself did not distinguish nature from culture. On the contrary he seems to consider culture part of biology. We know that in his view society is an organism and the individuals are cells. The analogy man/society worked in the analogy c for the sake of adaptation. In d we have assessed the great value of the analogy for the sake of evolution: Life. Now we have a mixture of both. Now in e the analogy covers the evolution of societies, but *not any individual society*. The perfective value, again, has no beneficiary in its horizon. Hence, it is not conservative teleology, but transgressive. Its perfective progress may be described for the sake of freedom, one ultimate global goal with no subsequent purpose. This implies a new kind of analogy: it is a vertical analogy between human soul and universal history. It is the last of our set in 3.1.

Human progress is a unique expression of nature. In one place in DS.I he affirms that there are not historical laws in history, but biological ones, if (he adds) we understand the word "biology" by its "wide meaning".⁴⁰⁵ Among other things, this claim implies that much of what we said about Bergson's conception of natural history works with cultural history. Life is, for him, an "instrument of freedom".⁴⁰⁶ So is history. DS continues and develops the doctrine of EC when Bergson refers to "individuals who each represent, as the appearance of a new species would have represented, an effort of creative evolution".⁴⁰⁷

Then he moves afterwards to the vision of the *élan* in history, and he recalls the two perfective tendencies, "two forces to which society owes its stability and its mobility".⁴⁰⁸ As I said in 3.1.c DS represents the systematic nuancement of the two teleological strives in nature and man, and also is only definite articulation:

"In order to define the very essence of duty, we have in fact distinguished the two forces that act upon us, *impulsion on the one hand, and attraction on the other* (...) We should have to open a very long parenthesis indeed if we had to give their due share to the two forces, the *one social, the other supra-social*, one of impulse, the other of attraction, which impart to each moral motive its driving force".

⁴⁰⁴ EC, p. 132.

⁴⁰⁵ DS, p. 101.

⁴⁰⁶ EC, p. 25.

⁴⁰⁷ DS, p. 97.

⁴⁰⁸ DS, p. 91.

We already have seen the *social impulsion*. My current aim is to focus now on *supra-social attraction* and aspiration. Social impulsion is to be found in impersonal laws or impersonal habits. Attraction is anchored in personality and the effect of personal models. Bergson's example is the "attitude of the apprentice towards the master, or rather, to use the language of Aristotle, of the accident in the presence of the essence. There would remain to be defined the *higher ego* to which the average personality defers".⁴⁰⁹ According to Bergson, the *average personality* imitates the *higher ego*, and thereby he or she creates. Whereas in impulsion the ego *obeys*, in attraction it *emerges*.

Bergson uses here again analogy. He moves from subjectivity to society. I think this second approach to the idea of aspiration and attraction emphasizes the perfective aspects of the term. Impulsion means conservation, but aspiration means enhancement and a new step forward. Technically speaking, I have been showing throughout these pages that conservation implies one notion of perfection, but progress implies a genuine one: ultimately contributing to the cosmic good. While in the subjective ground Bergson talks about personal authority, in the following passage he is also talking about a *society moved by the personal attraction of a spiritual hero* or a charismatic individual. It is important to note that his *personalistic way of understanding progress*, implies necessarily this figure. There is not any sort of inertial progress or impersonal and gradual law of progress in Bergson. Each spiritual hero implies a sudden breakthrough:

"[a] Now, a mystic society, embracing all humanity and moving, animated by a common will, towards the continually renewed creation of a more complete humanity, is no more possible of realization in the future than was the existence in the past of human societies functioning automatically and similar to animal societies. *Pure aspiration* is an ideal limit, just like obligation unadorned. It is none the less true that it is the mystic souls who draw and will continue to draw civilized societies in their wake. [b] The remembrance of what they have been, of what they have done, is enshrined in the memory of humanity. Each one of us can revive it, especially if he brings it in touch with the image, which abides ever living within him, of a particular person who shared in that mystic state and radiated around him some of its light. If we do not evoke this or that sublime figure, we know that we can do so; he thus exerts on us a *virtual attraction*. [c] Even if we ignore individuals, there remains the general formula of morality accepted today by civilized humanity: this formula includes two things, a system of orders dictated by impersonal social requirements, and a series of appeals made to the conscience of each of us by persons who represent the best there is in humanity. The obligation relating to the orders is, in its original and fundamental elements, sub-rational. The potency of the appeal lies in the strength of the emotion it has aroused in times gone by, which it arouses still, or can arouse: this emotion, if only because it can indefinitely be resolved into ideas, is more than idea; it is supra-rational. The two forces, working in different regions of the soul, are projected on to the intermediary plane, which is that of intelligence".⁴¹⁰

[a] and [b] show the analogy from the society to every one's life. In [c] the idea of attraction becomes even more complete. It is an "appeal". The appeal is active, personal. One can say that the appeal inspires privately the free soul to be free or to create while it imitates the master. Within impulsive matters, there is no freedom involved. Attraction is the social movement towards a new step forward, and it is the main *internal dynamic of progress* in Bergson.

There is an intermediate teleological drive here, absolutely new in Bergson. Earlier in his works, there was adaptation, on one hand, and freedom or creation, on the other. In DS there

⁴⁰⁹ DS, p. 66.

⁴¹⁰ DS, p. 84-85, italics are mine.

appears this middle term: imitation. It is perfective since, unlike impulsion, it permits us to create freely, to participate in progress and it also produces progress. In Bergson's view of history, heroes emerge like mutations and just change the world, but also, they attract regular people from within. Progress, made by attraction and imitation, comes just after the hero's work. Attraction is not made for heroes, but exerted by the hero's inspiration. The heroes are, as we saw, like Life itself: unpredictable. Average people create by imitating that.

Bergson thus introduces creativity in this mimetic model.⁴¹¹ Human beings have to be free as a condition for attaining the goals and values that the hero (who is "more free" than him or her) creates. As Bergson said from the beginning, although free-will is our most important feature, we are not usually free. On the contrary, we are "rarely free".⁴¹² His neo-Romantic vision of the human being entailed that artists are the most "commonly free" among us. Then he developed a new way which lead him towards religion and mysticism. The spiritual heroes and not the aesthetic ones are "the best of mankind".⁴¹³ In any case, spiritual and artistic reformers are on the top of his hierarchy of beings. Although Bergson rejects Nietzsche's dualistic vision of human beings, Bergson himself holds that there are two different types of human being: the creative and active, and the passive imitator. What he denies from the Nietzschean account of morals is the excessive duality regarding human beings, because Bergson thinks that in the end everyone has the two tendencies.⁴¹⁴

The attractor and the attracted are the two main roles in history, according to Bergson. Attraction is the main original concept of DS, regarding global creative teleology. There are, thus, two analogical factors to be mentioned in this subsection. First, we are creators, and history is like one creation. This is the primordial movement of progress. Second, we are inspired, attracted and we aspire to be like our personal models. That expresses a secondary or derived, but still global, transgressive and perfective trend of humanity. As we can see, also within Bergson's global teleology there is mimetic teleology. There are neither heavenly bodies rotating for the sake of gods imitation nor living beings reproducing for the sake of imitating the rotations. Here in Bergson there are geniuses who imitate the *élan vital*, and, subsequently, there are regular ordinary people that imitate the great creators in a more modest way. In our consciousness there are analogical patterns to establish that analogy.

Furthermore, I want to propose briefly an interpretative hypothesis of the origin of the terms impulsion/attraction in DS that reinforces that parallel. It is relevant for us since it is based on Bergson's peculiar interpretation of Aristotle in EC.IV. To my knowledge I am the first interpreter to call attention to this particular link between DS and EC.IV. The duality impulsion/attraction appeared for the first time in EC.IV in the context of Aristotelian theology:

"There is, then, immanent in the philosophy of Ideas, a particular conception of causality, which it is important to bring into full light, because it is that which each of us will reach when, in order to ascend to the origin of things, he follows to the end the natural movement of the intellect. True, the ancient philosophers never formulated it explicitly. They confined themselves to drawing the

⁴¹¹ DS, pp. 74-78.

⁴¹² DI, p. 231. "The moments at which we thus grasp ourselves are rare, and that is just why we are rarely free".

⁴¹³ CV, in ES, pp. 31-34.

⁴¹⁴ The third great figure of the 19th century that he quotes, along with Comte and Spencer, is Nietzsche, in DS, p. 278, regarding his doctrine of the slave and master. Bergson holds that every soul is both, slave and master, and he rejects Nietzsche, but the truth is that in *Jenseits von Gut und Böse*.IX. §260 Nietzsche seems to affirm something similar to Bergson's interior duality.

consequences of it, and, in general, they have marked but points of view of it rather than presented it itself. Sometimes, indeed, they speak of an *attraction*, sometimes of an *impulsion* exercised by the prime mover on the whole of the world. Both views are found in Aristotle, who shows us in the movement of the universe an aspiration of things toward the divine perfection, and consequently an ascent toward God, while he describes it elsewhere as the effect of a contact of God with the first sphere and as descending, consequently, from God to things”.⁴¹⁵

Surely influenced by Ravaisson’s account of Aristotle, Bergson defends there a twofold causality exerted by god upon the cosmos. “Attraction” in Bergson’s account is a teleological term. It explains how the first heaven is attracted by God, just like something “beloved” (“*erómenon*”, *Met.* XII. 7. 1072b2) attracts the lover. Furthermore, Bergson defends a “broad sense” of this attraction, and means that the whole world, in different degrees, expresses the same tendency. It is clear that, although in Bergson there is neither a causal God, nor a prime mover, as we saw in 3.2.3 there is an ascending tendency. The term “impulsion” comes from one theological interpretation of Aristotle, further developed in *Histoire de l’idée de temps. Course au Collège de France 1903-1904*.⁴¹⁶ It is based on the direct movement applied by the first mover upon the first heaven according to *Phys.* VIII.

I find this comparison interesting in the current analogic framework. It is difficult to prove whether Bergson translated Aristotelian theology into psychology, but what we can see is that in both applications of the word “attraction” there is teleology and mimesis implied. The final cause of god upon the first heaven, or the whole supralunary world or, even, maybe, the entire cosmos is seen as imitative. As we know, in the context of DS the main idea is creation. But Bergson adds the idea of imitation. The paradox here would be that *for being creative one needs to imitate first*. This never appeared before in Bergson.

Attraction and creation are the authentic motors of history. It is necessarily a vision of history in which the genius have a key role. In Bergson the genius, like mutation in the realm of Life, introduces newness and the transgressive impulse. The subsequent attraction implies the general change in history, from epoch to epoch. Bergson bases this view in freedom and the personal models of exemplarity in everybody’s life.

There is also a negative or deflationary version of that analogy. As we saw above in the analogy d): Life can succeed or not. There are different trends in Life’s evolution. Some of them fall into unconsciousness or retrogression, as parasites do. In general, there are, according to Bergson, few successes in nature. In the end, automatism and repetition of the same form mean some sort of materiality. The greater is *homo sapiens*, because every human individual is not a repetition. Or, better, every human individual *shouldn’t* be a repetition.

Just as in history there is progress and retrogression, we could also find in us those psychical features. Although in general Bergson is a progressive philosopher, the whole of chapter IV of DS, “Final remarks: mechanics and mysticism”, is written under the fear of an imminent historical retrogression and faces the possibility of human extinction.⁴¹⁷ Hence, decay is an analogical value too. Immanent teleology is anchored not only to perfection but also to the lack of that presumed perfection, just like in the Aristotelian framework.⁴¹⁸ Our mind is

⁴¹⁵ And adds: “The Alexandrians, we think, do no more than follow this double indication when they speak of *procession* and *conversion*”. EC, p. 323.

⁴¹⁶ Bergson, Henri. *Histoire de l’idée de temps. Course au Collège de France 1903-1904*. PUF, Paris, 2016.

⁴¹⁷ DS, p. 317.

⁴¹⁸ See 2.1.b.

analogous to history because of its progress, its stagnancy, and also its retrogression. Genuine and negative versions of the analogical value are at work there.

3.2. Hierarchy and the problem of anthropocentrism

This section does not analyze a methodical element but still a *structural* one. This means that the issue I address here is not openly expressed in the analogical method but implied in it. As in the case of Aristotle,⁴¹⁹ it completes the teleological world-view. The issue to tackle now has to do with anthropological philosophy and it is part of the structure of this vision of nature called immanent teleology. Behind the five analogies we saw in 3.1 there is a philosophical anthropology at work, composed of a theory of knowledge and a theory of life.

In 2.1.c I nuanced Johnson's commentary on anthropocentrism. He states that anthropocentrism is not compatible with immanent teleology, although he proposes one axiological hierarchy, since some goals in nature (human goals) are more important than others. Johnson concludes that this later notion is more harmonic within the teleological paradigm. I proposed another term, clearer in its meaning: mitigated anthropocentrism. It is equally against absolute anthropocentrism and also against evolutionary relativism.

3.2 may complete Bergson's theory of life. In Bergson, the theory of evolution plays a definitive role in his theory of life, and, hence, in his mitigated evolutionary anthropocentrism. It is naturally far from Aristotle since he was alien to evolutionary thought. At the same time, following other scholars who have pointed out similarities between Aristotle's rich philosophy and other contemporary authors, I claim that there is some structural basis in common between the mitigated classic anthropocentrism and the mitigated evolutionary anthropocentrism. In any case, I come back to this question regarding global teleology in Chapter 4. Namely, this issue will be tackled in 4.2.

For Bergson humans *are* animals, but *special* animals. In his immanent teleological context, human beings play a special role. I argue that Bergson's view can also be called mitigated anthropocentrism, although in his model of nature there are more elements of anthropocentrism than in Aristotle. It is due precisely to his evolutionary position.

This is important for one reason. Some of the elements mentioned in 3.2.b are the ones that permit a vertical analogy. The unique features of human beings make possible the analogy between individuals (parts) and Life in evolution or history (whole).

3.2.a. Historical sum

In Bergson, the human can also be considered a sum of the rest of the biological realms. Human beings recapitulate the basic previous stages of life. EC.II is the main textual basis for this claim in Bergson. He distinguishes life in a scale of superiority. He is a hierarchical author, as I defended in the Introduction. There are different degrees of life, and each one presupposes the previous and adds a relative superiority. For Bergson plants are defined in terms of reserve of energy and torpor. These two vital tendencies may define the whole reign in general terms. Bergson talks about animals, in general, as a tendency toward locomotion

⁴¹⁹ See 2.1.c,

and instinct. He defines the human (who also can be examples of torpor and instinct) with some unique features: intelligence, freedom and intuition.

Although, in ontogeny, the Aristotelian man *recapitulates* the three degrees, there is not a historical perspective at stake. In the case of Bergson there is. This may mean that human beings traverse previous stages in the history of life. All these stages are to be understood regarding conservative teleology: survival, reproduction and well-being.

My thesis is that, in comparison with Aristotle, on the one hand, the evolutionary perspective of EC strengthens anthropocentrism, and on other, it mitigates it. In any case, Bergson's anthropocentrism is *still mitigated*. Bergson's world-view is a clear recognition of non-human goals in nature: that is why his works are full of animal and vegetative life.

Bergson's evolutionary perspective reinforces anthropocentrism, in comparison with Aristotle. He holds the evolutionary perspective and, as we will see in depth in 4.2, he does not get rid of the natural scale. The *historical perspective* implies that the scale has been erected progressively: from the lower to the higher level. This means that plants can be understood as "for the sake of animals", and animals "for the sake of humans" in a new sense which, to be sure, is alien to Aristotle. The most anthropocentric reading of Aristotle reads *Pol.I.8* literally,⁴²⁰ in the sense that plants or animals exist, *among other things, for the sake of being used* by humans, in terms of food, clothes or anything else. The anthropocentric reading of *Pol.I.8* presupposes a teleological reading of the natural scale, and the outcome is something similar to the Stoic passages that we read in 2.1.c.

Despite the fact that Aristotle's embryology seems to endorse recapitulation and one of his passages refers to a trophic scale, in Bergson it is still different. Evolutionary thought entails a great change of mind. The teleological reading of the scale in EC reinforces anthropocentrism in a new way, since it is not based only on hierarchy and use. That is, Bergson's scale is not a trophic or utilitarian scale, although it does not exclude it: regardless of their use, in Bergson plants and animals exist for the sake of the next level of the scale. The vegetative realm and the animal realm are for the sake of freedom and mankind *not* in terms of use (although, again, it does not exclude it), but *in terms of constitution*. Recapitulation in Aristotle traverses different realms of living beings, but it is *not* representative of a chronology: natural history, in its successive stages. I will come back to my reading of EC.II in 4.2.b but for our current purpose we can say that humans do not just sum up nature, they recapitulate the previous basic forms of life.

It seems in EC that he accepts the recapitulation theory in evolution. At least, Bergson presents it as in the first chapter as very probable. He does not enter much into it, so it is uncertain what his position would be regarding the most prominent theories of recapitulation at that moment. François warns us to disregard this as one part of Spencerian evolutionism: it would lead to the idea of evolution as uni-linearity, and not a branching tree (see 4.2.b).⁴²¹ Recapitulation in Bergson may mean something peculiar to his philosophy. Every stage (vegetative/animal/human) may be understood as different in kind, and not in degree. I think this it is perfectly possible to make room for recapitulation in embryology in his framework. As he puts it, it is a result of science. It is nothing that he has deduced, but taken from the evolutionary biological investigations:

⁴²⁰ See Sedley and Owens in 2.2.b. "Ecology: order among species", around the second passage.

⁴²¹ François, Arnaud. "Ce que Bergson entend par 'monisme'. Bergson et Haeckel". Lire Bergson, PUF, 2011.

“It [observation] shows that up to a certain period in its development the embryo of the bird is hardly distinguishable from that of the reptile, and that the individual develops, throughout the embryonic life in general, a series of transformations comparable to those through which, according to the theory of evolution, one species passes into another. A single cell, the result of the combination of two cells, male and female, accomplishes this work by dividing. Every day, before our eyes, the highest forms of life are springing from a very elementary form. Experience, then, shows that the most complex has been able to issue from the most simple by way of evolution. Now, has it arisen so, as a matter of fact?”⁴²²

In Bergson, the highest forms are human forms and human beings reproduce part of the previous history of life. They are also the most recent product of it. He says that, according to his teleological understanding of Life (the best, ontologically speaking, comes chronologically last): “Now man is probably the latest comer of the vertebrates”.⁴²³ All this does not imply that the previous stages exist only for the sake of humans (that would be falling into anthropocentrism). I repeat that for teleological models like Bergson’s *every being has its own goal from the moment it is alive*.

But there are additional reasons for noticing this mitigation of anthropocentrism. I count two. I develop them in detail in 4.2.b, so I will merely mention them here. Divergence and contingency balance the possible anthropocentrism involved in the evolutionary teleological reading of the natural scale. Apart from the intrinsic pluralism of teleology, Bergson holds the branching pattern of chapter 4 of *The origin of species*, which emphasizes this pluralism. Life is developed in many different divergent tendencies. Although, as we saw, Bergson finds that one of these branches is the central one that can coexist with the plural tendencies of Life. Furthermore, there is his idea of contingency. It comes from his own philosophical assumptions. Bergson put contingency at the center of his conception of evolution. This means that although humans relatively fulfill nature’s need for indetermination, the concrete process of evolution (which includes the vegetative, the animal, and the human form) is unpredictable. It is an outcome of contingency. This mitigates Bergson’s anthropocentrism, since on hand Bergson understands Life apart from the global tendency that leads to perfection. Furthermore, the form human is central, especially and overall, because of its freedom. There is, then, a great deal of evolutionary contingency in human beings. With Aristotelian words, we could say that only one specific part of the human’s being is *divine*.

Also, it is true that there are general tendencies. Among this tendencies Bergson defines the most important ones. Among these is freedom, which is the one that we should notice, since it is the goal of nature. The rest, like the human form, is contingent. It also can be overcome by nature.

⁴²² EC, p. 23-24.

⁴²³ EC, p. 134. He adds a footnote: “This point is disputed by M. René Quinton, who regards the carnivorous and ruminant mammals, as well as certain birds, as subsequent to man (R. Quinton, *L’Eau de mer milieu organique*, Paris, 1904, p. 435). We may say here that our general conclusions, although very different from M. Quinton’s, are not irreconcilable with them; for if evolution has really been such as we represent it, the vertebrates must have made an effort to maintain themselves in the most favorable conditions of activity—the very conditions, indeed, which life had chosen in the beginning”.

3.2.b Addition

Bergson also bestows upon human beings a number of unique features. In the monograph on Bergson's anthropology, N. Kisukidi states that "the specificity of the human being [is to be found] based on its creative activities and not based on a determination of the essence".⁴²⁴ I am not so sure whether one should make this distinction between creative activities and essence. In the end, for Bergson, humans are *essentially creative*, even when being free is so difficult, occasional and rare. Anyway, my aim here is to show that Bergson considers human beings not just a part of nature but the *best* part of nature. I am not sure what Kisukidi means with "determination of the essence", but for Bergson, the human's spiritual superiority is necessarily linked to the "human type". It is expressed by human culture and even human physiology (the brain and the hand). Bergson states that, according to his own standards of perfection, humans are *not best in degree, but in kind*.⁴²⁵ And that is because they are essentially free. Bergson writes:

"...among conscious beings themselves, man comes to occupy a privileged place. Between him and the animals the difference is *no longer one of degree, but of kind*".⁴²⁶

Although Bergson is not fond of talking about forms or essence, I would say that this remark is not to be underestimated. Note that the vegetative, animal, and human faculties are all different versions of attention to life or maturity. They are all conservative teleology. With regard to the concept of "addition", we can state that human beings have supplementary powers that go beyond the previous boundaries. As I will show, humans are part of transgressive teleology.

The sharp difference between mankind was implicit in MM, it becomes more explicit in EC and is re-affirmed later in DS, with some religious echoes. I will mention now EC and DS, and some short texts in between. I divide human uniqueness into a twofold view: differences *in nature* and differences *in history*. The first concerns human nature as such, and the second aspect stresses human successes in the past. The main aspect of human uniqueness is related to freedom, invention, intuition and, also, moral charity. These are spiritual faculties of human nature, and they are all linked to the first of them. Not surprisingly, their systematic relation is not clarified at all in Bergson's works, but they are all related. The capacity to grasp our own duration, to fear death, and to have a social life are less stressed by Bergson in his essays.

The second aspect is more relative and contingent than the first. In Bergson's view, human beings are the newest species on earth among the vertebrates, and also are the best adapted to the world, since they are a success in terms of dominion. At some points of Bergson's discourse, it seems that it is a shared uniqueness, since also the Hymenoptera have reached the same apex of adaptive success. Historically, human society has advanced thanks to special people. These special people are the last anthropocentric aspect I study. The geniuses are the most perfect social individuals among human beings. Thus, Bergson makes a sharp distinction, in terms of morals, between regular people, on the one hand, and special, gifted individuals, charismatic, spiritual heroes, and creators, on the other. The latter group has

⁴²⁴ Kisukidi, Nadia. *Bergson ou l'humanité créatrice*, CNRS, Paris, 2013, p. 73, my translation.

⁴²⁵ See Chapter 4.

⁴²⁶ EC, p. 182, my italics.

changed human history, and they can be identified because their trace can be found in cultures.

- Difference in kind

- **Creation, invention, intelligence, brain:**

As we saw, the difference between humans is a difference of kind.⁴²⁷ It is time to see why. For Bergson, human beings are free and animals are merely spontaneous. Human beings re-create the world; they add unforeseeable newness to it. As I said, I will lay out some aspects of this very same thing. Freedom in terms of creation, technical invention and intuition are unique to human beings. Bergson started in DI to focus on freedom. In MM, along with freedom again, there appeared for the first time the notion of intuition, which became central in IM. The idea of invention came in EC, above all, and is certainly important in DS. In DS.III Bergson emphasized the idea of contemplation but, especially, the idea of Christian charity. The comparison between human beings' faculties and the rest of nature can be found in EC, when the author directly tackles the idea of the *place of humans in the cosmos*.

We can now address the central idea. In Bergson creativeness is understood as freedom. As I said, freedom is probably the core question in Bergson's philosophy. Bergson devotes the third chapter of his first book, DI, to this question. This also appears in MM (see the "Conclusion", for instance). Human features such as language, society or the great capacity of the brain are mere expressions of human freedom. Human freedom is different from animal spontaneity not in terms of degree, but in terms of kind or nature. He states this on different occasions in EC, and it is the central idea of his mitigated anthropocentrism. Bergson repeats this idea in the following passage:

"Doubtless he owes this to the superiority of his brain, which enables him to build an unlimited number of motor mechanisms, to oppose new habits to the old ones unceasingly, and, by dividing automatism against itself, to rule it. He owes it to his language, which furnishes consciousness with an immaterial body in which to incarnate itself and thus exempts it from dwelling exclusively on material bodies, whose flux would soon drag it along and finally swallow it up. He owes it to social life, which stores and preserves efforts as language stores thought, fixes thereby a mean level to which individuals must raise themselves at the outset, and by this initial stimulation prevents the average man from slumbering and drives the superior man to mount, still higher. The superior man's destiny is in the end to evolve, in the sense of progress. *But our brain, our society, and our language* are only the external and various *signs* of one and the same *internal superiority*. They tell, each after its manner, the *unique, exceptional success which life has won at a given moment of its evolution*. They express the *difference of kind, and not only of degree, which separates man from the rest of the animal world*".⁴²⁸

The "internal superiority" is related to freedom:

"Radical therefore, also, is the difference between animal consciousness, even the most intelligent, and human consciousness. For consciousness corresponds exactly to the living being's power of choice; it is coextensive with the fringe of possible action that surrounds the real action: consciousness is synonymous with invention and with freedom. Now, in the animal, invention is never anything but a variation on the theme of routine. Shut up in the habits of the species, it succeeds, no doubt, in enlarging them by its individual initiative; but it escapes automatism only for

⁴²⁷ EC, p. 182, my italics.

⁴²⁸ EC, p. 264-265, my italics.

an instant, for just the time to create a new automatism. The gates of its prison close as soon as they are opened; by pulling at its chain it succeeds only in stretching it. With man, consciousness breaks the chain. In man, and in man alone, it sets itself free”.⁴²⁹

Later on, in CV, he bestows human beings again with uniqueness: “Automatism and repetition, which prevail everywhere except in man”.⁴³⁰ If “consciousness seems proportionate to the living being's power of choice”,⁴³¹ in human beings this proportion is new. As we saw, “possible action” is identified with “freedom” and equally with “invention”. As I said, they are linked. Bergson says:

“As to invention properly so called, which is, however, the point of departure of industry itself, our intellect does not succeed in grasping it in its *up springing*, that is to say, in its indivisibility, nor in its *fervor*, that is to say, in its creativeness. Explaining it always consists in resolving it, the unforeseeable and new, into elements old or known, arranged in a different order”.⁴³²

Freedom, invention and intuition are concepts and human features that refer to each other. Namely, in my view, the unpredictable capacity for free choice is the basis for understanding the two others. Invention emphasizes the positive or progressive power of intelligence led by creativity. Bergson’s account of intelligence is here absolutely positive. Intelligence and the brain express human’s spiritual superiority, as I will show. This can be surprising for those who read Bergson in terms of irrationalism and pure spiritualism. Along with freedom and invention there is intuition. The latter implies freedom and appears to refer to a certain kind of contemplation and self-disinterested introspection. It nuances the Bergsonian definition of man as pragmatic *homo faber*. It adds another dimension to our nature: contemplation.

“To what date is it agreed to ascribe the appearance of man on the earth? To the period when the first weapons, the first tools, were made”.⁴³³ The human being uses intelligence for practical and utilitarian purposes: adaptation and dominion. Bergson proposes the name *homo faber*, rather than *homo sapiens*,⁴³⁴ because he wants to stress the practical capacity of human beings. Intelligence is naturally linked with invention,⁴³⁵ which in human beings is important, since it expresses human creativeness. The history of human freedom is, among other things, the history of invention: progress.⁴³⁶

Thanks to the creative use of our intelligence, human beings have changed throughout the centuries. The craft or the artefact is the sign of the *homo faber*. I think that the anti-intellectual view of Bergson is misguided. But whilst the products of intelligence change and progress, it means that intelligence is the very way of creativeness towards new “horizons”:

“Fabricating consists in shaping matter, in making it supple and in bending it, in converting it into an instrument in order to become master of it. It is this *mastery* that profits humanity, much more even than the material result of the invention itself. Though we derive an immediate advantage from the thing made, as an intelligent animal might do, and though this advantage be all the inventor sought, it is a slight matter compared with the new ideas and new feelings that the invention may give rise to in

⁴²⁹ EC, pp. 263-264.

⁴³⁰ ES, p. 31.

⁴³¹ EC, p. 179.

⁴³² EC, p. 164.

⁴³³ EC, p. 137.

⁴³⁴ EC, p. 139.

⁴³⁵ EC, p. 138.

⁴³⁶ See EC, p. 138.

every direction, as if the essential part of the effect were to raise us above ourselves and enlarge our horizon".⁴³⁷

Regarding human essential perfection or superiority in kind, it is important to notice that, along with language and society, the human body, and specifically the brain, is an *expression* of this sharp difference. Bergson states that: "The difference [between the human brain and that of other animals] at first appears to be only a difference of size and complexity. But, judging by function, there must be something else besides".⁴³⁸ It's then not a difference of complexity (degree), but "something besides", that is, "kind": "A difference of the same kind, we think, would be found between the brain of an animal and the human brain".⁴³⁹

It is important to note the place of the human brain in Bergson's discourse regarding freedom and invention, and not intuition, since the human brain is an "essential" element of the human body. As Kisukidi rightly says, human creativeness is the center of Bergson's discourse. But it is expressed also in concrete organs, like the brain. It means that human superiority is expressed also in terms of the body, not only in terms of actions, etc.

The human brain is different from the rest of nature: it is the organ of human agency and invention. It is not, again, a difference in degree, but a difference in kind. Only after reading MM and ES, this idea of difference regarding the brain could be expressed, since there he attacks the philosophical overemphasis of the value of this organ among the positivist physiologists of the late 19th century. Bergson thought throughout his life that consciousness should not be reduced to cerebral matter. In his view, this idea of material consciousness comes from an interpretation of modern metaphysics, and its roots are to be found in Descartes. In short, Bergson does not say that the human soul is *in* the brain or is *part of* the brain, quite the opposite. *But* he states clearly in MM and in EC that the brain is an *expression* of human consciousness.⁴⁴⁰

In EC, Bergson compares the brain of the human and the brain of an ape. Between both there is a difference comparable to the notion of "limited" and the notion of "unlimited":

"The consciousness of a living being, as we have tried to prove elsewhere, is inseparable from its brain in the sense in which a sharp knife is inseparable from its edge: the brain is the sharp edge by which consciousness cuts into the compact tissue of events, but the brain is no more coextensive with consciousness than the edge is with the knife. Thus, from the fact that two brains, like that of the ape and that of the man, are very much alike, we cannot conclude that the corresponding consciousnesses are comparable or commensurable.

But the two brains may perhaps be less alike than we suppose. How can we help being struck by the fact that, while man is capable of learning any sort of exercise, of constructing any sort of object, in short of acquiring any kind of motor habit whatsoever, the faculty of combining new movements is strictly limited in the best-endowed animal, even in the ape? The cerebral characteristic of man is

⁴³⁷ EC, p. 183.

⁴³⁸ EC, p. 183.

⁴³⁹ EC, p. 184.

⁴⁴⁰ The purely spiritualist reading of Bergson would be misleading. He defends a strong idea of creativeness, unique to humans, but at the same idea he holds a physiological position, focused on the development of the central nervous system along biological successions. I recall Bergson's remark regarding this matter in EC: "Philosophy introduces us thus into the spiritual life. And it shows us at the same time the relation of the life of the spirit to that of the body. The great error of the doctrines on the spirit has been the idea that by isolating the spiritual life from all the rest, by suspending it in space as high as possible above the earth, they were placing it beyond attack, as if they were not thereby simply exposing it to be taken as an effect of mirage!" EC, p. 268.

there. The human brain is made, like every brain, to set up motor mechanisms and to enable us to choose among them, at any instant, the one we shall put in motion by the pull of a trigger. But it differs from other brains in this, that the number of mechanisms it can set up, and consequently the choice that it gives as to which among them shall be released, is unlimited. *Now, from the limited to the unlimited there is all the distance between the closed and the open. It is not a difference of degree, but of kind*".⁴⁴¹

As we have already seen, freedom is the main aspect of this anthropology. The uniqueness of human beings regarding this question is also the center of DS. While in EC Bergson emphasizes human creativity by discussing technical inventions and the use of metaphor by the artist, in DS the scope is much broader: progress which leads to the threats of technology in 20th century.⁴⁴²

- **Intuition:**

Intuition appears for the first time in Bergson in MM.IV and is used in a more technical way in IM. It also appears in the last section of EC.II, where it is related with the animal faculty of sympathy. We also have it in the "Introduction" of PM. In PM there is also one essay called "The philosophical intuition" which contains an approach to the history of philosophy, focused on Berkeley and Spinoza. In LR.III the philosopher relates the knowledge of animals (wolves) to aesthetic understanding. I think the latter is a precedent of the comparison sympathy/intuition in EC.II. However, the role and importance of the famous term "intuition" in Bergson is controversial and my task here is not to disentangle the doctrinal uncertainties that it raises. My only aim for the moment is to show that Bergson considers intuition a higher-order faculty that is *unique* to human beings.

In the first important account of the notion of intuition, in IM, Bergson states that it "attains the absolute".⁴⁴³ Since perfection is, for Bergson, absolute,⁴⁴⁴ one can say that intuition is more perfect than intellect and analysis, as he does. We call intuition here the sympathy by which one is transported into the interior of "an object in order to coincide with what there is unique and consequently inexpressible in it".⁴⁴⁵ In the context of IM the main object of intuition is the self, although Bergson cryptically suggests an expansion. He proposes an attempt to go beyond the human state by using intuition, which I interpreted in 3.1. In this context, with the faculty of the intellect (which uses analysis and symbols) this very operation of self-intuition and subsequent expansion is simply impossible.

With this short background in mind we can now go further. At some point in Chapter 2 of EC, it seems that the intelligence of humans and the instincts of Hymenoptera are equally far from intuition. Instinct grasps things, intelligence grasps relations.⁴⁴⁶ Bergson claims that it is thanks to intuition that instinct can become "disinterested, self-conscious, capable of reflecting upon its object and of enlarging it indefinitely".⁴⁴⁷ Instinct is sympathy,⁴⁴⁸ which is

⁴⁴¹ EC, p. 263, italics are mine. Also, Bergson compares a dog brain and a human brain in EC, p. 180.

⁴⁴² DS, p. 304.

⁴⁴³ PM, p. 226.

⁴⁴⁴ PM, p. 118.

⁴⁴⁵ PM, p. 189.

⁴⁴⁶ EC, p. 148. It is interesting to note that in EC.IV, the historical account, the Greek intelligence grasps "ideas", and only the modern intelligence grasps "relations".

⁴⁴⁷ EC, p. 176.

also linked to animals. When Bergson talks about intuition, he says: "... it is to the very inwardness of life that *intuition* leads us—by intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and of enlarging it indefinitely:

"That an effort of this kind is not impossible, is proved by the existence in man of an aesthetic faculty along with normal perception. Our eye perceives the features of the living being, merely as assembled, not as mutually organized. The intention of life, the simple movement that runs through the lines, that binds them together and gives them significance, escapes it. This intention is just what the artist tries to regain, in placing himself back within the object by a kind of sympathy, in breaking down, by an effort of intuition, the barrier that space puts up between him and his model. It is true that this aesthetic intuition, like external perception, only attains the individual. But we can conceive an inquiry turned in the same direction as art, which would take life *in general* for its object, just as physical science, in following to the end the direction pointed out by external perception, prolongs the individual facts into general laws".⁴⁴⁹

As we can see, Bergsonian intuition is a non-utilitarian and disinterested faculty. I understand Bergson's intuition as a "free science" or wisdom. It implies the use of a contemplative faculty. There is nothing of irrationality here. This feature is emphasized in EC.II, at the end of the chapter, when the author talks about the Newcomen engines.⁴⁵⁰ These machines represent the capacity of human beings to emancipate themselves from the practical necessities and start to contemplate. But for Bergson, intuition or contemplation is linked to self-consciousness and, moreover, to aesthetics. Both creativity and intuition, practical activity and contemplation, are the two different but related perfect faculties of mankind in EC.

My sole aim here is to show that intelligence and instinct are not *situated equally* for Bergson, since *only* intellectual beings can experience intuition. Bergson considers that intuition implies a wide range of spiritual operations, like grasping the self, aesthetics, philosophical systems and life in general: it seems also that the first self-understanding is the key and basis for the rest.⁴⁵¹

The basis of intuition is self-apprehension: "In short, pure change, real duration, is a thing spiritual or impregnated with spirituality. Intuition is what attains the spirit, duration, pure change".⁴⁵²

In his talk "On personality", the contemplation of the self, or duration as a flux or continuum, is *unique* to human beings. Although the superior animals (he mentions the ape, the elephant and the dog) can have consciousness of themselves, in the end they just cannot experience the continuum of the inner life.⁴⁵³ To this extent, if I am not wrong, intuition is not possible for animals or instinctive beings. Moreover, we have seen in the text the capacity for contemplative and disinterested activities as well as aesthetic faculties. Bergson has never affirmed that aesthetics can be found among the animal interests. Animals are only interested in life.

⁴⁴⁸ EC, p. 176.

⁴⁴⁹ EC, pp. 176-177.

⁴⁵⁰ EC, p. 184.

⁴⁵¹ "The intuition we refer to then bears above all upon internal duration. It grasps a succession which is not juxtaposition, a growth from within, the uninterrupted prolongation of the past into a present which is already blending into the future. It is the direct vision of the mind by the mind" "Intro.II" in ES, p. 34.

⁴⁵² "Intro.II", in PM, p. 36.

⁴⁵³ Bergson, Henri. *Écrits philosophiques*. Op. cit., pp. 520-521.

The irrationalist conception of intuition, found for instance in his early 20th century readers like Bertrand Russell, is not based on the texts. Bergson considers his doctrine “a philosophy that attempts to reabsorb intellect in intuition” and not viceversa.⁴⁵⁴ Hence, intuition, like freedom and invention, is unique to human beings. These are positive features and entail superiority, human superiority *in kind*. Like in Aristotle,⁴⁵⁵ there is ambivalence in humans in Bergson: naturally, they are the best in nature, but they can also be the worst. I want to focus on one case of ambivalence and human fragility in Bergson: the human’s unique tendency toward depression when facing the idea of death. This is balanced by society: it has the power of calming down the depressive force of that idea. For Bergson, as for Aristotle, humans are social animals.⁴⁵⁶

- Difference in history

- **Domination of the world**

As we have seen in section 3.2.a. “Sum”, human beings recapitulate the world of nature in historical terms. Bergson’s progressive and teleological vision of evolution leads to the idea that the most complete beings on earth should be the latest. “... man is probably the latest comer of the vertebrates; and in the insect series no species is later than the Hymenoptera, unless it be the lepidoptera, which are probably degenerates, living parasitically on flowering plants”.⁴⁵⁷ His teleological assumption implies that the ontologically prior is probably the chronologically posterior. There is another progressive criterion, apart from the order in time: evolutionary success in terms of dominion and adaptation.

While the previous historical hypothesis would be rejected nowadays, the dominion criterion is still valid for evolutionary thought. It is caused by the social essence of human nature. Only the social animals have dominated the world: the hymenopterans and human beings. In the case of human beings, it is difficult to pin down whether we are at the level of conservative teleology or transgressive teleology. On the one hand, it involves the conservation of the human being regarding one already given environment. On the other hand, human success involves invention, which is caused by the use of intelligence led by creativeness, the spirit of transgression. It is surely a mixture of both tendencies, but the adaptive, conservative, perfective tendency prevails. In the end, dominion is always for the sake of adaptation within one fixed already given environment.

As Bergson says:

“It is unquestionable, for example, that *success* is the most general criterion of superiority, the two terms being, up to a certain point, synonymous. By success must be understood, so far as the living being is concerned, an aptitude to develop in the most diverse environments, through the greatest possible variety of obstacles, so as to cover the widest possible extent of ground. A species which claims the entire earth for its domain is truly a dominating and consequently superior species. Such is the human species, which represents the culminating point of the evolution of the vertebrates. But

⁴⁵⁴ EC, p. 270.

⁴⁵⁵ See 2.1.c.

⁴⁵⁶ DS, p. 130, see pp. 129-134.

⁴⁵⁷ EC, p. 134.

such also are, in the series of the articulate, the insects and in particular certain hymenoptera. It has been said of the ants that, as man is lord of the soil, they are lords of the sub-soil”.⁴⁵⁸

Up to this point, we see that we are facing a *shared* exclusivity. In terms of success, the species of the *homo sapiens* (or *homo faber*) and the order of the insect Hymenoptera are the apex of nature. Human intelligence and the insect’s instinct are compared in EC.II, but this does not mean that, as Bertrand Russell said, Bergson is defending the view that humans ought to live according to animal instinct. Bergson is saying that the exclusively human faculty called intuition has something of the instinct of the “perfect insect”, namely, the unmediation. This idea appears also regarding aesthetics in LR.III.

Turning back to the idea of the success of these two versions of social life in nature, in humans and insects, which remains at stake in his next long essay,⁴⁵⁹ it has to be said that there is shared success. It is success in terms of dominion. Anyway, the great dominion over the world is meant to be uniquely human later in DS. There the biological approach becomes more spiritual and more cultural, focused on morals, politics and technology. As I argue in 4, the reduction of all of Life to two goals, in EC, tries to avoid an excessive anthropocentric approach. It seems to me to be a certain complex reservation concerning his own view or maybe a provocative suggestion. Thus, the success criterion implies the best adaptation to the greatest number of different environments. The real *télos* of nature is better indetermination. Human beings are both successful (adapted to every territory) and undetermined (which implies, we know, invention, freedom and intuition). Again, human beings are the only success in terms of indetermination. I think he is talking about this when he says: “The creative effort progressed successfully *only* along that line of evolution which ended in man”.⁴⁶⁰

In DS, human invention (technology) appears as a *non-shared* position, regarding success and dominion.

But the midpoint between the *shared* conception of success and the *non-shared* one is CV. There he recovers the divergent directions of Life. Hymenoptera and man are the culminating points of evolution, regarding instinct and intelligence, respectively. Both lines of culmination reach the social life. Bergson says: “The societies of ants and bees are admirably disciplined and united, but fixed in an invariable routine. If the individual is forgotten in the society, the society on its part also has forgotten its destination”,⁴⁶¹ he says. There is no change forward “to a greater social efficiency and a completer individual freedom”. And he adds, in a deeply teleological way: “Human societies, *alone*, have kept full in view both the ends to be attained”.⁴⁶²

- **Genius as evolutionary goal of human societies:**

Finally, I want to refer to a major human historical peculiarity. In the context of the human societies there are for Bergson two kinds of individuals. There is the regular individual and the genius. I have talked about the analogy of the artistic genius in 3.1.d. The artistic analogy is so important for Bergson as a causal model. In the last quoted text, Bergson says about

⁴⁵⁸ EC, pp. 133-134.

⁴⁵⁹ DS, p. 116.

⁴⁶⁰ EC, p. 209, italics are mine.

⁴⁶¹ CV, in ES, p. 33.

⁴⁶² CV, in ES, p. 33.

artists that “richness and individuality of forms do indeed indicate an expansion of life”,⁴⁶³ but “the standpoint of the moralist is higher”.⁴⁶⁴

As we have seen, mankind is *almost* unique in terms of adaptation. Humans can share their dominion with other species, but in terms of freedom the uniqueness is indisputable. Freedom, intuition and invention are part of humanity. Now we can take a step forward. With human artists and, moreover, moralists, Life and nature reach the very apex. More or less like the contemplator of *EN.X. 7-8* in Aristotle. That is the maximum of affirmation of nature.⁴⁶⁵

The spiritual genius or moral creator fulfills the potentiality of nature in a totally new and unique way, like the philosopher in Aristotle, according to *NE.X. 7-8*.

The next passage will convince us about the absolute uniqueness of mankind in nature and, at the same time, about the uniqueness of the genius among humans:

“In man alone, especially among the best of mankind, the vital movement pursues its way without hindrance, thrusting through that work of art, the human body, which it has created on its way, the creative current of the moral life. Man, called on at every moment to lean on the totality of his past in order to bring his weight to bear more effectively on the future, is the great success of life. But it is the moral man creator who is a creator in the highest degree, -the man whose action, itself intense, is also capable of intensifying the action of other men, and, itself generous, can kindle fires on the hearths of generosity. The men of moral grandeur, particularly those whose inventive and simple heroism has opened new paths to virtue, are revealers of metaphysical truth. Although they are the culminating point of evolution, yet they are nearest the source and they enable us to perceive the impulsion which comes from the deep”.⁴⁶⁶

Invention and freedom are unique to human beings, in comparison with singular animals. Humans have freedom in a new qualitative dimension. The human brain, along with human language and human progress, are expressions of it. Intuition has elements in common with instinct, but it is still a human faculty. Intuition implies self-consciousness, and this is unique to human beings. Human beings are also fragile and can experience depression by thinking about their moral nature. The human is ambivalent, maybe fragile, but in society it is the most perfect among the rest of beings of nature. In terms of adaptive success or dominion and of newness, sometimes Bergson seems to give to humans a shared uniqueness with Hymenoptera. Nevertheless, in general terms human beings *alone* are the great success in creation. “Success” can be interpreted in terms of adaptation (success in relation to different environments) and, more importantly, in terms of spirit (success in relation to the past stages in the world history, regarding freedom). At last, we have seen that the human genius is higher in this scale than the regular human, since the aforementioned faculties are in their case more developed.

In this sense, it can be said that for Bergson the human genius is the most perfect being. This is similar in the other model of immanent teleology that we know, the classic one. Only philosophers can establish analogies between them and god, for instance.

⁴⁶³ CV, in ES, p. 31.

⁴⁶⁴ CV, in ES, p. 31.

⁴⁶⁵ For human as *affirmation of nature* in Aristotle see Rémi Brague in 2.1.c.

⁴⁶⁶ CV in ES, p. 32.

Bergson is a biomorphic author, and thinks that human beings are part of nature. Natural entities, like plants, animals and humans have irreducible goals. But human beings are not *mere* living beings. They live, as the others, but they (i) recapitulate the scale, and are also different in kind because of (ii) unique faculties. In my reading this implies a mitigated anthropocentrism, based on evolutionary theories of the epoch. The great difference with Aristotle is the evolutionary framework. That is because, in philosophical terms, evolution does not mitigate the anthropocentric assumptions, but, on the contrary, it strengthens the anthropocentric perspective.

Bergson's is not, however, an absolute anthropocentrism, because of his defense of biomorphism. First of all, Bergson is a defender of immanent teleology, and this implies that every being has its own perfection. Every living being can be conceived as a tendency toward action. This aspect of its existence is elemental and irreducible. As we know, from immanent teleology unfolds recognition of an innate value in every being. This is the basis for horizontal analogies and individual teleology.

This can be seen in Bergson also from a global view. As I said, Life tends in many directions. Some of them are absolutely deviated from the one that Bergson finds more important. Bergson combines the Darwinian "tree of life" branching pattern with the Aristotelian natural scale. Both coexist in his view. There is no solid basis for Pearson's statement: "On Bergson's model no dominant tendency within evolution can be identified"⁴⁶⁷. There are many tendencies in evolution, that is true, but following certain criteria above we can select and value specially the particular lineage that leads to human beings. Without doing this EC would be difficult to understand. That is because that reading tends to see a tension between two Bergsons: on the one hand, there is pluralism. On the other, there is "residual anthropocentrism". From the perspective of immanent teleology and mitigated anthropocentrism that is not a problem. Both are compatible. I address again the topic of the place of the human being in the cosmos in 4.2.b, applied to the phenomenon of evolution.

We have seen the main features of Bergson's human and its place in the cosmos. On the one hand, the human is a summary of different faculties in the living nature. The unavoidable evolutionary perspective of the beginning of the XX century puts this summary in historical terms. The natural scale, which is static and ahistorical in ancient thought, becomes chronological. To this extent, human beings represent the previous stages of natural history. I have pointed out the additional features of humanity in Bergson. The most remarkable ones are included in the section "Difference in kind", since it addresses specifically human faculties, all related with freedom, creativity and intuition. "Difference in history" can be considered an addendum of the previous, since there I have given the account of the specificity of human history, given its unique natural capacities. Human history is only an outcome of human nature.

Bergson's entire conception of human beings, their superiority and uniqueness, is mitigated by his conception of nature in general. I have addressed the most important *mitigating* features in Bergson, but there is still one more to examine in detail: evolution is unpredictable and, thus, human beings and their physiology and habits were not pre-designed in any sort of providential plan. The vegetative, animal, and human form are, to a certain extent, contingent. Freedom, and not humanity as such, occupies the central place in Bergson's

⁴⁶⁷Pearson, Keith-Ansell. *Philosophy and the adventure of the virtual. Bergson and the time of life*. Op. cit., p. 81.

worldview. Bergson's global teleology combines what I called primary teleology, for regular events, and secondary teleology, for contingent events, as I will clarify in the next structural chapter.

3.3. The temporal dimension of teleology. Regularity and irregularity

In general terms, we have seen that the first analogy, between one soul and one insect, is horizontal and conservative. The second analogy, the vertical one, is transgressive. Conservative teleology is conceptually linked to the classic developmental teleology, where the beneficiary is individual and concrete, and its goal is to persevere in being, in terms of the individual or the species.

On the other hand, transgressive teleology is conceptually linked to the global teleology of contribution, since the individual is seen as a part of something bigger. But here there is neither an eternal cosmos nor a god inspiring all the perfections, but one compound entity called Life or *élan*. The gap between the teleology of contribution in Aristotle and Bergson's version is considerable since in the first case it means eternity, while in the second, contribution means progress, and implies a growth of freedom.

One rather illustrative example is found in how Bergson addresses the "law" of biology. When Bergson talks in MM about a "fundamental law of life",⁴⁶⁸ it is implied that it is at work any time we conceive living beings. Although the term "law" is absent in Greek natural philosophy, Bergson's conception of individual teleology in MM fits with primary teleology, as we saw in 2.1.d. But in his later work DS the temporal perspective of Life is different. See the meaning of the term "law" here:

"We do not believe in the fatality of history. There is no obstacle which cannot be broken down by wills sufficiently keyed up, if they deal with it in time. There is thus no unescapable *historical law*. But there are biological laws; and the human societies, in so far as they are partly willed by nature, pertain to biology on this particular point. If the evolution of the organized world takes place according to certain laws, I mean by virtue of certain forces, it is impossible that the psychological evolution of individual and social man should entirely renounce these habits of life. Now we have shown elsewhere that the essence of a *vital tendency* is to develop fan-wise, creating, by the mere fact of its growth, divergent directions, each of which will receive a certain portion of the impetus. We added that there was nothing mysterious about *this law*".⁴⁶⁹

The biological laws, along with the fundamental law of life, make the living survive, reproduce and maybe also be well. There are no historical laws, since habits are contingent. Furthermore, there is one tendency, also called a law. It is historical, since it works in time. But he may avoid fatalism. Between the fundamental law of life in MM and the tendency-law, there is a difference with respect to the temporal dimension.

3.3.a. Primary teleology: regularity or perfectiveness for the most of the time

As we saw, regularity is part of the argument of teleology in Aristotle. Nature regularly tends toward the best. The embryo, for instance, tends regularly toward the complete figure, the

⁴⁶⁸MM, p. 150.

⁴⁶⁹DS, p. 293-294.

growth of the teeth tends regularly toward a good development so that one can chew and bite correctly, and the spider regularly works quite sophisticatedly on its web for the sake of nourishment and survival. The regular succession of the seasons due to the sun is, ultimately, based on teleology, since it is the consequence of the regular movements of the heavens, by the perfective attraction to god, the regular aim of heavenly bodies. According to Aristotle, then, regularly, every being tends to fulfill its potency, just as humans tend to be happy during their lifetime. Regarding the notion of contribution in Aristotle, it is exactly the same. That is, everything tends toward its completeness for the sake of a general arrangement. Regularly there is reproduction, for the species are eternal. And regularly everything occupies its range in the best way. In the infralunary world everything happens *aei* or *hos epi tò poly*. Moreover, the heavenly supralunary matters happen always.

For Bergson there is a regular fulfillment in nature and society, and as we know he uses neither the concept of form nor that of *éidos*. The same goes with the argument of teleology as happening “always” or the “most of the time”. But regarding the latter, regularity is certainly *implicitly used* in his account. Bergson talks as if it had happened always. It is, so to say, a relative *always*. The basic claim here is that Bergson doesn’t use a historical paradigm regarding this very kind of teleology.

Bergson deals with this kind of regularity in MM and the articles on mind and body in ES (like “The soul and the body”, “Dreams” or “Brain and thought”), in LR, in the pages of EC regarding adaptation, and in DS.II regarding closed society.

Regularly or for most of the time the body tries to be adapted to its environment, for the sake of something good or in order to avoid something bad. Regularly, the embryo continues the life of the past in the future for the sake of maturity. Regularly, society reacts in a defensive way regarding dissolvent powers, such as egoism, fear of death or absurdity or vanity, for the sake of its conservation. For instance, in his talk on “Dreams” he says that wakefulness is “adaptation and choice”, “willing and striving” and that being asleep is “to be disinterested”.⁴⁷⁰ Wakefulness is then a part of the so-called attention to life, which understands life in terms of functions: being and well-being. And, again, this happens always. When he addresses in MM “fundamental law of life”⁴⁷¹ the regularity is clearly implied.

Thus, the phenomena that Bergson is describing until now, in this section 2.3.a, are regular events. This doesn’t mean that there is some sort of eternity implied here. We already know that Bergson believed that there is not such an everlasting and permanent reality.⁴⁷² But *his approach* is that of regularity. It is a relative regularity. Since we are talking about regular features, the classic approach does not vary: *it happens that living things act always or most of the time for the sake of being or being in the best way possible*.

I have identified regularity with individual conservative teleology, but there is something important to add. In a complex system such as Bergson’s there are different aspects that are difficult to pin down. In Bergson’s global transgressive teleology, there is, certainly, one fixed property. That is, natural historical events like the plant or human form, or historical ones like the formation of new trends of the spirit, are an outcome of contingency.

⁴⁷⁰ “Dreams” in ES, pp. 125-126.

⁴⁷¹ MM, p. 150.

⁴⁷² Whatever he wants to mean with “eternity of life” and “eternity of death” in IM, in PM, p. 220, already quoted, is unclear for me.

Technically speaking they are unforeseeable. *But* Bergson's teleological cosmology relies upon one "impetus of life [that] consists in a *need* for creation". It is difficult to interpret that as if it was not a claim in terms of regularity. The perfective dynamic of that need of nature is also clear enough. Nature understood in the widest sense "strives to introduce into it the largest possible amount of indetermination and liberty".⁴⁷³ Bergson does not say that the *need* and the *goal* are so *sometimes, but always*. This is not something unforeseeable or contingent. Hence in Bergson's global teleology there is one element of regularity and also one element of irregularity. Therefore, the need and the goal of the cosmos is to be interpreted within the model of Aristotelian primary teleology, and the outcome of this need, is to be interpreted within the model of the secondary teleology that we saw in 2.1.d.

3.3.b. Secondary teleology: retrospective perfectiveness, unpredictability and narratology

In this subsection I address Bergson's view on global teleology from the perspective of time. To the extent that I refer to some sort of globality, this means that I understand nature as a whole, and each individual now is a part of this whole, and contributes to it by fulfilling its task.

The problem arises regarding the idea of progress and contribution in EC and DS, when we have the concept of Life, with capital letters. As we saw in Aristotle, entities regularly contribute to an eternal good. While in Bergson the wholeness cannot be thought in an eternal-like way, but only in historical terms, contribution, participation or imitation do not refer to any fixed or eternal ground of being, like the supralunary world or god. Now everything is perishable: there are no eternal items. Now there are no perishable individual entities that progress in some eternally fixed way, according to the general view of teleology. This leads us to the current problem: the time of teleology, because the universe, Life or history do not rely on fixed structures. Individual mutable cases of perishable entities are not expressions or examples of something eternal. There are no imperishable forms, there is no imperishable infralunary realm, there are no eternal, heavenly bodies and there is no prime mover.

In EC, Life covers the realm of biology. It is the synonym of the history of evolution. It has not ascended eternally and it is not one event to be understood in some bigger framework in which it is only one case. To this extent, it is not regular. One could say, as Bergson does, that Life, and its history, is one storyline. We really do not know what biology will be like beyond this particular and unique historical development. *Each part of Life's narrative is unique too, since it will not be repeated again ever: that is what being historical means ultimately.* This means, among other things, that *it is not to be repeated.*⁴⁷⁴ The temporal dimension is totally different now.

Bergson has to deal with a new problem: the teleology of singular events. Unlike with Aristotle, in modern language we could say that for Bergson the idea of Life is linked to the sciences of the spirit, namely, to history. I will soon propose some features for this. Regarding this second kind of teleology, I will tackle the issue of "retrospective finalism". Following Camille Riquier, I still defend a possible link between Aristotle and Bergson in

⁴⁷³EC, p. 251. My emphasis. Also EC, p. 261. This second passage shows the analogy between individual beings and cosmos. See 4.2.d.

⁴⁷⁴ Note that "law" is a modern term, and that Aristotle defends regularity but does not use such a term.

global terms. Although I admit that the speculative assumption is considerable in this case; also in this case I follow an already indicated interpretative path. In a word: in the Aristotelian framework there is room for retrospective finalism.

The vital impetus or *élan*, and the idea of human history or progress, are different from the regular phenomena I have mentioned just above. The main problem of global teleology in Bergson is that it leads to fatalism, as we saw in 1.1.b. It leads to some kind of providentialism where there is no room for indetermination, just what happens to certain deterministic evolutionary views. If we accept that there is an objective constitutive progress, an ontological tendency forward, we see that mankind does not lead to its own future. Moreover, we individuals are just puppets of destiny. And destiny is this overarching tendency called by Bergson Life or *élan vital*.

Bergson defends indetermination in nature and human indetermination at the same time. It is clear that during his career he progressively expanded the boundaries of indetermination. He started with human indetermination but his project of developing a philosophy of nature according to the model of immanent teleology entailed naturalizing almost all human features. This entails, in his case, also humanizing nature. Hence, freedom is not only to be found in our societies, but also in nature. Evolution is an expression of this nature. But he started everything from human experience.

At the moment in which Bergson constructed his philosophy of nature he was positive about the fallacy of fatalism: our direct experience of life denies any kind of overarching determinism. Bergson defended individual freedom from the beginning of his career, in the third chapter of D.I. A hard critique of determinism was implied in EL and, moreover, it became the center of his polemic approach to duration in DI.III. To be alive, to endure, implies being for the sake of conservation. Duration, later on applied to embryos, is an example of conservative teleology. But this goal coexists with another one, called freedom. According to this goal, human life is for the sake of freedom, which is a transgressive goal.

But in IM, EC and DS it seems that his position is on the verge of individual freedom and Life. In any case global teleology may lead to determination. Therefore, Bergson introduces natural contingency and human freedom or creativeness as part of the same anti-determinist feature of nature.

“We cannot contemplate it [progress in societies]”, Bergson says “without saying that, here too, across innumerable obstacles, life is working both by individualization and integration to obtain the greatest quantity, the richest variety, the highest qualities, of invention and effort”⁴⁷⁵

I will start with Life or history of evolution, including human history. In the universe there is need or also “exigency of creation”.⁴⁷⁶ Creation means unpredictability or “inflorescence of unforeseeable novelty”.⁴⁷⁷ Predictability is not one of the scopes of the sciences of Life, or, at least, of evolutionary biology.

Also “there is progress, *if* progress means a *continual* advance in the general *direction* determined by a first impulsion; but this progress is *accomplished only* on the two or three

⁴⁷⁵ CV, in ES, p. 34.

⁴⁷⁶ EC, p. 360.

⁴⁷⁷ CV, in ES, p. 31.

great lines of evolution”.⁴⁷⁸ Besides: “with the human being life of consciousness reaches, at least potentially, its *highest state* of emancipation from the restrictions imposed on it by matter”.⁴⁷⁹ In the last sentence from DS we have even a more bombastic statement on the same teleological ground. According to Bergson, humans should “intend to make the extra effort required for fulfilling, even on their refractory planet, the essential function of the universe, which is a machine for the making of gods”⁴⁸⁰

But, if the universe or Life is defined as an exigency of creation, then he is talking about a need and a natural tendency. The outcome of this natural tendency is progress and we can also talk about a highest state. Clearly, this is a global teleology scheme. This is also primary teleology. On the other hand, we need creation and unforeseeable novelty. It cannot be the development of a pre-designer. The natural progressive tendency has to fit with unpredictability and creation. This is the temporal dimension of secondary teleology. This is the great philosophical tension in Bergson, in my view: to make primary teleology and secondary teleology compatible within his global framework.

As Worms says, Bergson’s global finalism contains a retrospective and extraordinary original species of finalism.⁴⁸¹ Bergson’s vision of the *élan* entails a constitutive and objective teleology: evolution is the outcome of a natural tendency to progress and perfection. Hence, once more, *progress is real* and at the same time it *has to be* unforeseeable. If not, there would not be creation. In fact, it would never be real progress. It would be just Spencer’s evolutionary visions (the inexorable “law of evolution”⁴⁸²) and ultimately we may fall into fatalism: this is “false evolutionism”. Bergson’s creative teleology should be the opposite. It tries to combine his naturalistic view and something that maybe we could call humanism.⁴⁸³

His concepts of divergence in EC.II and dichotomy DS.IV meant to be precisely the avoidance of determinism. Life and history split into divergent branches, he says. There is not only one line of progress, but many.

The objectivity and non-reflexivity (this is not heuristics), on the one hand, and unpredictability (contingency), on the other, are characteristics of the *élan* or creative teleology. There is a certain tension between contingency and perfection, but they are just compatible. We should add that it implies *singularity* and divergence. Life and history are something unique, they will never be repeated for Bergson, and is in constant creation of new goals by divergence.

⁴⁷⁸ EC, p. 104, my emphasis.

⁴⁷⁹ Vaughan, M, Miquel, P-A, Pearson, K-A. “Responses to evolution”. Op. cit. p. 360, italics are mine.

⁴⁸⁰ DS, p. 317 and DS, 2012, p. 338.

⁴⁸¹ Worms, Frédéric. *Bergson ou les deux sens de la vie*. Op. cit.. p. 175: “finalisme rétrospectif pleinement original”. Worms talks about a: “Lecture psychologique et finale, mais rétrospective de l’évolution”. Ibid., p. 195. See also Ebénézer Njoh Mouelle. *Henri Bergson et l’idée de dépassement de la condition humaine*. L’Harmattan, Paris, 2013, pp. 192-211.

⁴⁸² It is formulated, among other places in *The first principles* chapters XIV-XVII. In Chapter XVII, §145 Spencer writes the formula that can be applied upon a vast range of phenomena, from physics to biology, from biology to culture, from individuals to the cosmos: “Evolution is an integration of matter and concomitant dissipation of motion; during which the matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity; and during which the retained motion undergoes a parallel transformation”. Spencer, Herbert. *The first principles*. Williams & Norgate, London, 1867, p 396.

⁴⁸³ See 4.2.c.

We can see singularity. Life is *one* story.⁴⁸⁴ In its origin, that was one feature of our own life or duration, also in DI. Duration is a continuum of the heterogeneous and it is *irreversible*. It is also unique.⁴⁸⁵ Hee-Jin Han has pointed out this characteristic in “L’heuristique du vitalisme”.⁴⁸⁶ In the short text “False recognition”, Bergson writes: “yet we know full well that no life goes twice through the same moment of its history, that time does not remount its course”.⁴⁸⁷ In subjective terms, in MM he talks about two memories: a memory that imagines and evokes singular events and another that forgets the singular property and just knows how to repeat, like every habit.⁴⁸⁸ In EC, in DuSim.III and in DS he talks about a great singular historical and irreversible tendency.

Since evolution is singular, it should be understood as one event. Predictability means that there are innumerable events that fit into some law-model. Life is not the case, so, in my view, it can only be an *event*. It is a complex event, one irreversible story. It can be interpreted by a narratology. Narratology is the method of the sciences of the spirit and does not aim to predict.⁴⁸⁹ Narratology interprets singular events. The singular events cannot be predicted, since prediction is so to say anchored around the repetition of some phenomena. *The irreversible singular events can only be interpreted retrospectively* as if they were narrated.

When Bergson differentiates between the “science of matter” (physics, but also physiology and chemistry) and the “sciences of the spirit” (psychology and a “vitalist biology”), I think he is talking about an essential difference between two branches of knowledge. On one hand, there is measurement, predictability, and precision. On the other, there is the unpredictable and unique phenomena called consciousness.⁴⁹⁰ Consciousness (understood according to the various meanings it has in Bergson’s works) is *always* an irreversible singular case to *be interpreted retrospectively because it is naturally directed towards change*. In his view, matter is inertia, geometry and necessity, and life is indetermination,⁴⁹¹ but also an impulse to higher efficiency.⁴⁹²

It is important to insist on the idea that this retrospective global teleology is not entirely *as if* teleology, although it has elements of contingency; it is in any case grounded in constitutive teleology. However, when Bergson says that there is in the world an exigency of creation he means two things: i) there is a teleological impulse towards something; ii) it is constant,

⁴⁸⁴Letter to H. Gouhier in 9th of June 1932: “La relation causale entre deux termes dont chacun est unique en son genre ne peut ressembler que de loin à ce que nous appelons causalité dans notre expérience humaine”. *Correspondances*, 1377-1378; and also in DS, 2008, “Lectures”, p. 622.

⁴⁸⁵ On uniqueness in his treatise on duration, DI, p. 239: against the notion of law, Bergson refers “this psychic state being unique of its kind and unable ever to occur again”. Also: “Now we must not make exaggerated use of the word “law” in a field which is that of liberty, but we may use this convenient term when we are confronted with important facts which show sufficient regularity”. DI, p. 296

⁴⁸⁶ Han, Hee-Jin. *Annales bergsoniennes*, IV. PUF, Paris, 2008.

⁴⁸⁷ “False recognition”, in ES, p. 167.

⁴⁸⁸ MM. pp. 81-82.

⁴⁸⁹This expression has nothing to do with Gérard Genette and literary criticism. At least, I have taken it from the biologist and historian Mayr, who, by the way, rejects Bergson’s valuation of biology. Despite this criticism, like Bergson, Mayr considers evolutionary biology different from physiology and closer to the sciences of spirit, regarding their historical method. Mayr, Ernst. Chapter.2 “Evolutionary biology as historical science”, *What makes biology unique?* Harvard University Press, 2007, pp. 32-33, italics are mine.

⁴⁹⁰“Phantasms of the living”, in ES, pp. 100-103.

⁴⁹¹ CV, in ES, p. 17.

⁴⁹² CV, in ES, p. 24.

which we call “world” as such. Creation is led by the direction of teleology. That is because human beings are the apex of that.

There is still an important element of contingency there. That is, human beings are products of contingency. Although nature is directed towards something (creation), there is variation in the forms of that process and there are also failures. So, nature would be different, *regarding the living species on earth, although the exigency would remain*. In his view, however, in comparison with other possibilities, there has been a success, called human being.

In short, teleology implies that creation is not chaos but indeterminacy. Teleology and novelty are compatible, while there is unpredictability regarding forms and the natural tendency or exigency remains. The teleological tendency of Life is certain: to seek indetermination. The outcome of that is purely unpredictable. There is indeterminacy and novelty to a certain extent (particular forms and species), because the exigency or tendency of the world does not change. This must remain.

As I said, I follow Riquier in his enlightening consideration of the *élan*. I agree with him regarding the understanding of the *élan* itself:

“L’*élan* n’a pas pour finalité absurde de déjouer toute prévision. Ce serait prendre pour une fin en soi ce qui n’arrive que par accident. Il a pour *finalité de réaliser la liberté dans la nature, finalité à laquelle il n’atteint que progressivement à cause de la contingence qui frappe son activité* (indétermination au premier sens). Autrement dit, si *les formes de l’évolution sont indéterminées parce qu’imprévisibles, l’évolution de formes est en revanche nécessairement déterminée*: elle tend à créer des formes capables de servir de plus en plus de véhicule à l’activité libre et créatrice. Bergson est donc manifestement hostile au thème romantique de la vie luxuriante, d’où jailliraient des formes innombrables, riches et variées, qui manifestent sa puissance d’éclosion”.⁴⁹³

There is a goal for nature: indetermination. The singular, irreversible process of striving toward that goal is unpredictable and only grasped by narratology. There is no law of Life that ultimately could predict everything. Life is singular and unforeseeable. Every moment is singular and takes part of a tendency in a certain historical context. The only axiom we have is teleology: tendency toward the best. Bergson shows that teleology; in this case, global teleology, is not necessarily determinist. Life is undetermined, apart from that. The state of the fauna of 1868 would not be predicted by anyone, as the evolutionist and determinist Huxley said.⁴⁹⁴

There is a global teleology, which includes a global tendency to something good. Every part of the living realm has contributed to the progressive fulfillment of that good. To my understanding, the ideas of divergence and dichotomy do not have the central importance that other authors have given to them. In a divergence scheme the idea of height or progress is perfectly possible, as it is in EC. It just fits better with the Darwinian tree of life, that is, with the modern science account. Global irreversible progress is historical and singular. It cannot be compared with any event similar to it, so it is a narratology and not a law. It is a retrospective interpretation. It implies that the phenomena cannot be measured. There is no experiment possible, since the conditions have always changed.

⁴⁹³ Riquier, Camille. “Vie et liberté”, *Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010, p. 146. My italics.

⁴⁹⁴ EC, p. 38. See 1.1.b.

Global, irreversible, progressive, historical and singular: these are the features of Bergson's transgressive teleology. The, so to say, "optimistic" conception of history remains intact in EC, but it is not necessarily the case. It lasts to explain the last feature: uncertainty. Uncertainty means that Bergson's conception of progress is not necessarily optimistic, but ambivalent. Although there is progress and a clear tendency in nature towards it, it is not *assured*. My point is that the exigency and tendency of nature understood as a whole, to the best or the higher development of its potencies, is for Bergson unquestionable, *but* it is not certain that in the future the progress will keep moving forward. It is not certain that this tendency to perfection will *succeed*. Stops, stagnation or decay are included among the future possibilities of our world. To some extent, this is something promising in one way since human history understood as progress, for instance, depends on us. In DS he writes: "the future of humanity remains indeterminate, precisely because it is on humanity that it depends"⁴⁹⁵.

We have to *make*, or rather *create*, progress. This would be natural, since it would fulfill human capacities and also the original need of nature, according to Bergson. Uncertainty, or even risk, in this context, leaves room for real creativity. Leaving aside human nature and human needs, only regarding Life, the story of evolution has not ended. At some point, nature could overcome human nature. In a way, from the point of view of spirit and ethics, geniuses are the proof of that. These questions on the future, according to Bergson, cannot be answered. We have seen why: Life and history compose a single case. Every step beyond them is just unpredictable.

I have talked about ascending all the time. Humans are the highest point in this trend. It is true that, in the *past*, for Bergson, the history of Life is clearly ascension. But his vision about the *future* is necessarily uncertain. The negative possibility of this uncertainty means basically that Life and humans *can decay*. In other words, although the progress is for Bergson *more natural* (or better) than retrogression, since we are talking about a singular event, the future remains open to different possibilities, better or worse ones. Although in EC and in CV the progressive and optimistic vision of Life and history seems quite central, in DS that changes. Namely the fourth chapter of DS, "Final remarks: Mechanics and mysticism", is colored by a different mood.⁴⁹⁶ Human choice is progress or decay, or even more dramatically, humans have to decide "whether they want to live or not".⁴⁹⁷

Bergson's global teleology is global, irreversible, progressive, historical, singular, creative and uncertain.

Again, Riquier gives us an important clue in his commentary of EC. He links the idea of retrospective teleology in Bergson with Aristotle. As he rightly points out, Bergson knew pretty well Aristotle's notion of *tyche* or luck, where one could find the secondary teleology. He gave a course in the period of germination of EC, between 1902 and 1903, in which he commented on that issue.⁴⁹⁸

⁴⁹⁵ DS, p. 299.

⁴⁹⁶ I think this is quite illustrative regarding the problem of technology. In EC the future of the human being is unproblematically linked to technology and craft invention. In DS, after the First World War, his optimistic vision has changed. See Zanfi, Caterina. *Bergson, la tecnica, la guerra*. Bononia, Bologna, University Press, 2009.

⁴⁹⁷ DS, p. 317.

⁴⁹⁸ *Mélanges*, p. 572. 1902-1903.

Riquier says:

“Ne serait-ce pas qu’il trouvait dans cette quasi-cause qu’est la *tyche* le modèle pour commencer à penser le jeu spécifique qu’entretiennent les forces vitales avec les forces matérielles? À partir du moment où l’élan vital agit en vertu d’une finalité immanente, il doit y avoir dans sa rencontre avec la matière des effets collatéraux qui n’étaient pas initialement compris en lui, effets qui arrivent non par soi, mais par accident (*symbebekòs*). *L’évolution creatrice* serait ainsi, comme la finalité et la chance, une finalité sans fin, c’est-à-dire une rencontre fortuite d’où procèdent des forms imprévisibles, mais susceptibles d’être expliquées rétrospectivement en termes de causalité mécanique ou finale”.⁴⁹⁹

According to Riquier, these ideas of global retrospective teleology and *tyche* have a lot in common. Organic forms, Riquier says, “come from unpredictable forms, but liable of being retrospectively explained in terms of mechanic and final causality”. It is difficult to say whether Bergson was conscious of that or not; this remains in the field of speculation. What is beyond doubt is that he knew perfectly well chapters 4, 5 and 6 of *Phys.II* and taught them in several lectures on that subject. He also taught the neo-Aristotelian Alexander of Aphrodisias, and particularly the doctrine of *On fate*, where the Aristotelian doctrine of chance and luck is used.⁵⁰⁰ However, Bergson does not comment on it. So the most prudent position for me now is merely to suggest the similarities.

The main problem and the main distance between the notion of *eutychía* in *Phys.II.4-6*, that I addressed in 2.1.d and the notion of *élan* in EC.I, II and III is threefold: i) Aristotle says that the cases of fortune are not just cases of the for the sake of. Bergson, on the contrary, thinks that evolution is for the sake of an innate natural function. ii) The cases of *eutychía* are beneficial not in an absolute sense, but in relation to the particular good of the individual involved. In EC the *télos* is absolute and non-relative, just like the general good in Aristotle’s global texts. iii) The case of *eutychía* and the *tyche* in general is secondary teleology. In EC it is not an alternative, but an essential part of global teleology. They have three elements in common: i) retrospective finalism; ii) indeterminism; iii) singularity. *We can see that, in any case, contingency has a much more important role in Bergson than in Aristotle.* But it is also important to see that in this case secondary teleology (history) is also derived from a non-historical claim, thus primary teleology.

According to Aristotle, the human is free to a certain extent. He or she is the principle of action and our actions depend on us (*EN.III. 3-5*). His teleological approach in *EN.I. 7* or *EN.I. 13* does not seem to be a problem for him. In general terms, all humans tend toward their natural goal, which is happiness, as we saw in 1.3. But their concrete future is contingent. Aristotle’s approach to deliberation, deliberated choice and voluntariness has nothing to do with chance,⁵⁰¹ although they have in common the “inherently unpredictable future” of the infralunary world of Aristotle.⁵⁰² The personal goal-directedness of every human being seems to be both natural and non-deterministic.

In Bergson every human being is goal-directed, but the paradox is that this requires transcending a previous step. *This is not pure contingency, but a relative one.* Bergson, as we

⁴⁹⁹Riquier, Camille. “Vie et liberté“, *Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010, p. 145.

⁵⁰⁰Ibid. “Vie et liberté“, *Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010; and *Archéologie de Bergson*. Op. cit. See the Introduction of Chapter 2.

⁵⁰¹ Although, luck or *tyche* has to do with deliberation and rational calculative faculties.

⁵⁰² Dudley, John. *Aristotle’s concept of chance: accidents, cause, necessity and determinism*. SUNY, New York, 2012, p. 278.

know, stresses the idea of creativity. Being free is to create oneself, as we will see in 3 and 4. Every personal life is a story of maturity, and, apart from dichotomy and divergence, it has the same features as the global teleology: Bergson's global teleology is global, irreversible, progressive, historical, singular, creative and uncertain. As the history of Life and human beings, our personal story is to be interpreted retrospectively.

I think that Bergson does not solve the problem I referred to regarding individual freedom. He defended the existence of Life as one assembly of entities. We can ask *whose* freedom is Bergson's freedom in EC. If Life is free, then we individual free beings can be mere puppets of that bigger entity. Then, the problem would be the same as in determinism, with the difference that there is contingency and freedom in the world. But this freedom, transmitted to the world through individuals, would be always one. Bergson defended that every human being is historical, creative and singular, not just analogue to Life itself, but a prolongation of it. At the same time, Bergson defended the autonomy of the human individual

Conclusion of Chapter 3

[A] Bergson emphasizes much more than Aristotle the vertical analogy. The cosmic passages in Aristotle establish analogies with compounds, like the army, or use analogical verbs, like to imitate or to desire. Aristotle also uses the vertical analogy for establishing analogies between humans and heavenly bodies and god. Only in one case he seems to accept the world/organism analogy. In contrast, in Bergson there are innumerable cases of microcosmos/macrocosmos, human/world. In Bergson there are no theological analogies and, naturally, no heavenly psychological bodies.

In Bergson there are two kinds of analogies, horizontal analogies and vertical analogies. That is how I see the claim in IM about an “effort” to “dilute ourselves”.⁵⁰³ Horizontal analogies are held between one singular living entity, such as a human being, especially regarding his or her body, and another one, such as the amoeba, the embryo, the society. Vertical analogies are held between the human being, especially regarding his or her soul, and just one item: Life or history. The *télos* in the horizontal analogy is development or conservation and the *télos* in the vertical one is contribution or transgression. In the first case there is a clear beneficiary, in the second there is rather an aim.

Like in Johnson on Aristotle, pluralism in Bergson can be understood can be understood in ecological terms, as Gunter did.⁵⁰⁴ This sheds light on the famous statement in IM, section IX, according to which “philosophy should be an effort to go beyond the human state”.⁵⁰⁵

[B] The two models are biomorphist, since they defend immanent teleology, and in both there is a certain kind of anthropocentrism, what I called mitigated anthropocentrism. In my opinion, the anthropocentric reading of Bergson’s global teleology is maybe easier to defend than Aristotle’s one.

In any case, in Bergson the evolutionary perspective means a peculiar case of mitigated anthropocentrism. On the one hand, it permits the teleological reading of the natural scale. On the other hand, Bergson understands evolution through the branching pattern of divergence, taken from the Darwinian framework. This means that Life tends in many directions, and only one (the most important) leads to the development of the central nervous system, and, ultimately, man. There is a third question: many aspects in the living world, and, namely, in man, have to be attributed to contingency. Humans are the goal of human beings insofar as humans are the best expression of freedom on earth.

Regarding the place of human beings and human knowledge in nature a dualistic view can be found in Bergson. Biomorphism is the first aspect we should consider, since it is required for immanent teleology. Biomorphism is the basis of the horizontal analogy and implies the worldview of the model of immanent teleology: pluralism. Mitigated anthropocentrism would complete the account of Bergson’s philosophy, since the human being is the most important or the highest entity or species in nature. Bergson’s is not, however, an absolute anthropocentrism, since plurality necessarily entails the recognition of goals in nature that are not human. His progressive view of evolution reinforces his anthropocentrism, since the rest

⁵⁰³ IM, p. 220.

⁵⁰⁴ Gunter, Peter. “Bergson and the war against nature”. *The new Bergson*. Ed. John Mullarkey. Manchester University Press, 1999.

⁵⁰⁵ PM, p. 227.

of nature can be understood as a previous step towards the form human: vegetative faculties and animal faculties are summed up in human beings, who are for Bergson the most recent species. The development of the central nervous system is, in Bergson, a tendency towards freedom and spirit. Only human beings qualified as free beings. Besides the recognition of non-human goals in nature, we have to add that what I have said of humans does not imply that the general perfective tendency is directed to the human form. It means that humans are a relative success of this the tendency towards freedom: partially, the human form, like the previous forms in the natural scale, is contingent. Regarding the former question of analogies, it is clear that the horizontal teleology relies on biomorphism while the vertical one relies on anthropocentrism. The human is a natural but unique entity. It is natural since it has basic things in common with the rest of the natural beings. It is unique since humans sum up the wide range of natural faculties and also add unique features, such as invention, freedom, intuition, self-consciousness. In terms of adaptiveness or dominion, humans share their label of success with the Hymenoptera. Like in the classic model, Bergson's human beings are ambivalent and require living in society.

[C] Temporality in both philosophers is definitely different. In Aristotle there are two grounds, the eternal one, which is better, and the perishable one. The perishable realm is equally eternal although the substances within are not. The teleological processes happen, it seems, always in the eternal realm and always or usually in the infralunary one. Individual teleology is thus regular, in Aristotle, and even more in the global one, since it involves the supralunary realm. That is not the case of Bergson. To be sure, regularity is not part of an explicit argument, as we find in Aristotle *Phys.* II. It is however implied in Bergson's approach to individual teleology. It is also part of the basis of his global teleology, since he talks about a regular exigency, need or perfective tendency in the cosmos, but its outcome gives a central role to contingency. The history of Life, human progress and personal life qualify as individual and unpredictable events. Like the Aristotelian fortune, it is to be understood as retrospective secondary teleology. The main difference is that this sort of teleology is in Bergson at the center of his natural worldview. He puts exceptionality at the core of his framework.

Bergson's more accentuated philosophical dualism appears here too. Based on biomorphism, Bergson erects horizontal analogies as if they were absolutely regular. This means that the human body and habits, living beings and society regularly tend to develop themselves, to adapt themselves and to persevere on earth as much as possible. Secondly, Bergson holds vertical analogies, based on anthropocentrism as global, irreversible, progressive, historical, singular, creative and uncertain teleological process. Now the question is mixed. On the one hand, he considers nature as a whole in regard with a regular goal. But its outcome, Life or evolution, human history or progress and our own subjective history are unique stories. In all these, contingency and unpredictability plays a central role. This is definitely far from Aristotle.

[D] Since the model of immanent teleology is grounded in analogies with human beings, it is also a reflection of humans. In Aristotle both development and contribution to perfectiveness can be easily understood as something simultaneous. The first is focused on the entity and the second on the relation between the entity and the whole. They both are grounded on the order of parts and wholes, something that is part of rationality. The order of development and the order of contribution are analogous with rational art and thought. There is only human reason

at stake. Bergson's view is, again, more dualistic. In Bergson development is made by a vital force of every living being which endures, matures and functions, whereas contribution is made by general biological trends (lineages) or mutations and by human freedom. The first one is a classic teleology of the *érgon*, the second one is a teleology of freedom. The analogy is grounded on two different human faculties or perfective tendencies.

As Bergson said, teleology is based on psychology or the human mind, and is doctrinally flexible. Also, we saw that notions, such as Life, imply that, *if* there is internal or individual teleology there is external teleology. In the first chapter I noted that Bergson talks about "effort". The effort should extend itself beyond the notion of individual effort, which completes the notion of external teleology. The human mind, individuals and individual efforts are elements of the horizontal analogy, biomorphism and regularity. The human mind, Life, and human cultures take part in certain kinds of "external effort", which is irregular, since it is unique. We have seen what means "going further" in structural terms. In Chapter 4 we will see in detail all the domains in which this philosophy is applied.

4. Two domains of immanent teleology in Bergson

This section casts the phenomena that Bergson explains in teleological terms, according to the previously seen ideas. One of the clearest ideas regarding the topic of teleology is Bergson's acute dualism. It is however a general feature of his philosophy: all his approaches are deeply marked by dualism. On teleology, we have seen, that is clear. There are two teleologies, two domains of teleology. If I am not wrong, Bergson refers to this dualistic vision of what Life and individual human life are only in one passage. The biological realm counts with two peculiar directions or teleological strivings, impossible to find in physics. To my knowledge, CV is the only place in which he addresses this question directly. It could be said that in a way the text sums up the varied contents of EC in an elegant synthesis. It is definitely what the following passage does around immanent teleology, although it has not been noted for any commentator until now, as far as I'm concerned. The text is so important for us that I quote it in the original language and in English, just as I did with the few central passages on reforming teleology in the first chapter.

The context is not far from Aristotle indeed. The text starts by establishing a sharp distinction between the artificial and the natural. Bergson asks how man could artificially imitate natural living entities. Like Aristotle at the beginning of *Phys.II*, Bergson thinks that there is one immanent principle in the living beings. This principle has to be understood in two ways, two main tendencies. Two main tendencies that can be found in human consciousness:

“[a] On imitera certains caractères de la matière vivante; on ne lui imprimera pas l'élan en vertu duquel elle [a.1] se *reproduit* et, au sens transformiste du mot, [a.2] *évolue*. Or cette reproduction et cette évolution sont la vie même. L'une et l'autre manifestent une poussée intérieure, le double besoin de [a.1] *croître en nombre* et [a.2] *en richesse* [a.1] *par multiplication dans l'espace* et [a.2] *par complication dans le temps*, [b] enfin les deux instincts qui apparaissent avec la vie et qui seront les deux grands moteurs de l'activité humaine: [b.1] *l'amour* et [b.2] *l'ambition*. [c] Visiblement une force travaille devant nous, qui cherche à se libérer de ses entraves et aussi à se dépasser elle-même, à *donner d'abord tout ce qu'elle a et ensuite plus qu'elle n'a*: comment définir autrement l'esprit?”⁵⁰⁶

“[a] We shall reproduce, that is to say, some characters of living matter; we shall not obtain the push in virtue of which it [a.1] *reproduces itself* and, in the meaning of transformism, [a.2] *evolves*. Now, reproduction and evolution are life itself. Both are the manifestation of an inward impulse, of the twofold need of [a.1] *increasing in number* [a.2] and *wealth* by [a.1] *multiplication in space* and [a.2] *complication in time*, [b] of two instincts which make their appearance with life and later become the two great motives in human activity, [b.1] *love* and [b.2] *ambition*. [c] Visibly there is a force working, seeking to free itself from trammels and also to surpass itself, to give first all it has and then something more than it has. What else is mind?”⁵⁰⁷

The passage shows again that Bergson's conception of Life and living beings can also be found in human consciousness. That is certain, since from [a], biology, we leap to [b] psychology. Namely, on the one hand, Bergson is proposing a link between [a.1] “reproduction”, that is, “increasing in number by multiplication in space” and [b.1] “love”. On the other hand, Bergson defends the analogy between [a.2] “evolution”, that is, “increasing in wealth by complication in time”, and [b.2] “ambition”.

⁵⁰⁶ “La conscience et la vie”, in ES, p. 22, italics are mine.

⁵⁰⁷ CV, in ES, p. 27 .

According to our analysis of teleology in the sense of *hou héneka + tini* (dative) in Aristotle, there has to be a beneficiary of a certain substance. The defenders of the individual biological teleology hold that, for instance, reproduction is something “good” for the individual. Conservation of the being (understood as individual conservation or specific conservation) and well-being are the basic models for the understanding of “perfection” or *télos*. This has to do with [a.1] and [b.1], that is, with “reproduction” and “love”. Teleology of *hou heneka + tinos* (genitive) is better understood regarding the relation between the individual and the universe, or the imperishable parts of the universe. The goal of the action or development or reproduction is not the conservation of any individual nor species, but the contribution to or participation in the whole. It has to do with [a.2] and [b.2], that is, with “evolution” and “ambition”.

[a.1] and [b.1] represent two tendencies toward preservation of what exists, one in biological terms and the other in psychological terms. [a.2] and [b.2] represent two tendencies, one in biological terms and the other in psychological terms, of transgression. The conservation of what exists means necessarily a concrete goal: it implies repetition. The transgression of one species to another does not have a clear beneficiary, but it is rather Life itself or ultimately the cosmos. Transgression implies a general goal, which does not refer to any sort of limited being. There is no repetition, but change. Thus, in the repetition of the conservative tendency, the goal is the existence or persistence of what already exists; and in change understood as evolutionary progress, the goal could not be that persistence, since persistence is at issue, but the enrichment of the wholeness. The *tendency to persist at the limit and the tendency beyond limits* is, for Bergson, the simplest understanding of Life and also, of human life.

Notice that in the passage, *repetition is not seen in negative terms*. Repetition or reproduction and transformation and evolution are seen both next to each other. They seem to be equally considered by Bergson. In EC reproduction or repetition could be reasonably considered one type of stagnation, a certain type of decay imposed to everything that exists. Always after newness comes adaptation, fixation and repetition. If one praises above all newness and creation with such an emphasis, automatically, the rest of the tendencies might be diminished. In EC the author talks about an “effort” which is different from that defended by the neo-Lamarckians, the “effort” of individual adaptation. Bergson believes in an idea of biological effort “far more independent of circumstances”.⁵⁰⁸

Although in MM Bergson’s scope is the “effort towards circumstances”, in EC he has found a second one much more important for him, the “independent effort”. Adaptation seems to be a secondary degree force, derived from the vital impetus. “But, if the evolution of life is something other than a series of adaptations to accidental circumstances, so also it is not the realization of a plan”.⁵⁰⁹ He devotes in EC one passage to the question:

“The truth is that adaptation explains the sinuosities of the movement of evolution, but not its general directions, still less the movement itself. The road that leads to the town is obliged to follow the ups and downs of the hills; it *adapts itself* to the accidents of the ground; but the accidents of the ground are not the cause of the road, nor have they given it its direction. At every moment they furnish it with what is indispensable, namely, the soil on which it lies; but if we consider the whole of the road, instead of each of its parts, the accidents of the ground appear only as impediments or causes of delay, for the road aims simply at the town and would fain be a straight line. Just so as regards the evolution of life and the circumstances through which it passes - with this difference, that evolution does not

⁵⁰⁸ EC, p. 87.

⁵⁰⁹ EC, p. 103.

mark out a solitary route, that it takes directions without aiming at ends, and that *it remains inventive even in its adaptations*".⁵¹⁰

At least two things need to be said. First, inventiveness can be found, according to the last line, in EC. It is, anyway, secondary in comparison to the "movement itself". Second, something more general can raise (again) problems for any reader. In the passage Bergson says that evolution "takes directions without aiming at ends". As I said, Life does not pre-design anything, it creates unconsciously. But it does not mean that there is no teleology involved. In the previous paragraph we talk about the vital impulse ("movement itself") as "an internal push that has carried life, by more and more complex forms, to higher and higher destinies".⁵¹¹

Once Bergson tries to link adaptation and change in EC, he stresses the value of change. It is also so in DS, since the open society is placed beyond and higher one more than the closed one. In CV he just refers to both, in a lyrical way, talking about love and ambition, as equally important. Equally unique to living beings and Life itself.

Repetition plays the role of adaptation, like attention to life. It is something that appears exclusively in biology. It is a power of Life. In the passage from CV, four years after EC, we see then that even the repetition, as every kind of adaptation or "attention to life" is *unique* to living beings. Conservation or, in his poetical language, "Love", is in its own right spontaneous biological driving force. In a higher degree we find transgression or freedom.

In the next two sections I will address this twofold vision of Life and living beings.

4.1. First domain of immanent teleology: conservative teleology

4.1.a. Destination, function and adaptation

The term "adaptation" is a genuine Darwinian concept. At least *The origin of species* emphasized its importance in a new way, regarding the previous transformist biological framework: namely, Lamarck's. The historian of biology Gustavo Caponi has criticized the adaptive or Darwinian reading of Lamarck.⁵¹² Only neo-Lamarckism has included the notion of adaptation in his framework, after the publication of Darwin's masterpiece in 1859. In rough terms, for Lamarck (as for Buffon) the organic form of the beings is, in different ways, an effect of the circumstances, and not cause of adaptation.

Needless to say, the concept is absent in Aristotle, although there are references in the corpus in which he alludes to the link between the living being and the environment. In Darwin the struggle for life found in the fourth chapter of *The origin of species* implies a dramatic vision of adaptation, while in Aristotle every living being is by nature adapted to a fixed niche, in a certain environment. In Aristotle adaptation is not a problem for the species, as it were, while in Darwin it is the ultimate need for the sake of short and long-term survival. Given that, in Darwin the drive towards adaptation—that is, survival, reproduction and well-being—is still teleological. The *télos* in Darwin has some different features and also the entire framework

⁵¹⁰ EC, pp.101-103, my emphasis.

⁵¹¹ EC, p. 101.

⁵¹² Caponi, Gustavo "Cap. 1. Contra la lectura adaptacionista de Lamarck" in *Filosofía, darwinismo y evolución*. Universidad Nacional de Colombia, Bogotá, 2007, pp. 8-19.

around, but it means perfection and good. Being alive is for the living being an absolute good both in the Aristotelian world and in the Darwin era.⁵¹³

Consequently, I apply to Bergson the teleological assumption of adaptiveness in living beings. Although Bergson talks sometimes about function, more emphatically he also uses the word “destination”. Undoubtedly, Bergson’s perspective may be understood in the Darwinian era, and adaptation is at stake in his works.

From my view, destination or adaptation play exactly the same role as every other teleological term, such as goal, task or function. In the following pages I deal with Bergson’s idea of goal, task or function regarding environment. Hence, again, I defend that the concept of adaptation has an unavoidable teleological meaning. It includes survival, reproduction and living-well, which in a lyrical and anthropomorphic way is called “Love”, in CV.

- Destination of the body and habits: attention to life

The activity of the body and its habits is one of the main concerns of Bergson in MM and, later, in ES.⁵¹⁴ So, action is the “fundamental law of life”,⁵¹⁵ and living corporeal beings are “centers of action”,⁵¹⁶ namely, “useful”⁵¹⁷ and “effective action”⁵¹⁸. This kind of action aims “to adapt ourselves to a present situation”.⁵¹⁹ That is the “purpose and function of our nervous system”: adaptation.⁵²⁰ The destination of the body and habits⁵²¹ that guide its actions, is the scope of MM, and that scope is adaptation. The key notion in MM is “attention to life”, which comes up in MM.III as the “cohesion in the normal work of the mind, as in a pyramid which should stand upon its apex”,⁵²² and will be used a number of times in his posterior works on body, soul and individual consciousness.⁵²³ Regarding the close relation between adaptiveness and attention to life, in the text of ES “False recognition” Bergson puts both ideas aside. He refers to “attention to life and adaptation to reality”.⁵²⁴

Along with adaptation we should include the nature of it: attention to life consists in spontaneous and unforeseen movements.⁵²⁵ As I mentioned, in “Dreams” he talks in a similar way about being awake. He notes another feature of attention to life: “its main function is to reply to you, for waking and willing are one and the same”. There is thus this voluntarist feature, related to spontaneity. He also relates attention to life with one of his most used terms, “effort”. Being awake or attentive is an “effort of concentration”⁵²⁶ and being alive is an “intellectual effort” in the “direction of effort”.⁵²⁷

⁵¹³ I have already addressed this subject in “The goal of the living being”, in 2.2.a.

⁵¹⁴ For MM as a “treatise of the body” see Worms, Frédéric. *Introduction à Matière et mémoire*. Op. cit.

⁵¹⁵ MM, p. 150.

⁵¹⁶ MM, pp. 228 and 242.

⁵¹⁷ I mean “vital utility”, for the sake of life itself.

⁵¹⁸ MM, p. 154.

⁵¹⁹ MM, p. 151.

⁵²⁰ MM, p. 160.

⁵²¹ In Bergson, habits “are fixed in the organism”. MM, p. 151.

⁵²² MM, p. 173.

⁵²³ ES, pp. 59, 60, 147, 153, 178.

⁵²⁴ “False recognition”, in ES, pp. 147-148.

⁵²⁵ MM, p. 248.

⁵²⁶ Dreams, ES, p. 127.

⁵²⁷ Effl, in ES, p. 200.

Attention to life is something not related to our personal psychology, but with our organic constitution. Attention to life is part of biology, as Bergson understands it. Only the case of human attention to life is at stake there, but it could be in other animals. He says: “I do not mean voluntary attention, which is momentary and individual, but that continuous attention common to us all, *imposed by nature*, which we may call ‘racial attention’”.⁵²⁸ Since the original text in French says “attention de l’espèce”,⁵²⁹ it should be better to translate it for ‘attention of the species’. Here the teleological element is implicitly posed. The attention of the species is deeply anchored in one specific form of life and flourishing, and not in mind or intelligence. It is an ontological feature and structure of living beings *per se*.

Adaptiveness to reality and, more concretely, to already made environments and spontaneity or willingness, are basic features of “attention to life”. It is much deeper than the individual human mind. Function and habit, on the one hand, and organs, on the other, are linked. The brain is “the organ of attention to life”,⁵³⁰ and it is “the point of insertion of mind in matter”,⁵³¹ it “secures at every moment the adaptation of the mind to circumstances”.⁵³²

In MM Bergson talks about it in these terms, which maybe can give a useful general account for this panoramic view: according to Bergson, attention to life “enables us to adapt ourselves to the present situation; through it the actions, to which we are subject, prolong themselves into reactions that are sometimes accomplished, sometimes merely nascent, but always more or less appropriate. Habit (rather than memory) it acts our past experience but does not call up its image”.⁵³³

In this context, habit refers to the tendency of the body, while memory refers to our spirit. That is, attention to life *is for the sake of adaptation*. Adaptation is its goal.

Attention to life is also the key for understanding the “utilitarian origin of our perception of things”,⁵³⁴ from which all the epistemological problems and ontological problems in MM are derived. Although useful, attention to life also produces philosophical problems:⁵³⁵ we forget our past and we do not give to this dimension of time the ontological category we should, Bergson says.⁵³⁶ The past “is inhibited by the necessities of present action”.⁵³⁷ Hence attention to life can mislead philosophical enquiries.

⁵²⁸“Phantasms”, in ES, pp. 94-95, italics are mine.

⁵²⁹ ES, 1964, p. 77.

⁵³⁰ AC, in ES, p. 59; in “Phantoms of the living” Bergson calls attention to life “the function of the brain”, ES, p. 91.

⁵³¹ AC, in ES, p. 59.

⁵³² AC, in ES, p. 59.

⁵³³ MM, p. 151.

⁵³⁴ MM, p. 158.

⁵³⁵It has been the “we are so much accustomed to reverse, for the sake of action, the real order of things, we are so strongly by images drawn from space, that we cannot hinder ourselves from asking where memories are stored up”. MM, p. 148.

⁵³⁶ “Materiality begets oblivion”, quotes Bergson from Ravaisson in MM, p. 177.

⁵³⁷ In alternative terms to the “plane of action”, in which attention to life performs its task, there is a “plane of dreams” (MM, p. 172), a plane of “disinterestedness” (Phantasms, ES, 94-95) or “inattention to life” (ES, p. False recognition: p. 150). Dreams, *déjà vues* or mental diseases are placed by Bergson in this “plane” (“Dreams”, in ES, p. 154; Dreams, 154: “recollections limited to the necessities of action”).

Although, according to one astonishing statement of Bergson the past “preserves itself”,⁵³⁸ this scheme implies that the past needs or seeks to be efficient. Efficiency, action and, specially, attention to life are the very key of his structural vision of the living beings. In the case of the human beings, attention to life organizes the scheme of body and soul life, since both are “united inseparably to one another”.⁵³⁹

Regarding the general structure of attention to life, as Hude has said, the philosophical approach behind MM (and its so to say doctrinal “appendices” in ES) is that of “hylemorphism”. A new version of the position attributed to Aristotle that invokes the unity of the soul and the body by appealing to teleology. The “attention-to-life-framework” is in my view absolutely teleological.

The term emphasizes the *goal of adaptation* in the Darwinian philosophical context after 1859. Also, Bergson’s attention to life plays a significant role regarding the philosophy of time that is at stake in MM. In the case of the human beings, attention to life is the aim of being fixed to the present and calculating the future. In Bergson, the brain and in general the body and its activities are our participation in the present, while the unconscious past, dreams, etc., are considered starting from the present. Thus, Bergson’s originality resides in the fact that he adds a philosophy of time to the framework of adaptation, a Darwinian and neo-Lamarckian topic.

- Destination of the cells and instincts: cytology, reproduction, ethology

As I said, all the varieties of conservative teleology are versions or expressions of attention to life. “Attention to life” pertains better to the human context of MM and ES, but we have seen in 3.1 that Bergson makes an analogy between animals (the amoeba, the herbivore) and human beings. In DI and LR there are also brief analogies suggested between animals’ hypothetical knowledge of the world and human knowledge.⁵⁴⁰ The attention to life is a general structure of Bergson’s conception of individual life, regarding the environment. It is a part (not the whole) of human consciousness. It is to be understood regarding the body and habits. We have seen one of these versions or expressions, language. This new subsection will be another appendix to the attention to life, but in the context of the philosophy of the organism, in EC.II. Now we are focused on non-human development and activities. Namely, Bergson talks about cells and instincts. Also, in the context of MM and ES the difference between body and habit wasn’t clear. As far as I’m concerned, Bergson does not deal with the difference between the organ and the function of the organ, since he considers both as parts of the teleological structure of attention to life.

The first passages that I show here are on cytology or cellular biology, and ethology or animal behavior. The author himself defends the similarity of both grounds of biological inquiry:

“When we see in a living body thousands of cells working together to a common end, dividing the *task* between them, *living each for itself at the same time as for the others, preserving itself, feeding itself, reproducing itself, responding* to the menace of danger by appropriate defensive reactions, how can we help thinking of so many instincts? And yet these are the natural functions of the cell, the *constitutive elements of its vitality*. On the other hand, when we see the bees of a hive forming a

⁵³⁸ MM, p. 149.

⁵³⁹ AC, in ES, p. 71.

⁵⁴⁰ On animals and the space: DI, pp. 96-97. On animals and the intuition of individuals: LR, 47a.

system so strictly organized that no individual can live apart from the others beyond a certain time, even though furnished with food and shelter, how can we help recognizing that the hive is really, and not metaphorically, a single organism, of which each bee is a cell united to the others by invisible bonds? *The instinct that animates the bee is indistinguishable, then, from the force that animates the cell*, or is only a prolongation of that force. In extreme cases like this, instinct coincides with the work of organization”.⁵⁴¹

Following the analogy, the bee is the cell of the hive and the hive is an organism. The idea of community as organism for Bergson has been noted, also in the human realm, and we will come back to it soon. For the moment, we can focus on the cell and the bee. Both live for themselves and for others, their activities are defined by an interest in self-preservation, nutrition, reproduction and self-defense. Those are the “constitutive elements” of their vitality and vitality in general. As I have said several times throughout this work, Bergson has a hierarchical vision of nature. Just as attention to life among humans is different among bees or cells, they are all expressions of the same impulse for the sake of preservation.⁵⁴²

As we saw in 1.2.4 Bergson rejects individual teleology. His own conception of reproduction leads him to reject Driesch’s exclusively individual teleology. I didn’t include this part, since the passage was long enough. I will recall it now. The context, basically, is how to delineate between individuals in biology. First, there is the problem of the compound: every living being is a compound of other living beings. Second, reproduction means that every individual comes from a cell from another body. He writes:

“An organism such as a higher vertebrate is the most individuated of all organisms; yet, if we take into account that it is only the development of an ovum forming part of the body of its mother and of a spermatozoon belonging to the body of its father, that the egg (*i.e.* the ovum fertilized) is a connecting link between the two progenitors since it is common to their two substances, we shall realize that every individual organism, even that of a man, is merely a bud that has sprouted on the combined body of both its parents. Where, then, does the vital principle of the individual begin or end?”⁵⁴³

The principle of living entities comes from other entities and the vital impetus must be global then. At the beginning of Chapter 4 we have seen that Bergson interprets the global tendency in two ways. One of them involves only members of the same species, reproduction, the other one covers the whole history of Life, from one species to another. Now it is time to focus on reproduction, since it is a conservative power, and defines it as a tendency of Life to “surpass itself”.⁵⁴⁴ It means the tendency to conservation not by one individual, but by one species. Like the previous one, reproduction tries to “give first all it has and then something more than it has”. For Bergson reproduction means “*increasing in number multiplication in space*”, and he calls it instinct. As we saw in 2.2.a survival of the species is for Aristotle one of the most basic and general levels of life, also applied to plants. For Bergson reproduction may have an additional evolutionary value: the dominion on earth is also made by the radiation of the same species all over the world.⁵⁴⁵ As in the classic model, reproduction can be understood from the point of view of the individual faculty, but also from the point of view of the species, that covers multiple individuals. In any case, survival of the species, in Bergson, as in Aristotle, has an immanent value. The goal at stake is clearly conservative, and covers one beneficiary or multiple ones.

⁵⁴¹EC, p. 166, my italics.

⁵⁴²“Of course there are degrees of perfection in the same instinct (...)” EC, pp. 166-167.

⁵⁴³ EC, p. 43.

⁵⁴⁴ CV, in ES, p. 27 .

⁵⁴⁵ See 3.2.b. “Difference in history”.

In EC.II the author is more focused on ethology than on cellular theory and reproduction. In DI.II and LR.III Bergson talks, respectively, about insects and dogs' experience of the space, and about wolves grasping their prey. In EC.II this approach to animal behavior is limited to entomology. As we have seen in the previous passage on bees, the insects of the order of Hymenoptera (like bees, wasps and ants) are the focus of EC. In Chapter 2.2 we showed that he considers them the perfection of instinct. After having talked about bees, and based now on Jean-Henri Fabre's then famous entomological reports,⁵⁴⁶ Bergson devotes a number of pages to the perfect expression of this type of attention to life called instinct in the wasps.

Namely, he focuses on the digger wasp.⁵⁴⁷ In EC Bergson comments on the astonishing capacity of these insects to follow their instinct in such sophisticated ways, as Fabre relates. Bergson refers to every type of digger wasp as following a musical theme. That is how he considers "the paralyzing instinct of certain wasps".⁵⁴⁸ In this context, the caterpillar is the prey of the wasp. Bergson asks how the wasp knows about the caterpillar. Then Bergson proposes the notion of "sympathy", taken in its etymological sense. The wasp must *feel* the caterpillar's nature. "This feeling of vulnerability might owe nothing to outward perception, but result from the mere presence together of the *Ammophila* and the caterpillar, considered no longer as two organisms, but as two activities".⁵⁴⁹ The wasp's activities are at stake here and are to be understood in the teleological sense, which is not intellectual, just like the spider in Aristotle. The wasp's activity is for the sake of something good, that is to be understood as perfective. Natural perfection is behind this idea of sympathy. Sympathy is an instinctual power for the sake of survival, reproduction and well-being.

Bergson's conception of cells and Hymenoptera organs and functions is thoroughly teleological. The being is for the sake of some specific activity and this activity is its perfectiveness. Living beings are for the sake of their functions. Bergson even considers that a being is an activity, more than a thing (namely, organism). This activity could be summed up by the expression perfectivism. According to the model of immanent teleology being or being in the fullest form of being are the goals of any living being.

- Destination of the human being (I): attention and language

As I have shown in 3.1.d and 3.2.b individual creativity is the paradigm of the activity of the human soul in Bergson. However, there are also adaptive human faculties to take in consideration: namely, the *attention to life*. My point now is that attention to life has its own form regarding *uniquely* human activities. That is: human spontaneous activities should refer to conservation and adaptation. He focuses on human behavior, and the human expression of the attention to life.

Some passages of MM.III put the example of the "man of action", which is interesting for us. It shows in a way the ethical aspect of this adaptive teleology, since it points to a middle-ground conduct for men. Between artistic creativity and animal adaptation there is an unique human activity that is a mixture of both. This hybrid form can be found only in MM.III, and refers to the virtuous middle term of the "well-balanced mind"⁵⁵⁰ by understanding mere

⁵⁴⁶ Fabre, Jean-Henri, *Souvenirs entomologiques*, 3^e série, Paris, 1890, see EC.II, footnotes 70-72.

⁵⁴⁷ Family: Sphecidae. Type genus: *Ammophila*.

⁵⁴⁸ EC, p. 272.

⁵⁴⁹ EC, p. 174.

⁵⁵⁰ MM, p. 153.

animal impulse or inattentive dream of the dreamer (and the mentally insane) as extreme middle terms. Although in general Bergson talks about human nature in heroic Romantic terms by stressing creation and breaking habits, here the philosopher holds a quite classic conception of the *vita activa* or prudent practical life.

At one vicious extreme, there is the “man of impulse”, who, like the “lower animals”, lives “only in the present” and responds to a “stimulus by the immediate reaction which prolongs it”.⁵⁵¹ Living in this way is like being led by “motor memory”, it is like being a “conscious automaton”, according to Bergson, like children and the so-called savages.⁵⁵² On the opposite side we have the dreamer, who “dreams his life instead of living it”, led by a “contemplative memory”.⁵⁵³ The dreamer is the one “who lives in the past for the mere pleasure of living there” and is “hardly better fitted for action” than other people.⁵⁵⁴ He or she is maladjusted. The awake dreamers in Bergson are exemplified by the mentally ill persons he refers to in MM.II or the “men drowned and hanged” who finally saved their lives: close to the end and disinhibited by their attention to life, these people saw their entire past existence.⁵⁵⁵

Bergson proposes that “between these two extremes lives the happy disposition of memory, docile enough to follow with precision all the outlines of the present situation, but energetic enough to resist all other appeal”.⁵⁵⁶ Between the extreme of the impulsive human and the maladjusted dreamer, there is the *man of action*: “The characteristic of the man of action is the promptitude with which he summons to the help of a given situation all the memories which have reference to it”.⁵⁵⁷

That is, the man of action is in a virtuous midterm between the automatic instinctive spontaneity and the dreamer’s creativeness. Attention to life, and so the man of action, faces its present regarding its open future, and uses the past for the sake of its actions.

The spontaneous effort or willing of the organic beings towards the performance of a certain activity or function upon circumstances imposed by nature is called by Bergson attention to life. It is his major concept in conservative teleology, and it is clearly related to the individual teleology of function. In the case of human beings, Bergson complexifies the human type of attention to life by claiming that there exists a virtuous middle term between two vicious extremes. It can lead to happiness, for human beings.⁵⁵⁸ This may be the fulfillment of the being.⁵⁵⁹

Society and the brain are for Bergson just expressions of human superiority, as we saw. Like in Aristotle, language is automatically linked with our social dimension in Bergson: we are

⁵⁵¹MM, p. 153.

⁵⁵²MM, p. 154.

⁵⁵³MM, p. 155.

⁵⁵⁴MM, p. 153.

⁵⁵⁵MM, p. 155.

⁵⁵⁶MM, p. 153.

⁵⁵⁷MM, p. 153.

⁵⁵⁸MM, p. 153.

⁵⁵⁹The idea of the practical middle term can be linked to the Aristotelian *mesótes* (NE.II.2.1104a25). And possibly Bergson’s *man of action* could have some resemblance with the prudent (*ho phrónimos*) ethical man in Aristotle, but the important differences dissuade me from emphasizing the similarities too much. I do not find a theory of virtue in Bergson.

political animals and linguistic animals at the very same time.⁵⁶⁰ The problem of language is part of Bergson's philosophical discourse from the first line of his first published work. These are the first lines of DI: "We necessarily express ourselves by means of words and we usually think in terms of space. That is to say, language requires us to establish between our ideas the same sharp and precise distinctions, the same discontinuity, as between material objects. This assimilation of thought to things is useful in practical life and necessary in most of the sciences".⁵⁶¹ In the "Conclusion" of that same work, Bergson states that "there are finally two different selves, one of which is, as it were, the external projection of the other, its spatial and, so to speak, social representation".⁵⁶²

Leaving aside the concept of *spatialization*, we can see that this necessity of practical life is closely linked to social representation. Thanks to language we can "externalize our concepts in relation to one another, reveal to ourselves the objectivity of things. We do this in two ways: by getting everything ready for language and by showing ourselves an external world, quite distinct from ourselves, in the perception of which all minds have a common share, which foreshadows and prepares that way for social life".⁵⁶³ We all share words in society, and these words are for the sake of adaptation. As far as I'm concerned, this idea doesn't change in Bergson: our verbal dimension is a) useful and b) social.

Language generates problems, for Bergson. Like society it has an important goal: adaptation and conservation. Language permits us to distinguish things and to communicate these distinctions in society. This means that, in the end, we can work in groups like no animal on earth. This group work of language becomes a quite complex but practical compound of symbols. Human domination of the environment and nature is due to society and language, and vice versa, since they can't be distinguished. In DI, modern science is the ultimate step of this scale of dominion. As I say, this is seen by Bergson in a critical way, since positivism is trying to apply the successful scientific quantitative model to consciousness. He considers that this is wrong. But this exhaustive teleological reading of Bergson has to include also the destination of words, for the sake of survival and well-being. Language can be perfectly understood as part of our biological background, unable to grasp the self and duration, for instance, but necessary for practical and social life. Language is then part of the "attention to life", a concept that he created seven years after DI.

- Destination of the community: laughter, myths, animism

As we know, Bergson devoted two books to human social life, LR and DS. The entire LR and one half of DS (especially its second chapter) can be read in terms of conservative teleology: they talk about corrections of dysfunctional cases of attention to life. This may mean that society is an entity that has to survive, or reproduce itself and even fulfill the tendency of living-well. It is certainly an entity that has to survive and to fulfill the best of its potency, and with society, all the members of it. As I said in the previous section on analogies, Bergson's lectures of 1916 known as "La personnalité" or "On personality", deal briefly with this conception of national communities and peoples. LR is from 1900 and DS from 1932, but that so-called vitalist conception of society is implied there. Both are focused on the defensive tendencies of society, conceived as a whole living entity composed by human

⁵⁶⁰ For Aristotle, speech (*ho logos*) is for making clear what is beneficial or harmful, and also what is just or unjust. *Pol.I.2.1253^a5-20*.

⁵⁶¹ DI, p.xix.

⁵⁶² DI, p. 231.

⁵⁶³ DI, 236.

individuals, and both are social reactions. Although in DS Bergson does not neither recall and nor even mention LR, in my view there is a clear continuity. Jokes in LR and myths in DS are collective creations of some living being called society.

There is a leading analogy in both texts. In LR he states: “Let us go on to society. As we are both in and of it, we cannot help treating it as a living being”,⁵⁶⁴ and “we should see that vanity, though it is a natural product of social life, is an inconvenience to society, just as certain slight poisons, continually secreted by the human organism, would destroy it in the long run, if they were not neutralized by other secretions. Laughter is unceasingly doing work of this kind”.⁵⁶⁵ Laughter has to be considered from this vitalistic perspective: as we will see, it enacts a particular faculty of a whole called society. In DS we have a similar organic analogy: “... human society with its members linked together like the cells of an organism, or, what amounts almost to the same thing, like ants in an ant-hill, has never existed but the groupings of primitive humanity were certainly nearer the ants than ours are today”.⁵⁶⁶

Following Aristotle, Bergson thinks that the philosopher has to search for function of any given organism, living being, or a part thereof. LR understands the laughter, the comedy and humor, as part of a society, the organism. LR is a book about the function or the *special cause* of laughter in the community. In the book, Bergson himself prefers to talk about function than about cause. He writes: “To understand laughter, we must put it back into its natural environment, which is society, and above all must we determine the *utility of its function*, which is a social one. Such, let us say at once, will be the leading idea of all our investigations. Laughter must answer to certain requirements of life in common. It must have a social signification”.⁵⁶⁷ And he adds: “Laughter must be (...) a sort of social gesture. (...) Laughter, then, does not belong to the province of aesthetics alone, since unconsciously (and even immorally in many particular instances) it *pursues a utilitarian aim of general improvement*”.⁵⁶⁸ The function and the signification have to be understood by means of general improvement or perfectionism. Laughter, ultimately, is read in teleological terms: that is, laughter improves society. Or, in other words, thanks to laughter society can fulfill its natural goal better. “What life and society require of each of us is a constant attention, an alert, that discerns the outlines of the present situation, together with a certain elasticity of mind and body to enable us *to adapt ourselves in consequence*”.⁵⁶⁹

We will come back to DS, on religion and morality, but I want to say in advance that the Aristotelian search for function can also be found. Bergson wants to explain the existence of myths and the social pressure within them: “we have the right to proceed like a biologist, who speaks of nature’s intentions every time he assigns a function to an organ: he merely expresses thus the adequateness of the organ to the function. In spite of humanity’s having become civilized, in spite of the transformation of society, we maintain that the tendencies which are, as it were, organic in social life have remained what they were in the beginning”.⁵⁷⁰

⁵⁶⁴ LR, p. 16a.

⁵⁶⁵ LR, p. 53b.

⁵⁶⁶ DS, p. 82.

⁵⁶⁷ LR, p. 5a-5b.

⁵⁶⁸ LR, p. 9a, italics are mine.

⁵⁶⁹ LR, p. 8b, italics are mine.

⁵⁷⁰ DS, p. 56.

LR is a book on the phenomenon of laughter, composed of three articles. In the appendix for the twenty-third edition Bergson quotes himself, from a recent article of 1919 about his own book, and says that the essay talks about the “procedure of the comic-making” or of “laughable” and about the “special cause” of that “defensive reaction, by a gesture that makes a light fear”.⁵⁷¹

The main scope of laughter is to fight the “distraction of life”,⁵⁷² which is the opposite of “attention to life”. Thus, laughter is subordinated to attention to life. With Sibertin-Blanc,⁵⁷³ I believe that the basic thesis of the whole work is the *special cause* of laughter. Secondly, LR talks about the procedures or methods of laughter, which occupy most of the text. In fact, the *perfective power* of laughter is not explained in detail. In general terms we know the essential idea for us: that it *strengthens attention to life*.

Bumping into something, eccentricities, or vanity are subtle distractions that are corrected by laughter. The man who is *attentive* to life is part of a group and he and the group laugh at those cases.⁵⁷⁴ My point now is to show that laughter’s function is *correction* of excessive liberties,⁵⁷⁵ repression of separatist tendencies,⁵⁷⁶ punishment,⁵⁷⁷ and humiliation,⁵⁷⁸ although in an indirect and subtle way. Near the end of the text, Bergson considers that “laughter doubtless exercises a useful function”.⁵⁷⁹ Laughter is understood by Bergson in a teleological way, since this psychological and social phenomenon is “made by” nature for the best of the individual. In this context, the individual is both the human individual and society itself, since it enhances the cohesive tendencies. “Here, like elsewhere, nature has disposed with evil and cruelty for the sake of the good. It is more especially the good that has engaged our attention throughout this work. We have seen that the *more society improves*, the more plastic is the *adaptability* it obtains from its members; while the greater the tendency *towards increasing stability* below, the more it forces to the surface the disturbing elements inseparable from so vast a bulk; and thus laughter performs a *useful function* by emphasizing the form of these significant undulations”.⁵⁸⁰ In the end the *télos* is again adaptation.

In DS conservative teleology is called in general terms compulsion, obedience or impulsion. We saw it in 3.1.e. Since this book is the best articulation of the twofold vision of teleology in Bergson, each tendency has its own chapter. Bergson focuses on conservative teleology in DS.II. There we see how this organic society uses dysfunctional faculties of humans *for the sake of the best*.

⁵⁷¹ “Appendice de la vingt-troisième édition”. LR, PUF, 2007, p. 156-157.

⁵⁷² The original text says “distraction de la vie” which, I think, is closer to the translation in English (authorized by Bergson): “*absent-mindedness* on the part of life”.

⁵⁷³ Note in LR, ed. Guillaume Sibertin-Blanc, PUF, Paris, 2007, p. 207.

⁵⁷⁴ LR, p. 28b.

⁵⁷⁵ LR.III.V, p. 59b. Also: “Laughter is, above all, a corrective. Being intended to humiliate, it must make a painful impression on the person against whom it is directed. By laughter, society avenges itself for the liberties taken with it”. LR, p. 60b.

⁵⁷⁶ “...it is the business of laughter to repress any separatist tendency. Its function is to convert rigidity into plasticity, to readapt the individual to the whole”. LR, p. 54a.

⁵⁷⁷ “Laughter punishes certain failings somewhat as disease punishes certain forms of excess, striking down some who are innocent and sparing some who are guilty”. LR, p. 60b.

⁵⁷⁸ “Its function is to intimidate by humiliating. Now, it would not succeed in doing this, had not nature implanted for that very purpose, even in the best of men, a spark of spitefulness or, at all events, of mischief”. LR, pp. 60b-61a.

⁵⁷⁹ LR, 60, b.

⁵⁸⁰ LR, p. 61a. This idea of nature using wrong outcomes for the best reminds me Aristotle’s nature: it also uses surpluses of matter for the better defense of animals, in *PA*.III.2 663b30-35.

DS.II leads to the search for “the first function of religion”.⁵⁸¹ It is none other than “social preservation”.⁵⁸² The myth-making function and static religion, closely linked, generate in societies eschatological myths, taboos, animism and magic against the “anxieties and temptations”,⁵⁸³ produced by the intelligence (the depressing idea of death, selfish preoccupations, uncertain future, sexual policy, etc.). “The function that nature has assigned to religion”⁵⁸⁴ is thus defensive of the group or cohesive. In DS.II there are three similar definitions of the same idea of natural defense: “religion is then a defensive reaction of nature against the dissolvent power of intelligence”.⁵⁸⁵ Also: “It is a defensive reaction of nature against what might be depressing for the individual, and dissolvent for society, in the exercise of intelligence”.⁵⁸⁶ Regarding the practical life and animism and magic Bergson adds: “defensive reactions of nature against the representation, by the intelligence, of a depressing margin of the unexpected between the initiative taken and the effect desired”.⁵⁸⁷

As I said, society is conceived in DS as in LR like an organism. In both sociological accounts the author shows different ways of defending society against dissolvent elements. In LR these elements are less hostile, so the defense is soft, related to aesthetics: that is laughter. In the end, LR answers the question of the goal of laughter. It attacks distraction and vanity for the sake of a better cohesion and adaptation of the human beings, and, ultimately, for the sake of the conservation of a singular entity called society. In DS.II myth-making faculties cause eschatological myths, animism, magic and taboos. They attack some kind of social illnesses made by the faculty of intelligence among humans. The goal is, thus, similar to laughter: conservation, that is, being and, furthermore, living well, since communitary perfection should involve a certain kind of happiness (not the highest, though, as we will see soon).

4.1.b. Embryologie: continuity and maturity

In the epigraph above called “destination of the cells and instincts: cytology and ethology” I talked about the activities of different types of living beings, namely cells and bees. Just before, I talked about the human body, and, by analogy, about amoebas and herbivorous animals. This subsection just adds material to Bergson’s philosophy of organisms. It introduces a new concept. The previous sections on language, body, habit, instinct and cellular theory and communitarian behavior stress the notion of function or efficient activity. In this section I recall one passage we saw in Chapter 3.1.b on analogies between consciousness and the embryo, the most conservative cases of conservative teleology.

Now Bergson refers to maturity. In my reading, it is not an expression of the attention to life. It is not a function or an activity. Maturity is certainly a type of perfection, it is a goal of the living being, but it is not an external action that the organism should perform. It has to do with Bergson’s philosophy of time, and namely with duration, as it is seen in DI.II, but transformed into philosophy of the organisms. The temporal perspective introduces this idea of maturity, which has nothing to do with attention to life.

⁵⁸¹ DS, p. 129.

⁵⁸² DS, p. 129.

⁵⁸³ DS, p. 208.

⁵⁸⁴ DS, p. 204.

⁵⁸⁵ DS, p. 123.

⁵⁸⁶ DS, p. 205.

⁵⁸⁷ DS, p. 140.

“The cause of growing old must lie deeper. We hold that there is unbroken continuity between the evolution of the embryo and that of the complete organism. The impetus which causes a living being to grow larger, to develop and to age, is the same that has caused it to pass through the phases of the embryonic life. The development of the embryo is a perpetual change of form. Any one who attempts to note all its successive aspects becomes lost in an infinity, as is inevitable in dealing with a continuum. Life does but prolong this prenatal evolution. The proof of this is that it is often impossible for us to say whether we are dealing with an organism growing old or with an embryo continuing to evolve; such is the case, for example, with the larvae of insects and crustacea. On the other hand, in an organism such as our own, crises like puberty or the menopause, in which the individual is completely transformed, are quite comparable to changes in the course of larval or embryonic life—yet they are part and parcel of the process of our ageing. Although they occur at a definite age and within a time that may be quite short, no one would maintain that they appear then *ex abrupto*, from without, simply because a certain age is reached, just as a legal right is granted to us on our one-and-twentieth birthday”.⁵⁸⁸

As I said in 3.1.b the feature here is no more activity than maturation and growth. The “perpetual change of form” which, as Bergson seems to think, has more to do with duration, appears as a pure flux. Like time in ourselves: it is a continuum. In this context, Bergson even says that “it is often impossible for us to say whether we are dealing with an organism growing old or with an embryo continuing to evolve”. Growing old seems to be here a non-teleological expression, since “old” is not necessarily something good. Old can mean decay. In this passage the expression stresses “pure becoming” more than directedness. On the one hand, growth is, in the classical scheme of Aristotle, a teleological activity. First, it is linked to nutrition. Nutrition is for the sake of survival, and survival is good.⁵⁸⁹ As we saw, in a teleological framework the term “growth” means *growth towards something*, and “something” is fulfillment of the specific nature to be developed, that is maturity. As Bergson says, “[it] is often impossible for us to say whether we are dealing with an organism growing old or with an embryo continuing to evolve” seems to erase the line between becoming and fulfillment, between development and maturity. In this case maturation and growth in age become sort of what Bergson tried to explain about duration in DI.II: continuum and change at the same time. Nutrition is not here the cause of growth and change. There is not matureness on the horizon. Puberty and menopause are the events selected by him, and not, again, matureness.

As I stated in 3.1.b the continuum flux and pure becoming are certainly features of duration, in Bergson. I add maturity, which is maybe less stressed in the first of Bergson’s essays. But even there, he highlights the importance of some moments of life in comparison to others. Bergson stresses in fact rare moments in life. He talks about the decisive moments of free choice and deliberation. As we saw, in DI his depiction of consciousness implies is a constantly changing and irreversible continuum of heterogeneous interpenetrated qualities. In short, this is pure progress. It is called duration. But in the last chapter of DI.III we see that also duration is directed to something: unforeseeable free choices, “the great and solemn crisis, decisive to our reputation with others, and yet more with ourselves...”⁵⁹⁰ He calls it “the deep-seated self rushing up to the surface”, which expresses the “whole personality”.⁵⁹¹ In Bergson’s view the case of free-will in DI.III completes the account of duration in DI.II.

⁵⁸⁸ EC, pp. 18-19.

⁵⁸⁹“Although this potency does not belong to all living things, alteration and growth also exist by way of soul” (DA.II.4.415b25-416a).

⁵⁹⁰DI, p. 170.

⁵⁹¹ DI, p. 169.

Given that we are “rarely free”,⁵⁹² it seems that we complete our selves sometimes. I believe the teleological concept of maturity is implied in the young Bergson’s account in DI. Irreversibility points to maturity and maturity is associated with the moments of big decisions. Free-will in DI gives a hint of the notion of creation, in the next works. Free-will is the peak of every duration, since it is a moment of self-creation and, at the same time, a continuation of the whole personality. However, it is not part of natural philosophy and neither of the model of immanent teleology. I defend an implicit perfective element there, but it is sure that there are no analogies at use.

In EC, teleological elements fall under the model of embryology. In the text examined in 3.1.b, Bergson discusses the idea of continuum, change and also maturity. By talking equally about embryonic life, puberty and menopause he is clearly stressing the idea of continuum. But growing old is not more than change and continuum, it is reaching towards something: a more perfect state. *Perfection here includes past time*. Maturity is then a sort of perfection here, for Bergson. It is situated apart from the other conceptions of conservative teleology because, although it does not imply transgression or evolution and it is certainly conservative, it has nothing to do with the fulfillment of attention to life. It means mere conservation in time, accumulation and duration.

4.2. Second domain of immanent teleology: transgressive teleology

As we saw at the beginning of 4, in CV there is a second “manifestation of an inward impulse” that can be understood “in the meaning of transformism”. It is evolution. It is not “increasing in number and wealth by multiplication in space” but “*complication in time*”. This can be found in human psychology too. Besides “Love”, he says, there is “Ambition”. Ambition is the analogical psychological item, it is the work of the genius and the spiritual hero. The passage ends with an analogy between life and human psychology: “Visibly there is a force working, seeking to free itself from trammels and also to surpass itself, to give first all it has and then something more than it has. What else is mind?”⁵⁹³ Now we will see transgressive teleology, which implies “complication” in evolution, and “ambition” in psychology. This is the second domain of teleology. It includes all kinds of global teleology. Approximately, the place occupied by global teleology in Bergson’s philosophical works is proportional to the one devoted to individual teleology in Aristotle. In this sense, EC is to global teleology in Bergson what *Physics* is to individual teleology in Aristotle. In Bergson the teleological paradigm is the cosmic impetus of the *élan* and in Aristotle it is the individual substance. We have seen that the model of immanent teleology explains a great variety of phenomena, pertaining to different domains and areas of knowledge.

The impulse for the sake of complication and ambition doesn’t fit perfectly with the global model, taken from Aristotle. This is not surprising, since we knew that Bergson is an original reformer. The second domain includes the cosmos, Life or the *élan* but also individual human free beings. In the passage above from CV we see that the transgressive teleology is to be found also in individual human beings. Only human beings are analogous to the macrocosmos. As I have said, Aristotle believes that man, to some extent, expresses the general order of the cosmos (2.1.c). However, he doesn’t use that analogy for teleology. Furthermore, Bergson’s reform of teleology reaches its most original and its most interesting

⁵⁹² DI, p. 231.

⁵⁹³ CV, in ES, p. 27.

philosophical problems and paradoxes points in this domain. In Bergson, global teleology becomes a combination of primary teleology and secondary teleology, and is grounded in freedom. *Teleology of freedom* is at stake now. Although at this point we should use the Bergsonian term: creativity.

We have seen that creativity is one of the main topics in Bergson and it is extremely close to the question of freedom. Freedom is a creative power, and vice versa. According to different contexts, it has different terms. This idea can be found at the very beginning of his dissertation. One can understand DI, his first original book, as a response to his book on Lucretious, published earlier in 1883. Hence Lucretious is the first one of a list composed of the materialist physicians of DI, Leibniz, Laplace or Huxley in EC, as we saw in 1: Lucretious is the first of the *deniers of the spirit*. In Bergson's account, for the Roman poet "everything consists and has always consisted solely of atoms, masses of atoms, and changes in the arrangement of atoms; atoms move on, eternally and inexorably; definite, changeless laws must govern the birth, growth and decay of things caught up and squeezed from every direction by the tight bond of necessity".⁵⁹⁴

Part of Bergson's commentary on Lucretius deals with his philosophy and, as we know, he compares him with Darwin.⁵⁹⁵ Bergson describes the origin and philosophical sources of this conception of the world, inspired "by what he assumes to be the basic idea of Epicureanism".⁵⁹⁶ This worldview is again determinism. According to Bergson, it holds "the eternal rigidity of the laws of nature" and the "inexorable natural laws".⁵⁹⁷ But especially, Bergson depicts Lucretius' character and, namely, Lucretius' philosophical anthropology, in the light of that natural philosophy. Determinism and the "inexorability of natural laws"⁵⁹⁸ or "inexorable laws of matter",⁵⁹⁹ produces "compassion for mankind"⁶⁰⁰ and "melancholy".⁶⁰¹ Unlike contemporary scientists, according to Bergson, Lucretius was a sensible enough to suffer coherently his own intuition of the world.

As Bergson says: "The concept of the rigidity of natural laws reappears under various guises. This notion obsesses and saddens the poet; it explains his peculiar variety of melancholy that, in a manner of speaking, contains its own consolation. Unable to see anything in the universe except cumulative or compensatory forces and convinced that whatever is results naturally and inevitably from whatever has been, Lucretius takes pity on the human race".⁶⁰² Lucretius' compassion, pity, dread, obsession, sadness, consolation and melancholy are due to the inexorability and rigidity of his vision of the place of human beings in the cosmos. Bergson seems to say: if I would have Lucretius ideas I would feel the same. But in Bergson there is neither sadness nor dread since there is creativeness. Creative, meaning freedom, is, for Bergson, the "sign of joy".

In Lucretius creativity is impossible. All is done and humans are just puppets of an inexorable destiny. In the end, Lucretius' conception of the place of man in the cosmos was the source of

⁵⁹⁴ EL, p. 56.

⁵⁹⁵ EL, p. 46.

⁵⁹⁶ EL, p. 56.

⁵⁹⁷ EL, p. 58.

⁵⁹⁸ EL, p. 59.

⁵⁹⁹ EL, p. 39.

⁶⁰⁰ EL, p. 59.

⁶⁰¹ EL, p. 39.

⁶⁰² EL, p. 38.

his own melancholy. Equally, one can think that maybe Bergson's view of humans as creative and unforeseeable was the source of the euphoric buoyancy of some of his writings.

Again, creativity is a major issue in Bergson, from the beginning until the end, and it comes into play in DI.III, where it faces the "principle of conservation of energy".⁶⁰³ Freedom is a fact "if it is agreed to call every act free which springs from the self and from the self alone, the act which bears the mark of our personality is truly free, for our self alone will lay claim to its paternity. It would thus be recognized that free will is a fact",⁶⁰⁴ is made by an effort.⁶⁰⁵ It is a fact, and there is "none clearer."⁶⁰⁶ It is defined as "the relation of the concrete self to the act which it performs".⁶⁰⁷ Spontaneity *versus* inertia:⁶⁰⁸ "All determinism will thus be refuted by experience, but every attempt to define freedom will open the way to determinism".⁶⁰⁹ Bergson relates freedom with causality.⁶¹⁰ According to the conservative understanding of the world, "the same causes produce the same effects".⁶¹¹ But according to duration there is a cause produced by effort, which is unforeseeable. Both causalities, the inertial and the spontaneous, the physical and the psychic, can't be reduced one to another since he is not trying to elaborate a philosophy of nature. But the work of Lucretius and DI don't link openly the question of creativity and the question of immanent teleology. As I have shown in two occasions, there are reasonable hints of it to be found in DI.

There is only one passage on general causality in EC that must be addressed now.⁶¹² It is an obscure text for me, and doesn't clarify much. Like Aristotle in *Phys*.II.3 and 7, surprisingly Bergson's account of causality in his treatise on nature is illustrated only with human and artificial examples. We see here again that, according to the model of immanent teleology, Bergson considered human beings an expression of nature. As I said, EC is as focused on global teleology as *Phys* is focused on individual teleology, and this passage shows, I believe, precisely that.

In EC Bergson tries to place human creative freedom in nature. As we have seen, he establishes an analogy between personal freedom and Life. In the first chapter of EC the causal model is not twofold, but threefold. Bergson himself talks about causality:

"[1] A cause may act by [a] *impelling (impulsion)*, [b] *releasing (déclenchement)*, or [c] *unwinding (déroulement)*. [a] The billiard-ball, that strikes another, determines its movement by *impelling*. [b] The spark that explodes the powder acts by *releasing*. [c] The gradual relaxing of the spring, that makes the phonograph turn, *unwinds* the melody inscribed on the cylinder: if the melody which is played be the effect, and the relaxing of the spring the cause, we must say that the cause acts by *unwinding*. What distinguishes these three cases from each other is the greater or less solidarity between the cause and the effect. [a] In the first, the quantity and quality of the effect vary with the quantity and quality of the cause. [b] In the second, neither quality nor quantity of the effect varies with quality and quantity of the cause: the effect is invariable. [c] In the third, the quantity of the

⁶⁰³ DI, p. 151.

⁶⁰⁴ DI, p. 173.

⁶⁰⁵ DI, pp. 214-215.

⁶⁰⁶ DI, p. 221.

⁶⁰⁷ DI, p. 219.

⁶⁰⁸ DI, p. 230.

⁶⁰⁹ DI, p. 230.

⁶¹⁰ DI, pp. 201-209.

⁶¹¹ DI, p. 201.

⁶¹² As Arnaud François points out, in EC, p. 73. there are other texts, like DI.III in which Bergson talks about causality, to be sure. But this is the only general account and typology of the topic.

effect depends on the quantity of the cause, but the cause does not influence the quality of the effect: the longer the cylinder turns by the action of the spring, the more of the melody I shall hear, but the nature of the melody, or of the part heard, does not depend on the action of the spring. [2] Only in the first case, really, does cause *explain* effect; in the others the effect is more or less given in advance, and the antecedent invoked is—in different degrees, of course—its occasion rather than its cause”.⁶¹³

Following Troitignon, I would say that the threefold vision of causality could be completed by the fourth type: teleological “attraction”. It appears in EC.IV, actually addressing Aristotle’s theology. I have mentioned this passage in 3.1.d and we will come back to it in 4.2.d. Bergson thinks that in Aristotle, but also in major Greek and Alexandrian philosophers, there are two types of movement in the world, movement by mechanical impulsion and movement by aspiration or attraction to God. Attraction would be exerted then by something external and eternally fixed. In fact, impulsion has in EC.I and IV a similar sense. Impulsion, releasing, unwinding and attraction are the four types of causality that can be found and pondered in the whole EC. As I said in 3.1.d, after EC, in DS he incorporates “attraction” in his own terminology, for expressing the immanent power of the *élan* in our consciousness. As I will say in 4.2.d Bergson himself was not far from the two fluxes (impulsion/attraction) in some passages from EC. But attraction, as we have it in EC.IV, is part of theological causality. And the threefold passage in EC.I only deals with natural causality. We may focus on it now.

In EC.I, the threefold passage, [a] impulsion is the efficient cause that explains [2], since the quantity and quality of the effect vary with the quantity and quality of the cause. Regarding [b] *releasing* and [c] *unwinding* there is a certain disproportion.

In my view, with Troitignon and against Marietti,⁶¹⁴ *for Bergson is “unwinding” or “dérroulement” is the one which represents the “true finalism”, while “releasing” or “déclenchement” seems to be placed somewhere in the middle.*⁶¹⁵ Is the key term is unwinding. EC is not focused on impulsion. Releasing fits with the metaphor of explosion that Bergson uses at the beginning of EC.II, but in the end, only unwinding contains the full scope of his work on global teleology. Following Troitignon, releasing represents a low degree of indetermination, such as spontaneity; attention to the life of the living beings and unwinding are better than genuine freedom or creation. It is more vital, so to speak, than mechanic impulsion, but is less than free unwinding. Releasing is *midterm* causality.⁶¹⁶

Unwinding means that although the quantity of the effect depends on the quantity of the cause, the cause does not influence the *quality* of the effect. The cylinder/spring and the “nature of the melody” compose an analogy of matter and Life or, in individual terms, of body and soul. This dualistic perspective is harder than the one we could find in the classic teleological perspective. But there is still a cylinder engine that exists for the sake of the melody, just as Bergson finds body for the sake of free choice or the material universe for the sake of indetermination. There is a difference in nature, between the matter and the spirit, but in the end, there is a coordination between the two. In the example of the cylinder engine there is subordination.

⁶¹³ EC, p. 73.

⁶¹⁴ For “impulsion” as the vital cause, Marietti, Angèle. *Les formes du mouvement chez Bergson*. Le Puy, Paris, 1953.

⁶¹⁵ Following Troitignon, Pierre. *L’idée de vie chez Bergson*, PUF, Paris, 1968.

⁶¹⁶ Troitignon, Pierre. *L’idée de vie chez Bergson*, PUF, Paris, 1968, p. 571.

The passage from EC.IV is, again, obscure and open to different interpretations. I believe that genuine freedom or creation is to be understood only according to unwinding. As usual when Bergson addresses the topic in EC, this causal typology sheds maybe light only on creative teleology and does not include forms of conservative teleology that we saw in 4.1. Anyway, Bergson does not use this terminology later on, neither in the discourse within the book nor in any other text. It is just one possible typology, in the context of EC.I, of global evolutionary teleology. According to Troitignon, Life in Bergson is in between impulsion (mechanism) and attraction (theology). In particular, unwinding addresses better than any other type his emergentist conception of global immanent teleology.

Section 4.2 is twofold, and, to this extent, shows two different kinds of unwinding causality or creativity. The first kind is anchored in individual free activities that *exclusively* involve human beings. *The melody of the cylinder can be heard regarding free will and human culture*. From my perspective, there is an immanent teleological model at stake, since it implies the coordination of different parts and means in accordance with one goal. The goal is creation. The *télos* of what I call transgressive teleology.

The first kind of creation in Bergson is individual: personal creativeness and personal freedom. I will develop another view of human action different from 4.1.a. As we will see, there are three possible ways of understanding individual creative teleology in Bergson's works. Keeping with the already mentioned metaphor, the cylinder is the human body and the melody is the human soul, created by free choices.

The second kind of creativity involved in this view of creative teleology is much more ambitious and also philosophically problematic. Global immanent teleology is at stake here. It talks about nature as a whole and not about individuals. Namely, it addresses general drives in Life: following the musical analogy the cylinder is the material world, and the melody is biology; or the cylinder is the world, including matter and Life, and the melody is human freedom.

In Bergson global teleology is teleology beyond individual living beings, but it only covers the progress of Life, in evolution, and human history. Mutations in biology, according to Bergson, can be understood teleologically. Biological lineages express direction and the essential drives of Life. They are not all, to be sure, progressive. On the contrary, in general terms, we have failure in Life, Bergson says, but there is room for global teleology. There are few but huge successes in nature. Namely, those that lead toward mankind. Note that Bergson doesn't openly extend global teleology to elements, as we found in Aristotle in 2.2.b. The *élan vital* in biology and human progress are the two grounds for global creative teleology, although in fact they compose for Bergson different parts of the same picture: the emergence of consciousness in the world.

I have divided global creative immanent teleology in three subsections. I ponder firstly global teleology within Life, regarding the different realms of biology. Plants, fungi, animals and humans take part of the one whole: history of spiritual progress. After I address the continuation of the doctrine of the *élan*: human history or progress. In DS, among other things, Bergson applies his approach of EC to history (although in EC he also talks about history): he repeats the main features of his biological global teleology, but makes one addition, the notion of mimesis.

I finish the set with cosmology, as we find it in EC, namely, in its third chapter. There I reach the widest scope around the topic of Bergson's global teleology. In 4.2.d I tackle the notion of Life, apart from evolution. In EC and CV there are passages in which Life is understood as opposed to matter. The world is depicted as the tension between two fluxes: I claim that this view comes, again, from Aristotle. It is Bergson's view of Aristotle's theodicy, heavily influenced, as is well known, by Neoplatonism and the 19th century Hellenist Ravaisson. After this, we will see that in other places in Bergson it seems that there is a coordination between the two, and then matter could be understood teleologically, as the cylinder is teleologically directed to its function: the melody. In other places, Life seems to be autonomous.

Creative immanent teleology involves one (human) entity or many (all the living), but its goal is always unpredictable indetermination. In all of its versions, creative immanent teleology faces the same paradox: the natural tendency toward overcoming.

4.2.a. Individual creative immanent teleology: destination of the human being (II)

The term "destination" appears in CV,⁶¹⁷ but the meaning was implied in his previous work EC, which develops in a teleological and natural ground the conclusions of DI. As we saw in 3.2 the creative freedom (which involves invention and also intuition) are exclusive faculties of the human being. Again, there is a certain dualism in Bergson. On the one hand, humans are the sum of natural conservative strivings and also add attention to life, which in my reading of 4.1.c implies a certain kind of midterm prudence for the sake of adaptation. The scope of man in EC has more to do with DI: the goal is not adaptation any more, but creation. We have reached the other dimension of human teleology: the ultimate transgressive goal of being is to create himself or herself, surely inspired by one spiritual inspiring model. Attention to life and creative freedom are not more opposed than active prudent living and contemplation in Aristotle. They are compatible.⁶¹⁸

If human nature in Bergson has to be understood in teleological terms, as I defend, human realization has to be made regarding the use and ultimate fulfillment of these faculties. Bergson's framework is clearly eudaimonistic: the goal, within humans, entails happiness.

As we saw, creative freedom is thus the basis of man's superiority, and that implies that man's goal is his or her own realization through this activity. Creative freedom and invention are outcomes of history, the history of the *homo faber*. Bergson defends intuition as an undeveloped faculty that, again, is linked not to instinct or feelings.⁶¹⁹

"Nature warns us by a clear sign that our destination is attained. That sign is joy",⁶²⁰ Bergson says. The mother, the merchant, the artist and the spiritual hero exemplify different kinds of joy. The quality of that joy depends on the quality of the creation. As the author says in the same place, "wherever there is joy, there is creation; the richer the creation, the deeper the joy". In a way, for Bergson, that joy is supernatural, since is "the joy of a god".⁶²¹ Neither the

⁶¹⁷ ES, p. 29.

⁶¹⁸ Maybe one can think here about the Aristotelian controversy between the inclusivist and the exclusivist readings of *NE*.

⁶¹⁹ "(...) my intuition is reflection". "Introd.II", PM, p. 102.

⁶²⁰ ES, p. 29.

⁶²¹ ES, p. 30.

pleasure obtained from admiration nor vanity nor the pleasure from bodily satisfaction could be compared.

Bergson's ethical teleology is grounded in this idea of *joy as destination*. He gave hints of that in DI and in EC he doctrinally grounds this eudaimonic approach. But he only develops that in his last book DS, focused on ethics and heavily influenced by Christian religion. It seems that in the third chapter of DS the destination of the human being should be considered love and creation. First, love should be understood "not [as] love for any particular person".⁶²² Second, creation is a central issue in Bergson at least from EC. It has more Christian echoes in DS. Bergson says: "Creation will appear to him [to the intellectual who study the deepness of mysticism] as God undertaking to create creators, that He may have, besides Himself, beings worthy of His love".⁶²³ I believe it is precisely from this point of view from which we should read the last sentence of DS.IV, according to which the universe is a "machine for the making of gods".⁶²⁴

In the end of DS Bergson returns to the notion of joy. To be sure, he had already mentioned it in the book, previously, when he talks about it as an unmixed joy, lying "beyond pleasure and pain".⁶²⁵ The context of DS.IV is the context of an ideological promotion of asceticism. Joy means here self-sufficiency, creativity and is necessarily different from pleasure, vanity, and luxury. In DS.IV Bergson defends a return to a more sober life. There he says that "joy indeed would be this simplicity".⁶²⁶

As we already know, for Bergson "the creative effort progressed successfully *only* along that line of evolution which ended in man".⁶²⁷ This exclusive being has for Bergson a concrete nature and only by developing its own nature humans can attain their goals. Words such as function appear in his speech. Bergson's approach is deeply teleological.

Although the idea of free creation as the main goal of human life appears in DI, it is an implicit eudaimonological and teleological perspective. The reader can interpret that from the whole text, although it is not openly stated. In MM the model is that of the virtuous middle term between two vicious extremes, but he does not develop this perspective. In EC, CV and DS Bergson develops his teleological anthropology that, by force, includes a doctrine of happiness. Freedom understood as creativity, invention and intuition are mankind's characteristics. Bergson's approach in EC relied on a notion of human nature. The only way in which nature could be completed should be through one of these activities. To sum up, the fulfillment of human life could only be considered regarding those faculties:

"Even so with regard to the moments of our life, of which we are the artisans. Each of them is a kind of creation. And just as the talent of the painter is formed or deformed—in any case, is modified—under the very influence of the works he produces, so each of our states, at the moment of its issue, modifies our personality, being indeed the new form that we are just assuming. It is then right to say that what we do depends on what we are; but it is necessary to add also that we are, to a certain extent, what we do, and that we are creating ourselves continually".⁶²⁸

⁶²² DS, p. 254.

⁶²³ DS, p. 255.

⁶²⁴ DS, p. 317.

⁶²⁵ DS, p. 261.

⁶²⁶ DS, p. 317.

⁶²⁷ DS, p. 209.

⁶²⁸ EC, pp. 6-7.

Like Aristotle, in CV and DS, Bergson calls the major faculties unique to humans “divine”. But, more important for us, he erects a philosophy of happiness. Natural or material teleology points out what the nature is and, so, what the specific goal is, but also adds the concept of happiness. Happiness is the expression of metaphysical fulfillment. Although, in Bergson there is not a theory of virtue, there is a teleological framework regarding human life. Bergson uses the term “joy”, that is still linked to creativity. In his new religious and political context, he links joy with Christian love and communitarian austerity.

In this level, there is one hard paradox at stake. This paradox is of real importance for us at this point. It can be formulated as follows: the goal of the human individual is to create his or her own goals. Human beings are teleologically oriented towards their own self-creation: that is ethical maturity. Can we be directed towards something that does not already exist? This problem re-appears in the next subsection in a wider context. In short, all the anthropological aporia of creative finality are translated into the cosmic domain.

As I see it, the overarching term Life or *élan* can be found in tension with individual autonomy. The limits of global teleology are difficult to distinguish here. In the case of Aristotle, the tension was less hard to avoid: the individual and global are two dimensions of the same picture. Now, regarding freedom, the question becomes more problematic, since a strong theory of freedom like Bergson’s requires a great deal of autonomy. This autonomy fits badly sometimes in his view, since the boundaries between Life and individual man are blurred. In fact, Life is still emerging in culture. According to his account, Socrates and Christ express the nature of Life. Given that there is freedom in the world, it is unclear to me *to whom this freedom belongs*.

There is one more thing to add now. Although, as I just said, DS sharpens the problem of freedom, Bergson also nuances his conception of free creation in human beings. In DS he distinguishes between the powerful unforeseen work of the genius, in morals or arts, and the derived creative power by average human beings. Bergson’s global teleology, as we will see, also leaves space for mimesis. In this framework, regular human beings are inspired by the great personalities. This tendency is perfective, since it moves regular people to contribute to and participate in progress. In DS he proposes the model of attraction, imitation or aspiration that is, mainly, a midterm between pure genius, creativity and passivity. This complexifies and nuances his theory of creation.

4.2.b. Global creative immanent teleology: destination of evolution

Now we have to deal with the notorious idea of the *élan vital*. It appears in EC, the first of Bergson’s books that gives a philosophical account of biological transformism. One can find that as a sort of delay, insofar as Bergson was such an early reader of Herbert Spencer, for whom evolution was so central.⁶²⁹ For whatever reason, evolution is absent in DI, MM, LR or IM: but in EC he shows a considerable knowledge of the subject.⁶³⁰ Bergson was a lifelong reader of Darwin too and knew his work quite well.⁶³¹ Furthermore, the book shows very well

⁶²⁹ “Intro.I” in PM, p. 12.

⁶³⁰ The best study on this is François, Arnaud. “Les sources biologiques de *L’Évolution créatrice*.” *Anales bergsoniennes*. PUF, Paris, 2008.

⁶³¹ For Bergson and Darwin: “Bergson and Darwin: for an immanentist to an emergentist approach to evolution”, Paul-Antoine Miquel, *Substance*, vol. 36, number, 3, 2007. For the historical relation between Bergson and Darwin (Bergson’s early readings) see Magda Costa Carvalho and M. Patrão Neves. “Building the

the philosophical debate around 1907, called by one historian “the eclipse of Darwinism”.⁶³² The natural selection theory was hardly revised and criticized by different biological trends: French and American Neo-Lamarckians, Spencerians, monists, mutationists, the defenders of orthogenesis, Weissman genetics and vitalists. EC echoes all of these trends and many others.

Bergson finishes EC.I by addressing the nature of the global tendency he calls Life and in EC.II Bergson considers the natural history of Life on earth by splitting into divergent branches or lineages. Conry, Kanamori and François have linked Bergson’s view with other thinkers of Life, in a number of cases, with teleological evolutionary biologists like Edward D. Cope.⁶³³ As Barthélémy Madaule has said: “In the Lamarckian concept of effort, capable of creating an organ through the exercise of a function, Bergson found an analogue to the creative power of his ‘vital impulse’. To the mechanistic Lamarck, whom he knew and quoted, Bergson preferred the Lamarck of the will favored by Cope”.⁶³⁴

Teleology is a flexible philosophical model, as Bergson himself said: his view of global evolutionary teleology has certainly important traits in common with Cope’s view. However, my aim will be to analyze Bergson’s approach with regard to our already gained conceptual background. This section is quite long, and I have structured it in the following way, partially following EC’s discourse. First, we will see the main elements of the *élan*: it is one tendency, and its features are simplicity and unpredictability. Afterwards I will highlight one problem criticized by Bergson in the philosophy of biology: uni-linearity. Then I will discuss pluri-linearity, which implies more features: namely, divergence, which reinforces unpredictability in my reading. As a result, I will claim that Bergson combines the Aristotelian natural scale and the Darwinian tree of life. He also combines primary teleology of regularity and secondary teleology of contingency. In the next three subsections I address Bergson’s history of Life. We will end this subsection with the paradigmatic global teleologic image of the cosmic army.

- Life is a tendency: unity, simplicity, unpredictability

With regard to the idea of tendency we can recall that in EC.I Bergson quotes Paul Janet and his book *Les causes finales* on the case of the evolutionary formation of the eye in biology. The “destination of the eye” is Bergson’s last example of Life in EC.I. The defenders of teleology recalled the case of the progressive formation of the eye: it was at that time a controversial case. The accidental and slow progressive formation of something so sophisticated and apparently coordinated as an eye seems like a weak response for the teleologist.⁶³⁵ In this context, Bergson starts by discussing a finalist perspective.

“Two points are equally striking in an organ like the eye: the complexity of its structure and the simplicity of its function. The eye is composed of distinct parts, such as the sclerotic, the cornea, the

‘True Evolutionism’: Darwin's Impact on Henri Bergson's Thought”. *Revista Portuguesa de Filosofia*. T. 66, Fasc. 3, Evolução, Ética e Cultura / Evolution, Ethics and Culture, 2010.

⁶³² Bowler, Peter. *The eclipse of Darwinism*: Op. cit.

⁶³³ For Bergson and Cope: Conry, Yvette. *L'évolution créatrice. Investigations critiques*. L'Harmattan, 2005 and Kanamori, Osamu. Also “L'évolution créatrice et le néo-Lamarckisme” in *L'évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010. Also François in VVAA. “Commentaire”, *L'évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010.

⁶³⁴ Barthélemy-Madaule, Madaleine. *Lamarck, the mythical precursor*.. Trad. M. H. Shank. MIT, 1982, p. 137.

⁶³⁵ Janet, Paul. *Les causes finales*. Germer Bailliere, Paris, 1876. For the eye and evolution see Darwin, Charles *The origin of species*. Chapter VI. „Difficulties on theory“. For one echo in the late XIX century philosophy see Nietzsche, Friedrich. *Morgenröte* §122. KSA, 3, Walter de Gruyter, München, 2016.

retina, the crystalline lens, etc. In each of these parts the detail is infinite. The retina alone comprises three layers of nervous elements—multipolar cells, bipolar cells, visual cells—each of which has its individuality and is undoubtedly a very complicated organism: so complicated, indeed, is the retinal membrane in its intimate structure, that no simple description can give an adequate idea of it. The mechanism of the eye is, in short, composed of an infinity of mechanisms, all of extreme complexity. Yet vision is one simple fact. As soon as the eye opens, the visual act is effected. Just because the act is simple, the slightest negligence on the part of nature in the building of the infinitely complex machine would have made vision impossible. This contrast between the complexity of the organ and the unity of the function is what gives us pause”.⁶³⁶

According to Bergson, the accidental and progressive formation of the eye is highly improbable. But here comes the moment for Bergson distance himself from the finalist thinkers:

”Just so with the relation of the eye to vision. There is in vision *more* than the component cells of the eye and their mutual coordination: in this sense, neither mechanism nor finalism go far enough. But, in another sense, mechanism and finalism both go too far, for they attribute to Nature the most formidable of the labors of Hercules in holding that she has exalted to the simple act of vision an infinity of infinitely complex elements, whereas Nature has had no more trouble in making an eye than I have in lifting my hand. Nature's simple act has divided itself automatically into an infinity of elements which are then found to be coordinated to one idea, just as the movement of my hand has dropped an infinity of points which are then found to satisfy one equation”.⁶³⁷

As I interpret it, Bergson does not deny the finalistic element, that is, the natural global tendency *toward the best*. He states that for nature there is no rational coordination behind the eye's structure: nature neither thinks nor deliberates. Bergson defends an immanent understanding of Life and there are neither demiurges nor divine plans at stake. Some anthropomorphic features for establishing analogies are just discarded. As we know, the model of immanent teleology can be rigorous regarding the analogies. Not any analogy is accepted. Hence, nature is neither a plan nor a plan maker. I think that when Bergson says that vision is “more” than the compounds and the coordination of them, he is referring to the immanent spontaneity towards perfection. Sometimes Bergson features the tendency towards vision in Life as a simple force. Notice that simplicity in Bergson is opposed to matter (since matter is always composed). It is by no means opposed to teleology. The simple wholeness that articulates the parts and pushes it spontaneously is the *élan*.

Concerning the question of the eye, we can see that Bergson gives a lot of importance to the similarities between different lineages of Life. He says that the idea that such distant lineages such as mollusks (scallops, namely) and vertebrates have developed the eye is illustrative. This similarity between mollusks and vertebrates is for Bergson a sort of proof. They are, as he will say in EC further on, different variations of the same theme: “progress toward vision”.⁶³⁸ He writes: “For this reason, no matter how distant two animal species may be from each other, if the progress toward vision has gone equally far in both, there is the same visual organ in each case, for the form of the organ only expresses the degree in which the exercise of the function has been obtained”.⁶³⁹

⁶³⁶ EC, p. 88.

⁶³⁷ EC, p. 91.

⁶³⁸The idea of the “variation” appears in EC.II with regard to instincts and entomology. We have seen the case of the wasp above in 4.1.

⁶³⁹EC, p. 96.

After this approach, Bergson seems to be aware of his ambiguous position.

“But, in speaking of a progress toward vision, are we not coming back to the old notion of finality? It would be so, undoubtedly, if this progress required the conscious or unconscious idea of *an end to be attained*”.⁶⁴⁰

Divergence, progress and simplicity are features of a new kind of finalism and immanence and perfectivism are definitely part of the old finalism. Bergson claims to overcome finalism by his own doctrine, but progress-toward-vision still sounds pretty finalist.

So, since there are neither forms in nature nor god as general aspiration, there is no “old notion of finality”. Bergson holds that the progress is “effected in virtue of the original impetus of life; it is implied in this movement itself, and that is just why it is found in independent lines of evolution”. Bergson is referring to the “old notion of finality” with something transcendental. But we know that the old notion of finality, if Aristotelian and not Platonic, is to be understood as immanent. However, Bergson thinks that progress toward vision is not old finality. In a way, that is reasonable. As we know well, the context of the evolutionary progress of the eye is just alien to ancient world-view.

The next passage to quote is, to be sure, problematic and unclear. But it is important for us now, for the philosopher seems to seek to clarify his position regarding the problem of the “progress toward vision”.

“[a] If now we are asked why and how it is implied therein, we reply that life is, more than anything else, *a tendency to act on inert matter*. [b] The direction of this action *is not predetermined*; hence the *unforeseeable variety of forms which life*, in evolving, sows along its path. [c] But this action always presents, to some extent, the character of contingency; it implies at least a rudiment of choice. [d] Now a choice involves the anticipatory idea of several possible actions. Possibilities of action must therefore be marked out for the living being before the action itself. *Visual perception is nothing else: the visible outlines of bodies are the design of our eventual action on them. Vision will be found, therefore, in different degrees in the most diverse animals*, and it will appear in the same complexity of structure wherever it has reached the same degree of intensity”.⁶⁴¹

Section [a] is clear for me, and is in fact the basis of my claim. Saying that Life is “a tendency to act on inert matter” is, to some extent teleology. That is to say that the essential fulfillment of Life is a certain function. In our context, it means that the more indetermination Life introduces in the material world, the more this goal is fulfilled. Section [b] is more or less easy to understand, from my perspective. The natural tendency of Life remains but its outcomes are unforeseeable. Shortly before, regarding human goals, we faced the same paradox. Being a complete, joyful human being for Bergson implies fulfilling a natural goal, but a human natural goal is not concrete because the goal just can be formulated as follows: the *télos* is to create a *télos*. This implies a certain degree of unpredictability, but not a complete one. Given human form, human culture, and the past, newness is needed for the sake of attaining personal perfection. Unlike the previous one, section [c] is a bit unclear to me. On the one hand, Bergson talks about contingency. The contingent events are by force unforeseeable, so to this extent it completes [b]. But it is the idea of “rudiment of choice” which causes uncertainty in my vision. It connects the sentence with [d]. In [d] a number of statements remain obscure, but at least I can identify the perfective element: action. Vision is a way of acting. Vision is action upon the world. To this extent, it introduces indetermination in the world. That is, the *eye fulfills the original tendency of acting on inert matter*.

⁶⁴⁰ EC, p. 96.

⁶⁴¹ EC, p. 96, italics are mine.

It is an evolutionary immanent global teleology. This tendency is simple, unpredictable and contingent. Intellectual models are useless for thinking about it, since unpredictability leaves room for a high variability of the outcomes. This evolutionary immanent global teleology implies one clear idea of *télos*: indetermination. Ultimately, the different degrees of complexity and intensity refer to degrees of indetermination. The more indetermination an organic structure can produce, the more complex it is. Spontaneity guides the animal's use of vision. The more complex is the central nervous system of a being, the *more spontaneous* it becomes. The apex of this scale is to be found in humans, where spontaneity opens the stage for freedom. That is, the human brain is to human freedom what the eye is for mollusks and vertebrates.

Bergson asks rhetorically “are we not coming back to the old notion of finality?” I think so, but only partially. Bergson's modern notion of finality adds new elements. Namely, Bergson introduces unpredictability. When he ends the chapter by writing that he has defined his “attitude toward mechanism on the one hand and finalism on the other”, this affinity with finalism, clear in the case of the progress toward vision, remains vague. I'm sure that this sort of ambiguity in Bergson has misled many commentators.

- Uni-linearity of the tendency: the natural scale

EC.II, entitled “The divergent directions of the evolution of life. Torpor, intelligence, instinct” makes my philosophical point even clearer, even though, Bergson seems to put distance between his view and finalism. Furthermore, in this chapter of EC Bergson finds in Aristotle the founder of the scheme of understanding Life, even for the evolutionary philosophers. I will start with that.

As we saw, when Bergson was developing these theories for EC, he taught a number of courses on Aristotle or Aristotelism at the Collège de France, and furthermore we already know too that he was deeply familiarized with the philosopher. Aristotle also occupied an important role in his non-monographic but historical courses at the Collège, such as the recently published *Histoire de l'idée du temps* and *L'évolution de l'idée de liberté*. In EC he is the more quoted author with Darwin, something quite outstanding in a book that is supposed to be on the theory of evolution in 1907. The centrality of Aristotle comes up in EC.II. The Greek philosopher is the founder of the concept of “natural scale” which is the basis, according to Bergson, of the conventional view of Life and Biology.

“The cardinal error which, from Aristotle onwards, has vitiated most of the philosophies of nature, is to see in vegetative, instinctive and rational life, three successive degrees of the development of one and the same tendency, whereas they are three divergent directions of an activity that has split up as it grew. The difference between them is not a difference of intensity, nor, more generally, of degree, but of kind”.⁶⁴²

The second text just completes the same idea:

“If our biology [Bergsonian biology] was still that of Aristotle, if it regarded the series of living beings as unilinear, if it showed us the whole of life evolving towards intelligence and passing, to that end, through sensibility and instinct (...) But one of the clearest results of biology has been to show that evolution has taken place along divergent lines”.⁶⁴³

⁶⁴² EC, p.135, the italics aren't mine.

⁶⁴³ EC, p. 174.

As we will see, the context of the first reference to Aristotle is the relationship between the three kingdoms, and in the second it is focused on the relation of instinct, the animal kingdom, and intelligence to which only humans belong. The main thing for us now is that the idea of “different degrees of life” is, according to Bergson, the mental *vice* of most “philosophies of nature”. As usual, I am afraid, the author does not specify which philosophical currents he is actually talking about. Arnaud suggests that Bergson is referring to Spencer, which is perfectly possible, but nonetheless uncertain.⁶⁴⁴ The crucial point for us is that within Bergson’s historical perspective Aristotle is the founder. I cited the two passages in the Aristotelian corpus in 2.1.c and, then, on Bergson, in 3.2.a I talked about the idea of making that vertical scale of nature a horizontal process. Now is time to nuance that claim.

Although in EC.I the role of Aristotle is non-existent, in EC.II his name appears in the spotlight. Biological thought is extremely close to what Bergson considers the “Aristotelian theory of nature”.⁶⁴⁵ Bergson needs to confront not orthogenesis, Darwinians, Hugo De Vries, French or American neo-Lamarckians, as he did in EC.I, but rather old Aristotle. However, he does not quote his sources. In fact, he is not talking about Aristotle, but about evolutionary biology, without quoting anyone in concrete. It is difficult to attribute to Aristotle the idea of difference in degree/kind, since they are absent in his work, to my knowledge.

Hence plants, animals and humans are the three realms, the three “successive degrees” in the same unilinear “tendency”. They compose the conceptual scale, the “cardinal error which has vitiated most of the philosophies of nature”, in Bergson’s opinion. Up to this point, we have seen that while Aristotle is the founder of biological thought, he is also the *founder of a vice*.

Before we check what Bergson’s response consists in, I want to say something about his historical remark. As we have seen, according to EC.II, evolutionary philosophers use Aristotle’s model. It shows the importance that Bergson gives to ancient thought in general and, more concretely, to Aristotle. It is important to notice that Bergson used to refer to the metaphysical sources of contemporary science in modern philosophy (Descartes, Spinoza or Laplace), but ancient ascendancy is much rarer in Bergson. By stating so, if I am not wrong, here Bergson constitutes a precedent of the theory explained by Arthur Lovejoy in the previous chapters of *The great chain of being*, published in 1936.⁶⁴⁶ That is, according to Bergson, the natural scale held by Aristotle in three basic stages (the nutritive or plant one; the instinctive or animal one; which involves desire, imagination and locomotion in Aristotle; and, finally, the rational or human one) is apparently, still alive among scientists in 1907. Now I explain why this is so.

Bergson holds that, in general terms, the philosophers of Life took this vertical scale, which shows three successive degrees of perfection and interpreted it in a horizontal or historical way. In Aristotle, for sure, there is an a-historical perspective. In this way, he is opposed to evolutionary positions. But Aristotle held, as we have seen, a principle of continuity, which means that, in the sublunary realm, there is a progressive ascension from the lowest beings to human beings. According to this vision, intelligence is the apex of sublunary nature.

⁶⁴⁴ EC.II, footnote 116: “Il s’agit de s’opposer à la philosophie spencerienne de la nature”. EC, PUF, 2009, p. 457.

⁶⁴⁵ EC, p. 175.

⁶⁴⁶ Note that 20 years before the publication of this important historical work, Lovejoy read EC and commented it in 1914 in *Bergson and romantic evolutionism*. UCP, California, 1914. Some of the ideas of this early essay appeared again in 1936. Therefore, in EC there are substantial elements of the so called “great chain of being”.

As I said, Bergson thought that this scale can be expressed in evolutionary terms as a trend or, as Bergson himself says, as a *unilinear tendency*. For certain authors of the 19th Century, the history of Life is the material succession from the non-living to plants, from plants to animals, and from animals to humans. Hence, the degrees in the scale become epochs, and the epochs, degrees. We have then the epoch of plants (nutrition), the epoch of animals (instinct) and the epoch of humans (intelligence) that make up the whole history of Life.

Bergson affirms that this conception of “the series of living beings as unilinear” is wrong. Bergson is positive. We can figure out why. It seems that Bergson interprets Aristotle in the following way: since there is a *scale of perfection*, instinct is considered an impoverished intelligence. Just as plant nutrition is considered an imperfect instinct. In historical terms, this general progress towards intelligence is close to the type of finalism he is, actually, trying to avoid in chapter two. The Aristotelian scale leads to unilinear vision of Life, a unilinear vision of Life leads, in evolutionary terms, to a non pluralistic view of nature. Maybe it is Spenser’s. Furthermore, that would involve *intellect-centrism*. And he, Bergson, thinks that human intuition (at stake in EC.II) has something of the animal branch too (what he calls sympathy).

Bergson seems to prefer a pluralistic way of thinking of evolution. There are two Bergsonian concepts to note at this point. One is divergence and the other is the idea of difference in kind. I will show how he combines the Aristotelian model and the Darwinian one. *He does not avoid the Aristotelian scale, but, once again, he reforms it.*

- Pluri-linear tendency: the tree of life

Bergson states that “one of the clearest results of biology has been to show that evolution has taken place along divergent lines”.⁶⁴⁷ He uses the term “divergence”, which is, apparently supported by empirical discoveries. It will have an important role in his philosophy of history. The concept will become “dichotomy” in his later work on history DS.IV, as we will see further on. Apparently, the main philosophers of Life were at that time defenders of the scale in time, as we saw, but not of this “result” of biology.

Divergence means that, over a long span of time, in a biological realm, Life splits into divergent branches. The concept contains, for his defender at least, two positive ideas that may reinforce contingency in nature. First of all, behind divergence is the branching pattern. This is the paradigm of the tree of life, part of the Darwinian world-view from the beginning. This image of a “tree of life” is referred to by Darwin himself in the first edition of *The Origin of Species*.⁶⁴⁸ In fact, Bergson mentions it in EC.I.⁶⁴⁹ To this, Bergson adds an element

⁶⁴⁷ EC, p. 174, also p. 117.

⁶⁴⁸ Darwin himself says that previous biologists have used the very same image in the ending paragraph of Chapter IV of his famous book: “*The affinities of all the beings of the same class have sometimes been represented by a great tree.* I believe this simile largely speaks the truth. The green and budding twigs may represent existing species; and those produced during former years may represent the long succession of extinct species. At each period of growth all the growing twigs have tried to branch out on all sides, and to overtop and kill the surrounding twigs and branches, in the same manner as species and groups of species have at all times overmastered other species in the great battle for life. The limbs divided into great branches, and these into lesser and lesser branches, were themselves once, when the tree was young, budding twigs; and this connexion of the former and present buds by ramifying branches may well represent the classification of all extinct and living species in groups subordinate to groups. Of the many twigs which flourished when the tree was a mere bush, only two or three, now grown into great branches, yet survive and bear the other branches (...) As buds

that was certainly not in the gradualist evolutionary framework of Darwin: suddenness. Bergson thinks that this splitting is not necessarily slow and progressive, but sudden. He takes this idea from Hugo De Vries and the contemporary mutationists.⁶⁵⁰ Bergson defends the tree but challenges one of Darwin's mantras: *Natura non facit saltus* ("Nature does not make jumps").

Divergence expresses the idea of *unpredictability*, one idea that he raised in talking about the unique simple tendency. Now it gains a clearer form, since divergence reveals the concept of contingency better and more intuitively than unilinearity.

Along with divergence there is a second concept that I mentioned as "difference in kind". This difference has to be noted in the evolutionary tendency that guides each branch:

"Attempts to define the two kingdoms strictly have always come to naught. There is not a single property of vegetable life that is not found, in some degree, in certain animals; not a single characteristic feature of the animal that has not been seen in certain species or at certain moments in the vegetable world. (...) There is no manifestation of life which does not contain, in a rudimentary state (either latent or potential), the essential characters of most other manifestations. The difference is in the proportions. (...) In a word, *the group must not be defined by the possession of certain characters, but by its tendency to emphasize them*. From this point of view, taking tendencies rather than states into account, we find that Plants and animals may be precisely defined and distinguished, and that they correspond to two divergent developments of life".⁶⁵¹

And this can be extrapolated regarding animals and humans.⁶⁵² The same happens with the difference between instinct and intelligence. Bergson says:

"We have seen in the case of vegetable and animal life how they are at once mutually complementary and mutually antagonistic. Now we must show that intelligence and instinct are also opposite and complementary. But let us first explain why we are generally led to regard them as activities of *which one is superior to the other* and based upon it, whereas in reality they are not things of the same order: they have not succeeded one another, *nor can we assign to them different grades*".⁶⁵³

According to Bergson, the difference between the three kingdoms is not of degrees, but of kind. Thus, there is no superior faculty. The three kingdoms are parts of Life, and that is because they are in different proportions, in every organism. They take part of the common origin of Life. They come to be by its sudden splitting.

We can go back to the statement that makes Aristotle the founder of a centuries-old misinterpretation.

"Vegetative torpor, instinct, and intelligence—these, then, are the elements that coincided in the vital impulsion common to plants and animals, and which, in the course of a development in which they were made manifest in the most unforeseen forms, have been dissociated by the very fact of their growth. *The cardinal error which, from Aristotle onwards, has vitiated most of the philosophies of*

give rise by growth to fresh buds, and these, if vigorous, branch out and overtop on all sides many a feebler branch, so by generation I believe it has been with *the great Tree of Life*, which fills with its dead and broken branches the crust of the earth, and covers the surface with its ever-branching and beautiful ramifications". *The origin of species*. Chapter IV. Darwin, Charles. *The origin of species*. Chapter IV. Darwin. Encyclopedia Britannica, Chicago-London, 1952, p. 64.

⁶⁴⁹ EC, p. 43.

⁶⁵⁰ EC, p. 63.

⁶⁵¹ EC, p. 106.

⁶⁵² EC, p. 136.

⁶⁵³ EC, pp. 135-136, italics are mine.

nature, is to see in vegetative, instinctive and rational life, three successive degrees of the development of one and the same tendency, whereas they are three divergent directions of an activity that has split up as it grew. The difference between them is not a difference of intensity, nor, more generally, of degree, but of kind".⁶⁵⁴

Divergence splits Life into two tendencies first (plants and animals), and subsequently, the animal branch is divided into two, instinct and intelligence. In conclusion, they are just different. If so, that can be interpreted as a pluralistic account. Hence, plants have a chlorophyllin function,⁶⁵⁵ animals are mobility and humans express intelligence.

But, if in "the root of life there is an effort to engraft on to the necessity of physical forces the largest possible amount of *indetermination*",⁶⁵⁶ then indetermination is a perfective concept, just as the Aristotelian intelligence. This must lead to superiority, necessarily: and only the human beings attain the step further in terms of perfection, or indetermination. That is, *only* humans are free.

What I have not already shown is that Bergson claims the superiority of animals over plants. In short, although Bergson tries to avoid Aristotle's triadic vision of Life, it is still in his work. In EC there is a triadic classification of realms and furthermore there is a hierarchical subordination.

Bergson is one of those "philosophers of nature" that are influenced by Aristotle regarding the question of the scale. In the end, what I am doing is applying to Bergson himself what he says of the uncertain philosophers of Life. But as we have seen Bergson is an original reformer. The importance of the divergence and his hierarchical understanding of evolution produces a new framework.

There is also another essential question to tackle at this point. The Ancient model of immanent primary teleology would find some problems when addressing the notion of *élan vital* for two reasons. First, it involves contingency and it is unpredictable. Second, it happens only once. Every event in natural history takes part in global teleology, but regularity is not the main feature anymore. The model of secondary teleology can help us at this point. In fact, what we have is a mixture of primary and secondary teleology. On the one hand, the tendency of Life is rooted in nature. There is not one form at stake but one natural function, need or tendency, the "*need for creation*" that "strives to introduce into it the largest possible amount of indetermination and liberty".⁶⁵⁷

There, as in a number of places, Bergson is describing a natural tendency of nature. It is natural and regular. The impetus expresses one dimension of nature for Bergson, as we will see in more depth in 4.2.c. Creativity is part of the cosmos, and is expressed in Life. We are for the moment in the realm of primary philosophy. In terms of its domain, it covers the whole of the living beings. Thus, it is global teleology.

But notions like contingency, divergence, creativeness and uniqueness introduce a big distance between this paradigm and the ancient model of immanent teleology. Although the source and tendency of Life is expressed in regular terms, the outcomes of this tendency

⁶⁵⁴ EC, p. 174.

⁶⁵⁵ EC, p. 114.

⁶⁵⁶ EC, p. 114.

⁶⁵⁷ EC, p. 251, italics are mine. He repeats the idea of the need in EC, p. 261. See 4.2.d.

could not be considered regular. *History of Life is unrepeatable*. It is made by singular creation in singular moments.

This implies that there is *as if* teleology regarding the events within the history of Life, although not regarding Life itself. The plant form, the animal form and, more important for Bergson and for us, the human form are not necessary. They were not contained in any pre-design. Within this framework anthropocentrism is severely mitigated: the human form as such is contingent.⁶⁵⁸ When Bergson displays his little histories of Life and humans, he is applying retrospective teleology or secondary teleology. EC.II, CV, DS.II and III contain a narratology with regard to the great deal of contingency involved. At the same time, all the events are selected for the sake of following one precise non-contingent story line: the fulfillment or decay of one original need or exigency: indetermination.

The tree of life coexists with the natural scale and the natural global tendency with indetermination. Now we will see how this mixed model is applied to the data of science.

- The scale, the plants and the animals

I claim that in EC.II plants are part of a global historical teleology. They are described in two ways. There is a positive but subordinate one: they are a reservoir of energy to be partially used by others. There is negative interpretation of what plants are: they represent unconsciousness, sleep and torpor in the world. In the best case, plants are for the sake of animals' activity. In the worst, they are deficient animals.

In nature there is complementariness, and not harmony.⁶⁵⁹ It is the Bergsonian version of contribution, since harmony was neither perfect nor scientific enough for Bergson, as we saw in 1.1.b. Bergson's global teleology could never be harmonious. Naturally, this complementariness means coordination towards something. Plants have a positive task or function here. They contribute in a certain way to the evolution or progress of Life. Plants are *for their own sake* and *also* are *for the sake of animals*, but, more importantly, animals *are not* for the sake of plants. Bergson openly talks about the natural scale: "What constitutes animality, we said, is the faculty of utilizing a releasing mechanism for the conversion of as much stored-up potential energy as possible into 'explosive' actions. In the beginning the explosion is haphazard, and does not choose its direction (...) But, as we rise in the animal scale, the form of the body itself is observed to indicate a certain number of very definite directions along which the energy travels".⁶⁶⁰

"Explosive actions" are the *télos* of this complementary action, since they imply more indetermination. The evolution of the sensory-motor system *needs* the chlorophyllin function, that's out of question.⁶⁶¹ No one said that the subordinates are not needed (for instance, the soul needs the body).

Animals, as having a tendency, seem to be directed to what Bergson considers the best. And, thanks to complementariness, plants developed their subordinate capacity: amassing energy. Despite divergence, there is still room for complementarity: "series of characters opposed in

⁶⁵⁸ As I will show in 4.2.c, it is unclear whether contingency comes from Life, spirit or consciousness alone, whether it comes from the clash between Life and matter, or whether it comes from both.

⁶⁵⁹ EC, p. 116. On complementariness. EC, p. 117.

⁶⁶⁰ EC, p. 120.

⁶⁶¹ EC, p. 123.

certain points, complementary in others, but, whether opposed or complementary, always preserving an appearance of kinship. While the animal evolved, not without accidents along the way, toward a freer and freer expenditure of discontinuous energy, the plant perfected rather its system of accumulation without moving”.⁶⁶²

We can read this other example:

“The evolution of life really continues, as we have shown, an initial impulsion: this impulsion, which has determined the development of the chlorophyllian function in the plant and of the sensori-motor system in the animal, brings life to more and more efficient acts by the fabrication and use of more and more powerful explosives”.⁶⁶³

It is true that I have extracted this conclusion from the text, and it is not openly stated as subordination. It is logically implied. The negative definition of plants reinforces my position.

In some passages, the plant kingdom is regarded as “torpor” (in French, “torpeur”). We have seen one sentence above. Bergson compares “vegetative torpor” with intelligence and instinct. To some extent, torpor as such is a negative feature. Torpor means lethargy. It is a lack, while instinct and intelligence are not. “Though the plant is distinguished from the animal by fixity and insensibility”, Bergson says, “movement and consciousness sleep in it as recollections which may waken”.⁶⁶⁴ Plants sleep. If one compares this with the heroic march of the animal kingdom towards mankind, one realizes that: “the vegetable falling asleep in immobility, the animal, on the contrary, becoming more and more awake and marching on to the conquest of a nervous system”.⁶⁶⁵

Notice that, as I quoted in 2.1.c “Analogy consciousness/general consciousness”, the “elements of a tendency” are like “psychic states”.⁶⁶⁶ In this case, the psychic state is that of decay. Bergson clearly thinks so when he says that “the animal kingdom threatened with torpor, secured that, on some points at least, it should rouse itself up and move forward”.⁶⁶⁷ When Bergson applies plant features to animal lineages he talks about parasites.⁶⁶⁸

In conclusion, the plant kingdom is teleologically subordinated to animals. Bergson writes in EC.II that he is “more particularly interested” in animals.⁶⁶⁹ The reason is quite obvious: the scope of his inquiry is mankind, and animals are so to say closer to mankind than plants. Plants have their own goal, as any other living being according to immanent teleology. Secondly, there is a complementary goal: that of contribution to progress. Bergson states that plants and their tendency is different in kind. Furthermore, they are also inferior and the plant form, like the other forms of kingdoms, genera and species as such, is also an expression of contingency in nature.

- The scale and humans

⁶⁶² EC, p. 116.

⁶⁶³ EC, p. 245-246.

⁶⁶⁴ EC, p. 119.

⁶⁶⁵ EC, p. 130.

⁶⁶⁶ See the in DI he said that states of consciousness are like organisms in DI, p. 118.

⁶⁶⁷ EC, p. 132.

⁶⁶⁸ EC, p. 109. On fungus, the “abortive children of the vegetable world”. EC, p. 107 for the insectivorous plants.

⁶⁶⁹ EC, p. 119.

The latest vertebrate, the human being, seems to be *one* of the two culminating points of evolution,⁶⁷⁰ but, in the end, it is *the* culminating point. *Despite of the rich plurality of the branching pattern and the room made for contingency, in the end, the scale persists.* Between animal knowledge and human knowledge there is a difference of kind, and not a difference of degree, as we saw in 3.2.b. In this case *kind* means also superiority. He says that “science claims to resolve instinct completely either into *intelligent* actions, or into mechanisms built up piece-by-piece like those combined by our *intelligence*”.⁶⁷¹ There is a difference in kind, and not of degree, and we can find it to be so in our consciousness. The rest of our instinct shows it to be so.

We can ask whether instinct is situated in Bergson in a lower level than intelligence. In EC intelligence is more important than instinct in at least one sense. It means invention, freedom and intuition, and instinct just shares some features in common with intuition. Bergson considers his doctrine “a philosophy that attempts to reabsorb intellect in intuition”,⁶⁷² and not instinct. We should not overemphasize the role of instinct in EC, which would be a misguided reading.

Since Bergson’s approach is based on analogy, we find in our mind sleep, instinct, intelligence and intuition. Since Bergson’s view is deeply hierarchical he establishes different degrees, depending on the ontological importance that he gives to each one.

It is time to ask whether Bergson avoids the conception of the natural scale within his own vision. My answer is clearly negative. In Bergson there is a scale of living beings, but developed in time. There is an epoch of plants, and epoch of animals, and an epoch of intelligence and, more important for Bergson, of intuition.

The different realms/faculties are different in kind and they appear by splits, divergences or dichotomies. But there is still a gradation. Each degree implies *better* efficiency, that is, *closer to perfection*. It’s difficult to know what Aristotle would say about the idea of difference in kind and evolution, but in his corpus there are degrees of perfection. The ultimate one is god and in the infralunary world the ultimate one is the human philosopher. In Bergson there are degrees of perfection, and the ultimate one is the creative spiritual hero, and before him the regular human being.

I would say that Bergson does not avoid the “scale model” by just saying that every realm is not more or less perfect, but *different* in nature or kind. First, Bergson’s text implies that plants, represented by two faculties, torpor and the accumulation of energy, are “for the sake of” animals, that is: animal movement and explosion of energy. Animals are *superior* to plants: they are placed by Bergson in an upper level of the scale. He himself mentions that scale, not just here in EC, but before in MM.⁶⁷³ When a lineage becomes increasingly vegetative, it means that, for instance, it becomes parasitic.⁶⁷⁴

It is not totally clear whether Bergson considers intelligence *better* than instinct in this work, though I believe he tends to dismiss this equality here and, later, openly in EC. However, it is clear that intuition is in an *upper degree, over instinct and intellect*. In a way, it is like a synthesis of both. Part of the epistemological discourse of EC.II is for the sake of this idea.

⁶⁷⁰ EC, pp. 133-134.

⁶⁷¹ EC, p. 174.

⁶⁷² EC, p. 270.

⁶⁷³ See 2.1.a.

⁶⁷⁴ See EC, pp. 112-113.

The important aspect here is that intuition, which involves freedom, is *exclusively possessed by human beings* (I show that in detail in 3.2.b).

Thus, Bergson does not reject the natural scale. The scale is to be found in many passages of his corpus, but he *reforms* it. He reforms the scale. First, he wants to make it a product of an unpredictable power. The divergence does it. The difference in kind stresses the same idea: unilinearity reduces reality. But at the same time, Bergson doesn't avoid the idea of perfection or perfectibility. The energetic reservoir of plants, the energetic explosion of the central nervous system and the faculty of intelligence which leads to intuition can be perfectly understood in terms of perfection. Thus, nutrition or torpor, instinct or sensibility and intelligence and intuition form a new sequence. The main novelty regarding Aristotle is the addition of intuition and, maybe, the closeness between instinct and intelligence.

We have already seen the teleological relation between plants and animals. We saw the difference between animals and humans. These three stages are different in kind, according to Bergson. But this difference is articulated in teleological terms, since every step is for the sake of the next one. And the next one is for the sake of the whole, that is, the general *télos*. This, I insist, *does not reduce the goal of individuals or different branches of Life*. As we know, immanent teleology recognizes the intrinsic value of all kinds of life since it is alive. Every kind of living being tends to some kind of perfection. Like in Aristotle, individual teleology and global teleology are compatible in Bergson. The latter even makes primary teleology and secondary teleology compatible.

- Global teleology and the paradigm of the cosmic army

After talking about the simple tendency of the *élan* (EC.I) and its divergences (EC.II), in the last section of EC.III Bergson comes back to address Life. Now he tackles the topic in the most general dimension; there are no biological concrete issues like the eye or the relation between plants and animals.

Now Bergson emphasizes the most important features: the hierarchy and the idea of progress or emergence. Bergson's hierarchical scale has to be interpreted in global teleological and historical or horizontal terms. The three stages form a scale in time, that is, a progress. The ultimate *télos* is, again, indetermination or freedom. That is the "exigence" of the whole universe, and *it is its tendency because it is its natural tendency*.

In the following passage we can see the cosmic approach of EC.III. The natural global tendency that he calls Life is now seen within the solar system:

"As the smallest grain of dust is bound up with our entire solar system, drawn along with it in that undivided movement of descent which is materiality itself, so all organized beings, from the humblest to the highest, from the first origins of life to the time in which we are, and in all places as in all times, do but evidence a single impulsion, the inverse of the movement of matter, and in itself indivisible. All the living hold together, and all yield to the same tremendous push".⁶⁷⁵

I think it is already clear that progress "from the humblest to the highest" can be understood in at least three stages. Their difference in kind and the splits in Life cannot avoid perfectivism.

⁶⁷⁵ EC, p. 270.

The next passage that I will quote closes EC.III. In a way, it can be said that it closes the book, since EC.IV is one addition, taken from one course in the history of philosophy. In terms of doctrine, the following text ends Bergson's essay. It reaches the widest and most panoramic scope. In this central moment of the book, the idea of the cosmic hierarchy is illustrated by the image of the army. There are strong Aristotelian echoes here. As we know, the most important example of global teleology in Aristotle is to be found in the last chapter of *Met.*XII, where precisely the whole cosmos and god were understood as one army (*stráteuma*) and its general (*strategós*).⁶⁷⁶ This is how Aristotle illustrates the cosmic order or *taxis*.⁶⁷⁷ We also know that Bergson taught this passage at the Collège.

The army of Bergson has no god as leader. It seems, better, that mankind is the official in charge of the great parade of nature. There is no divine entity inspiring order and perfection in nature. Bergson's army becomes an emergentist metaphor, taken from the ancient world. It develops the idea of a global teleology, as we saw it in 2.2.b. In fact, he advances the "riding metaphor" in EC.I. There he says that "the essential thing is the *continuous progress* indefinitely pursued, an invisible progress, on which each visible organism rides (*chevauche*) during the short interval of time given it to live".⁶⁷⁸

Miquel says in his commentary of EC that "the "substantialist and spiritualist conception of duration and life" appears "particularly" in the closing paragraphs of EC.III.⁶⁷⁹ Surely Miquel wants to be far from the "spiritualist lobby" (Troitignon) among Bergsonists.⁶⁸⁰ It seems that Miquel's "aporetic reading" of EC.III does not emphasize this passage because, substantialism and spiritualism in Bergson are not to be emphasized. This conception is not far from Pearson's claims in the two articles quoted in 1. Whatever substantialism and spiritualism is for Miquel, I consider that the last *suspicious* lines of EC.III will complete our enquiry. I do not consider the last paragraphs of EC.III to come from a sort of mystical access point, but to be coherent summary of the essay, although, obviously, expressed in a lyrical form. It shows a clear example of evolutionary global teleology:

"[1] The animal takes its stand on the plant, [2] man bestrides animality, and [3] the whole of humanity, in space and in time, is one immense army galloping beside and before and behind each of us in an overwhelming charge able to beat down every resistance and clear the most formidable obstacles, perhaps even death".⁶⁸¹

The three stages of Life are clearly present in [1] and [2]. Although it is uncertain for me what Bergson means with beating down "perhaps even death", there is, at least, one thing that is clear enough: the passage talks about three different degrees of evolution and ontology. Bergson notes three roles for three different types of being. They are situated hierarchically,

⁶⁷⁶See 2.2.b on *Met.* XII.10.1075a10-25.

⁶⁷⁷ The passage from *Met.* XII echoes his earlier dialogue *On philosophy*, Ed. Ross, 12b. Pseudo-Aristotle uses the metaphor it in *On the universe* (*De mundo* 399a35-b10). Also Plotinus echoes Aristotle's army in *En.*III.2.4-11.

⁶⁷⁸ EC, p. 27. For the French, EC, 2009, p. 27.

⁶⁷⁹ Miquel, Pierre-Antoine. "Chapitre III. De la signification de la vie. L'ordre de la nature et la forme de l'intelligence". *L'évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010, p. 179.

⁶⁸⁰ Troitignon, Pierre. *L'idée de vie chez Bergson*, PUF, Paris, 1968, p. 5.

⁶⁸¹ EC, pp. 270-271. On animals as useful forces, at this point, he had already given another hint: "The animals, however distant they may be from our species, however hostile to it, have none the less been useful traveling companions, on whom consciousness has unloaded whatever encumbrances it was dragging along, and who have enabled it to rise, in man, to heights from which it sees an unlimited horizon open again before it". EC, p. 267.

from “the humblest to the highest”. This army has no general. But the leader of the army will be one of the topics of DS. I will come back to this matter onwards.

We can see from the passage in EC.III that plants are for the sake of animals [1] and animals are for the sake of humanity [2], since it “gallops” on “animality”. However, it is not a teleological reading of the natural scale as we found in the Stoics.⁶⁸² I think [1] refers to that by “taking stand”, but also implies a sequence. Here animality splits from the unconsciousness of the plant world. In the same way, [2] I presume that taming and feeding animals is legitimate, but the main aspect there is that the central nervous system has been developed through animality. The human body is in a certain way the outcome of it. This development should be understood as a process towards freedom. It could have been in another way. Unpredictability implies contingency. But although there is room for contingency in Bergson, there is always implied the same global tendency towards freedom. There is progress, although it can be seen retrospectively, since the possible forms of Life were infinite and the success was uncertain.

To some extent Bergson’s approach is anthropocentric and to some extent is not. In Bergson, new more perfect forms could come to earth. Man could lose its centrality. I agree with Troitignon in that “le but de la nature n’était pas l’homme, mais le but essentiel de l’homme est de se comprendre et de se dépasser”. I add another useful remark: “Nous sommes pourtant la fin que la nature s’assigne à elle-même à travers les êtres naturels que nous sommes”.⁶⁸³

This is a new variety of what I called in 2.1.c mitigated anthropocentrism. Human beings are the best on earth because they have the most important thing on earth: indetermination. Human beings are more creative than any other being, and this implies that even the analogy between wholeness and personal freedom can be established. They are better than the rest for the sake of indetermination. They contribute by their own actions to progress. And progress is the essence of the cavalry march of Life and culture.

EC, CV and DS coincide in saying the same thing. In the first one, Bergson says: “With man, consciousness breaks the chain. In man, and in *man alone*, it sets itself free. The whole history of life until man has been that of the effort of consciousness to raise matter (...) But, everywhere except in man, consciousness has let itself be caught in the net whose meshes it tried to pass through”.⁶⁸⁴

In the same page of CV Bergson writes: “In *man alone*, especially among the best of mankind, the vital movement pursues its way without hindrance thrusting through that work of art, the human body, which it has created on its way, the creative current of the moral life”,⁶⁸⁵ and that “Human societies, *alone*, have kept full in view both the ends to be attained”. This is the essential aspiration of Life. In DS he just repeats the idea: “the creative effort progressed successfully *only* along that line of evolution which ended in man”.⁶⁸⁶

But then, finally, I have to address what Bergson does mean when he says in EC:

⁶⁸² See 2.1.c.

⁶⁸³ Troitignon, Pierre. *L’idée de vie chez Bergson*, PUF, Paris, 1968, pp.10-11.

⁶⁸⁴ EC, p. 264.

⁶⁸⁵ CV, in ES, p. 32

⁶⁸⁶ DS, p. 209.

“[a] It is in this quite special sense that man is the “term” and the “end” of evolution. Life, we have said, *transcends finality as it transcends the other categories*. [b] It is essentially a current sent through matter, drawing from it what it can. *There has not, therefore, properly speaking, been any project or plan*. [c] On the other hand, it is abundantly evident that the *rest of nature is not for the sake of man: we struggle like the other species, we have struggled against other species*. [d] Moreover, if the evolution of life had encountered *other accidents in its course, if, thereby, the current of life had been otherwise divided, we should have been, physically and morally, far different from what we are*. [e] For these various reasons it would be wrong to regard humanity, such as we have it before our eyes, as *pre-figured in the evolutionary movement*. It cannot even be said to be the outcome of the whole of evolution, for evolution has been accomplished on several divergent lines, and while the human species is at the end of one of them, other lines have been followed with other species at their end. [f] It is in a quite different sense that we hold *humanity to be the ground of evolution*”.⁶⁸⁷

It is now the moment to face the problem whether there is any contradiction contained in Bergson’s account. In [a] he shows us that teleological terminology is still useful for him, but, again, in a special sense. What Bergson rejects definitely is to “regard humanity as pre-figured in the evolutionary movement”. According to [b] there is no transcendent plan, that is, *evolution is immanent*. According to [d] there is contingency, so we humans “should have been, physically and morally, far different from what we are”. There is more to be said regarding [c] and [e].

Bergson says in [d] that we “struggle like the other species, we have struggled against other species” and then, that is because the “rest of nature is not for the sake of man”. He adds in [e] that “evolution has been accomplished on several divergent lines, and while the human species is at the end of one of them”. But I don’t think that the struggle is necessarily a sign of teleology or not. Furthermore, he holds in other place, as we already know, that human beings have dominated the other species. Domination is the result of the struggle. It is, anyway, [e] the most problematic statement. In the two paragraphs above we have seen that for Bergson in EC, CV and DS man *alone* is the real fulfillment of nature, so in light of those affirmations we can ponder the term “accomplished” and the expression “one of them”, regarding the lineage that leads to human beings. But we have seen that man is not one of the ends of nature and that nature hasn’t attained its perfection through any other line.

I will quote one more statement from EC, really similar to those from EC, CV and DS three paragraphs before, but with some useful insight regarding our current logical problem. It is, in fact, where Bergson wants to address the mentioned “special sense” in which “man is the ‘term’ and the ‘end’ of evolution”.

“From our point of view, life appears in its entirety as an immense wave which, starting from a centre, spreads outwards, and which on almost the whole of its circumference is stopped and converted into oscillation: at *one single point the obstacle has been forced*, the impulsion has passed freely. *It is this freedom that the human form registers*. Everywhere *but in man*, consciousness has had to come to a stand; in man *alone* it has kept on its way. Man, then, *continues the vital movement indefinitely*, although he does not draw along with him all that life carries on itself. On other lines of evolution there have travelled other tendencies which life implied, and of which, since everything interpenetrates, man has, doubtless, kept something, but of which he has kept only very little. *It is as if a vague and formless being, whom we may call, as we will, man or superman, had sought to realize himself, and had succeeded only by abandoning a part of himself on the way*. The losses are

⁶⁸⁷ EC, p. 265-266, italics are mine.

represented by the rest of the animal world, and even by the vegetable world, at least in what these have that is positive and above the accidents of evolution”.⁶⁸⁸

Again Bergson talks about “man alone”. Thus, human species is at the end of *one of the* lines of evolution, but at the end of the most important one. Although in the previous paragraph, regarding [e], Bergson seems to consider human beings just one part, equal to the others, that is not his idea. What Bergson is trying to emphasize by this, to be sure, through excessive contrast, is that human beings are important not because of their form, but because *of their contribution to history of freedom*. “It is this freedom that the human form registers”, he says. It seems that “human form” in itself is not important, but his or her capacity to imitate or replicate the vital impulse. Man “continues the vital movement indefinitely”.⁶⁸⁹ In my view, this claim and the mention of the figure of the “superhuman” mean basically what the mystic genius will be in DS.

So “the place we occupy in the whole of nature”⁶⁹⁰ is by all means exceptional, not ordinary. But it is due not to a pre-ordained plan. We are not the accomplishment of nature. Our *form* is not, so to say, the last step of the movement of nature. Nothing has ended yet. Besides, humans are not good *per se*, but only with regard to their faculty of creating: again, their *contribution*. If we increase this contribution to change (and that would involve, according to Bergson, the use of intuition), then we should attain a “more complete and perfect humanity”.⁶⁹¹

These texts clearly show that in Bergson there is a global teleology. It gathers every living being and articulates their existence for the sake of one goal. That is, Bergson uses the teleology of contribution, which in his particular case is a transgressive teleology. Particular animals and species do not contribute to eternity like perishable beings in Aristotle, but to progress and change. In my interpretation, Bergson falls into the precise problem that he criticizes: the Aristotelian idea of the three stages/faculties of Life becomes not a vertical scale but a horizontal progress. In Bergson there is a historical version of the three levels of life, but he is a reformer, so he introduces newness. First, there is divergence or contingency. Second, there is difference in kind, and not in degree. Third, he adds a new degree and new notions (torpor, explosion, etc.). For Bergson, there is the plant-torpor level, an animal sensory-motor level and human intelligence. As I said, Bergson adds the faculty of intuition, still to come fully on earth. Furthermore, Bergson has a hierarchical vision of Life, so he understood the different realms, all different in kind, all with irreducible types of *télos* but also unequal in value.

Bergson wants to avoid excessive anthropocentrism and also pre-design, and that’s because he emphasizes the natural origin of man. In this sense, the human is the end of one of the branches of nature. His perspective is, however, that of global teleology. There is tendency in nature and that tendency comes to its fullest form. The final success and, importantly, the forms that appear in the process, are contingent. The human form is not a pre-designed apex of any demiurge or god; it is important because of its freedom. That is its perfective power.

⁶⁸⁸ EC, p. 266.

⁶⁸⁹ EC, p. 266.

⁶⁹⁰ EC, p. 268.

⁶⁹¹ EC, p. 267.

According to Bergson, and according to the model of immanent teleology in general, every being has its own goal (attention to life is its best expression, in Bergson). But still there's room for hierarchy and even for subordination: they are all goals and souls, but some goals are better than others. Aside from the developmental teleology there is contribution teleology. In his nuanced way, we can say that, partially, plants are for the sake of animals, and likewise animals are for the sake of humans, but also humans are for the sake of consciousness.

The whole material world is *for the sake of* consciousness and consciousness is a work in progress, as I show in section 4.2.d. Now we will turn to Bergson's continuation of this trend in human history.

4.2.c. Global creative teleology: destination of history

The domain of global teleology continues combining primary teleology and secondary teleology in Bergson's philosophy of history. We focus now on the leaders of that global army. This is found in his last long essay, DS, where the doctrine has some additions. In this section I find it useful to examine, at least roughly, the context of the philosophy of history in Bergson. Then I will address the subject in three different subsections, following the same structure as when I talked about natural history in 4.2.c. That is, first I will talk again about the tendency of the *élan* as one teleological impulse in DS. Then I will talk about dichotomy and other subjects that nuance his view of the teleology of history. Afterwards I will address the concrete account of Western history to be found in DS. In this case, instead of plants, animals and humans, in rough terms we have the primitive epoch, the pagan epoch, Christian medieval epoch and modernity.

Throughout this work I have highlighted the affinity between Aristotle and Bergson; at this point it is necessary to emphasize their differences. As we saw in 2.2.a I do not support the teleological interpretation of Aristotle's philosophy of history. It does not mean, like Bury says, that all the Greeks are simply alien or *opposed* to any idea of cultural or technical progress.⁶⁹² This is not the case with Aristotle. If Aristotle had a vision of history *opposed* to progress, we could find in the corpus a philosophy of history in the sense of necessary decay. Maybe this regressive vision of history can be found in Plato, as the historian suggests. Regarding Aristotle, my claim is precisely that he saw history from an empirical perspective and thus had no philosophy of history. In short, although Aristotle created the model of immanent teleology, that is not to be found in the domain of history in his work.

I want to recall one more thing from 2.2. In that section I addressed historical teleology in the 2.2.a, at the end, and not along with the other views of Aristotelian global teleology in 2.2.b. Now regarding Bergson, I consider teleology of history a global teleology. This needs an explanation. In the case of Aristotle, I consider that it is a mixed field, difficult to pin up in this sense. If teleology of history were included in the framework, it would be always related to individual entities. In the case of political teleology, the *télos* is the city, one individual, perishable compound of living substances. In the case of the poetics, a certain type of tragedy would be the goal. It would surely involve a number of substances (people) activity, all subordinated to a general good. However, it would fit with the label of contribution, and not development. This good would always be concrete and also perishable, whereas in all the

⁶⁹² I think Nisbet is right in this critique of Bury, John. *The idea of progress. An inquiry into its origin and growth*. McMillan & Co. London, 1920. See Nisbet, Robert. *History of the idea of progress*. Heinemann, London, 1980.

cases of genuine global teleology there is a contribution for general stable good or *táxis*. I gave the examples of ecology or cosmology. In Bergson the universal goal to contribute is not stable in any case, but progressing. His view of history as one trend is a continuation of the natural trend in evolution and also in cosmology. The goal to attain in history is universal, and part of nature understood as a whole. In short, history in Bergson is what in Aristotle was cosmology. In Bergson the *élan*, in nature and in history, is always global transgressive teleology. It may be understood as a general contribution to the general good. In this case, the good or *télos* is indetermination or progress, and not *táxis*. That is the need and the exigency of nature. So, in the context of DS the key term is progress.

Cultural or historical progress mean human perfectiveness, by means of intelligence, technology, adaptation, natural dominance, peacefulness, cultural improvement, etc. Furthermore, following classic teleology, modern progressive perfectiveness can also imply happiness (a general eudaimony). If the notion of progress emphasizes above all the latter outcome, happiness, then we could talk about a eudaimonological theory of progress. Regarding the former concept of perfectiveness, we should notice that it could also imply physiological improvement, that is, biological progress. There can be then cultural progress and material progress, eudaimonological progress and physiological progress. All these versions can be gathered together or in different proportions. Anyway, in general, progress is a highly familiar term to us, so common in ordinary language. Among other things DS deals with it and is the main textual source for this section. Material, cultural and eudaimonological progress are at stake. Maybe also the biological one.

- Philosophy of History: in the line of Comte and Spencer

In terms of the cultural context of this book of 1932, I find it important to call attention briefly to the classic historical account of the idea of progress by John Bury, written ten years before DS. I want to recall two aspects regarding the notion of progress as it is addressed in that essay. First, Bury considers the concept as primarily French.⁶⁹³ Throughout modernity, Bossuet, the Abbé Saint Pierre, Turgot, Condorcet, Madame DeStäel, Cousin, Saint-Simon and, finally, Comte built and developed the most important part of the doctrine of progress. Second, he establishes at the end of the essay three stages of the history of the idea of progress: paradoxically, the peak of progressive thinking is not French, but British, and, strangely, his account of it is extremely short. So, the first stage is conceived up to the French Revolution and Condorcet; the second one, after it, when a search for a general law began (it culminates with Comte). And now, the third one, which holds that the general apex of the idea of progress is associated with England (not with France). Bury devotes only one chapter, the last one, “Chapter XIX. Progress and evolution”,⁶⁹⁴ to the apotheosis of the idea of progress. Darwin and above all Herbert Spencer mix the idea of progress and the scientific theory of evolution. Bury writes that “in the seventies and eighties of the last century [19th century] the idea of Progress was becoming a general article of faith”.⁶⁹⁵

We can turn back to DS. First, DS is to be understood as the prolongation of the French tradition, where the idea of progress was widely accepted, both in the positivist lines that lead to Comte and also in the spiritualist lines, such as Ravaisson or Renouvier.⁶⁹⁶ Second, Herbert

⁶⁹³ Bury, John. *The idea of progress. An inquiry into its origin and growth*. Op. cit., pp. x-xi.

⁶⁹⁴ Ibid., pp. 334-335.

⁶⁹⁵ Ibid., pp. 346-347.

⁶⁹⁶ See “Quelques mots sur la philosophie française et sur l’esprit français”, written two years after DS, in 1934. *Écrits philosophiques*, PUF, 2011, p. 675.

Spencer exerted a great influence upon Bergson during the 70s and 80s of the 19th Century, Bergson's formative early years.⁶⁹⁷ Maybe DS can be read as a response to Spencer's view of history. DS, the work of a man who many years before was a French Spencerian, still contains a theory of progress, or, in my words, a global historical teleology of human culture. From my perspective, regarding the context, it should also be considered as a *convergence* of the two mentioned traditional lines of modern progressive thought.

To this extent DS is to be understood in the line of modern progressive authors such as Comte or Spencer, for whom universal progress is a central concept. Both Bury and Nisbet consider Spencer the "supreme embodiment in the late nineteenth century of both liberal individualism and the idea of progress".⁶⁹⁸ Bergson mentions both, and criticizes Spencer twice in DS.⁶⁹⁹

My approach to Bergson's teleology in 4.2.c is twofold, and follows the same scheme as regarding the natural history in 4.2.b First, I will show the internal dynamism of the *élan* throughout history. I will try to address roughly why and how culture progresses. In Bergson, history and human culture are moved by inner perfectiveness. This is part of the reform of classic finalism, advanced in Chapter 1. Second, I will also roughly discuss the whole picture of Bergson's historical global teleology in three stages. His historical vision challenges the idea of progress as universal law. I claim again that Bergson does it by appealing to secondary teleology.⁷⁰⁰

As we have been seeing throughout these pages, Bergson is not a passive receptor, but an active reformer. While using the same concept, in this case (beyond Aristotlianism) the modern notion of teleological progress, Bergson modifies some of its features. In Bergson, progress is *a fact but not a law*. It is, then, unforeseen and unpredictable. Again, his ascensional model must make room for creative freedom. I think of Bergson like a sort of transitional figure, between the great historical progressive systems of the 19th century and the more sceptical approaches regarding global perfectiveness from post-WWI era. That is, what Pierre Taguieff calls the "anti-progressive *vulgata*".⁷⁰¹ I find DS between two opposite directions.⁷⁰²

As I said above, DS is also the convergence of the two domains of teleology in Bergson. We have already seen conservative teleology in DS, but we already need to tackle the creative one. To this extent, the issue at stake in this section is a continuation of EC and the doctrine of the *élan*. DS prolongs the ascensional conception of nature in EC that we saw in the two previous subsections in 4.2. The book addresses the higher function in Bergson's nature: mystic intuition.⁷⁰³

⁶⁹⁷ PM, p. 12.

⁶⁹⁸ Nisbet, Robert. *History of the idea of progress*. Op. cit., pp. 234-235.

⁶⁹⁹ Bergson mentions Comte once in DS, in p. 117, regarding his law of "law" and "progress". He also mentions Spencer once in DS, in p. 272-273, regarding the issue of the inheritance of acquired characteristics. Bergson had already rejected this neo-Lamarckian theory in EC.I, but here it has important historical implications. Both references are really important in Bergson's discourse.

⁷⁰⁰ See chance and luck in 2.1.d.

⁷⁰¹ Taguieff, Pierre André. *Le sens du progress*. Flammarion, Paris, 2004, p. 265.

⁷⁰² Take the example of his influence in Sorel and De Chardin.

⁷⁰³ DS, p. 264.

Bergson developed in DS something contained in the last statements of CV, written 20 years before. In CV he said that human heroes are the “culminating point of evolution and they are nearest the source” and they “enable us to perceive the impulsion which comes from the deep”.⁷⁰⁴ To this extent, DS ascends even more in the scale of living beings: from humans to human genius.⁷⁰⁵ DS talks about biology in a “wide meaning”⁷⁰⁶ and, ultimately, all kind of law that Bergson would accept is *biological, and not historical*.⁷⁰⁷ In this context, biology refers to the teleological tendency to conservation. It is a law that appears equally in the beginning or in the end, for this author. To this extent, primitive societies and Western civilization are essentially the same. With historical laws he means a concrete development. But, again, at this point Bergson recalls contingency. The historical events unfolded from the beginning of the human being could not be pre-determined. Bergson is writing here against historical determinism, in all its forms.

In sum, Bergson considers culture and spirit to be inside the concept of biology, *widely understood*. Cultural and spiritual matters are, so to say, biological outcomes of society, which is an organism, whereas human physiology remains fixed in comparison. Culture, including here religion, politics and the arts, are the most moveable parts of human life. DS tries to show that evolution, that is, the *élan* is at work in culture.⁷⁰⁸

Ultimately, DS is a continuation of EC. Bergson is clear when he states in the former essay that progress’ “direction is exactly that of the vital impetus; it is this impetus itself, communicated in its entirety to exceptional men, who in their turn would fain impart it to all humanity, and by a living contradiction change into creative effort that created thing which is a species, and turn into movement what was, by definition, a stop. Can it succeed? If mysticism is to transform humanity, it can only do so by passing on, from one man to another, slowly, a part of itself”.⁷⁰⁹

Finally, regarding the continuity from EC to DS I want to reiterate one thing. Bergson repeats his critique of the retrospective illusion⁷¹⁰ and the idea of divergence.⁷¹¹ He also claims two important ideas for establishing global teleology: a global tendency towards perfection in nature and a concrete higher point or culmination of Life.

Also, DS is the best articulation of the twofold vision of teleology in Bergson. Conservative teleology and creative teleology are both part of the same picture. Each perfective tendency occupies its own chapter in that book. While in EC conservation was seen as something clearly less interesting than evolution, here in DS *conservation and evolution share the leadership*. Both are perfective, although obviously, change or progress means a higher degree of perfection, since it implies not mere action for the sake of something good for an individual entity (one organism or one society), but a creation for the sake of contribution to something universal (the vital impulse or progress).

⁷⁰⁴ CV in ES, p. 32.

⁷⁰⁵ See DS, pp. 95-96.

⁷⁰⁶“See DS, pp. 100-101.

⁷⁰⁷ DS, p. 293.

⁷⁰⁸ DS, p. 27: “... however much human society may progress, grow complicated and spiritualized, the original design, expressing the purpose of nature, will remain”. DS, p. 27. Leaving aside the question of progress and evolution, also in Aristotle the *polis* and human beings are part of nature.

⁷⁰⁹ DS, p. 235.

⁷¹⁰ See Chapter 1.

⁷¹¹ See 4.2.b.

- The essential function of the universe

What in EC has the name of “need” or “exigency” now DS has a much more openly teleological term: “function”. Bergson says in the last sentence of the book that the “the essential function of the universe” is a “machine for the making of gods”.⁷¹² This can recall the third type of causality that we saw at the beginning of 4.2 on the cylinder and the melody. Here the melody is none other than freedom and the universe is called “machine”. In this last statement of DS we see that nature is for the sake of perfection. I see it as a clearly perfective or teleological statement. Again, the destination of the world is freedom. Thus, universal history has for Bergson cosmic echoes, as evolution had.

Regarding the culmination point it is also clear in CV, when Bergson writes that the “original and essential aspiration of life (...) could *only* find full satisfaction only in society”.⁷¹³ As we saw, Bergson’s cultural philosophy relies on the exemplary figure of the hero. To this extent, societies should be understood for the sake of genius, since the genius introduces indetermination and freedom in the world. Here the mitigated anthropocentrism of EC is even emphasized. In the following passage Bergson says that man *only* “accounts for the presence of life on our planet”. Also, and especially interesting for us, Bergson says here that teleology is in between predetermination and accidentality:

“It doubtless takes, by reason of the diversity of conditions in which it exists, the most varied forms, some very remote from what we imagine them to be; but its essence is everywhere the same, a slow accumulation of potential energy to be spent suddenly in free action. We might still hesitate to admit this, if we regarded as accidental the appearance amid the plants and animals that people the earth of a living creature such as man, capable of loving and making himself loved. But we have shown that this appearance, *while not predetermined, was not accidental either*. Though there were other lines of evolution running beside the line which led to man, and in spite of all that is incomplete in man himself, we can say, while keeping in close touch with experience, that it *is man who accounts for the presence of life on our planet*”.⁷¹⁴

The universe has a *function*: indetermination. Human beings, human societies and particularly, human geniuses *partially* fulfill that function. The tendency of Life or nature towards human beings, and particularly, human geniuses is *not accidental*. It is a natural goal: it is regular and perfective. These three features sketch out an unavoidable teleological model. Bergson considers it important to stress again that pre-design is not part of his global teleological framework. DS focused on the role of human societies and, moreover, human progress in this natural vision. There is, thus, a non-accidental tendency to fulfill a certain *télos* and it is unforeseeable. Regarding the natural scope of EC, human progress is at the very peak of nature. But like evolution, history is not pre-determined. We will see this in the next paragraph.

⁷¹² DS, p. 317. In a letter to Henri Gouhier, in 9 juin, 1932 he explains this in Christian terms. The universe is a machine “créé par Dieu pour faire des créateurs”. “Lectures” in DS, 2008, p. 622.

⁷¹³ CV, in ES, p. 33.

⁷¹⁴ DS, p. 255, italics are mine.

-Progress against progress: retrospective illusion, sudden leaps, and dichotomy

In the insightful article called “Y a-t-il chez Bergson une philosophie de l'histoire?” Polin proposes two notions of progress.⁷¹⁵ On the one hand, DS is a “rejection of progress like a principle of forecasting and like a real presence of one pre-existent direction and immanent to the historical becoming”. On the other hand, it's a *defense of progress in an original way*. According to Polin, DS holds an “open progress”. It is discontinuous, undefined, undetermined. So, in Bergson, civilizations make progress regarding the second. The accumulation of intellectual inventions and the diffusion of the creations of the mystic love are to be called progress.

Polin notices that the problem is not the word “progress”. The problem is not the concept behind that either. Bergson was in his early days a French Spencerian: he grew up with that concept, and he still supports its philosophical use. In rough terms, Bergson is a progressive author. Just as Bergson reforms global teleology in other areas, he does the same here. Bergson is a reformer of the concept of progress, and not a destructive critique. Polin shows very well that the problem is not general enhancement and perfectivism: for Bergson the problem is how to hold perfectivism and freedom at the same time. The global historical laws of the previous century are not useful for him now.

The progress defended in DS should go beyond already made conceptual destinations and should be *opened*. Progress should escape from the “enclosedness”.⁷¹⁶ Two years after DS, Bergson published the article PR. It is time to recall that there Bergson writes that from his philosophical perspective that “evolution becomes something quite different from the realisation of a program: *the gates of the future open wide*; freedom is offered an unlimited field”. Just afterwards he talks about the doctrines, “rare indeed in the history of philosophy”, that have tried to make “room for indetermination and freedom *in the world*”.⁷¹⁷ His own doctrine is, beyond a doubt, one of those rare speculative proposals. Bergson defends progress, but *open progress*.

As I have said, DS is a development of EC. It is clear why he recalls two major concepts regarding the vital impulse's doctrine. The retrospective illusion or *vis a tergo*,⁷¹⁸ and the idea of divergence:⁷¹⁹ Bergson renames the term as “dichotomy”. It apparently brings about a materialization by a mere splitting up.⁷²⁰ Besides he also conceives the process towards freedom as non-gradual, but made by sudden leaps. Clearly, Bergson repeats the contents of EC.⁷²¹

Concerning our subject, DS merely continues what he said in EC. If we understand progress, then “ (...) we introduce into the things themselves, under the guise of the pre-existence of

⁷¹⁵ Polin, Raymond. “Y a-t-il chez Bergson une philosophie de l'histoire?”. *Études bergsoniennes*. IV. PUF, 1956, p. 33.

⁷¹⁶ *Ibid.*, p. 40.

⁷¹⁷ PR in PM, p. 122, my italics.

⁷¹⁸ For the idea of illusion of progress: DS, pp. 72, 78-79, 267-268.

⁷¹⁹ DS, pp. 293-296. Bergson himself relates dichotomy with divergence in EC: “We could say the same of instinct and intelligence, of animal life and vegetable life, of many other pairs of divergent and complementary tendencies”. DS, p. 294. On dichotomy see Aaron, Raymond. “Note sur Bergson et l'histoire”. *Études bergsoniennes*, IV, 1956.

⁷²⁰ DS, p. 296.

⁷²¹ “And even then we should have to add that there had been, not gradual progress, but at a certain epoch a sudden leap. It would be interesting to determine the exact point at which this saltus took place.” DS, p. 73.

the possible in the real” and “this retrospective anticipation”. It seems that “each one [personal and contingent creation] has given rise to the one that follows it and if they appear, in retrospect, as continuations of one another”.⁷²² Recalling EC’s doctrine, Bergson states “that it is always possible to take the latest phase of renovation, to define it and to say that the others contained a greater or lesser quantity of what the definition defines, that therefore they all led up to that renovation. But things only assume this form in retrospect”.⁷²³ This is his theory of the *vis a tergo* in EC. Bergson puts it in this way in DS: “if there were really a pre-existent direction along which man had simply to advance, moral renovation would be foreseeable; there would be no need, on each occasion, for a creative effort”.⁷²⁴

“Step forward” is a metaphor that implies a misinterpretation, for Bergson. It shows history in retrospect. But history has “defied all anticipation”,⁷²⁵ because human effort and creativeness defies anticipation. Bergson proposes another metaphor that I have mentioned: “opening what was closed”.⁷²⁶ Bergson talks about a succession of creative efforts:

“these successive efforts were not, strictly speaking, the progressive realization of an ideal, since no idea, forged beforehand, could possibly represent a series of accretions, each of which, creating itself, created its own idea; and yet the diversity of these efforts could be summed up into one and the same thing: an impetus, which had ended in closed societies because it could carry matter no further along, but which later on is destined to be sought out and captured, in default of the species, by some privileged individual”.⁷²⁷

Again, we are facing creative teleology. *Dichotomy, as divergence and sudden leaps in EC, is the material expression of creation and contingency.* There is no pre-determined goal or plan out of time, waiting for history to reach its plenitude. For Bergson everything in human culture is contingent and human beings are free. “We do not believe in the fatality of history. There is no obstacle which cannot be broken down by wills sufficiently keyed up, if they deal with it in time. There is thus no inescapable historic law”.⁷²⁸

Bergson is talking here about history as a mere sum of accidents. We already know that that is not true. There is an “original tendency”,⁷²⁹ or “primitive tendency”⁷³⁰ but, as in any activity where freedom is involved, there is also real oscillation between opposites and contingency. Perfectivism and attraction might go hand in hand with contingency and freedom. Bergson proposes “to designate law of twofold frenzy the imperative demand, forthcoming from each of the two tendencies as soon as it is materialized by the splitting, to be pursued to the very end as if there was an end!”.⁷³¹

As evolution “while not predetermined, was not accidental either”, that’s the same that we should say about history. Bergson’s global teleology works at this middle term, full of risks of aporia and paradox. According to Bergson it “*is man who accounts for the presence of life on our planet*” and, moreover, in the cultural ground the Christian mysticism is the

⁷²² DS, p. 72.

⁷²³ DS, p. 267.

⁷²⁴ DS, p. 267.

⁷²⁵ DS, p. 268.

⁷²⁶ DS, p. 268.

⁷²⁷ DS, p. 268.

⁷²⁸ DS, p. 293.

⁷²⁹ DS, p. 294.

⁷³⁰ DS, p. 296.

⁷³¹ DS, p. 296.

culmination of human history, in DS.III, and at the same time we should talk “as if there was an end”⁷³².

The global natural function, on the one hand, and divergence and contingency of one singular event called history of mankind (or rooted in history of Life), on the other, compose a mixed model with regard to the temporal dimension of 2.1.d. It is primary teleology, since this vision of the cosmos presupposes a certain regularity: regularly the cosmos tends to fulfill its requirement. The global natural function is to be interpreted in terms of primary teleology. At the same time, the actual outcome of this tendency, split into divergent branches is different. It is different not only for its form, marked by contingency, but also for its singularity. The history of man is unique. Contingency and singularity imply that the outcomes of the process are not to be deduced from any law. That is because Bergson says that progress is not a law, since his global teleology has to be understood from secondary teleology too. In the end, however, it is not like an Aristotelian secondary teleology since this one is based on cases of fortune, and they do not constitute any sort of fulfillment at any natural degree. As we saw, only humans can have good or bad fortune. What I take from secondary teleology in Aristotle is the idea of *as if* teleology or making sense of unique and unrepeatable events. That is what I called narratology.

Like in the case of Life in 4.2.b human history is unique and unrepeatable. It has something of the events of fortune of secondary teleology (2.1.d), but at the same time, it is led by the original tendency, which implies real fulfillment in the natural ground. In this sense, it is a mixture of two types of teleology regarding time. Bergson’s global teleology implies a primary natural teleology and a narratology regarding the outcomes. That is why he can say that, inasmuch as there is a tendency in culture, there is a genuine fulfillment. At the same time, every stage of the concrete historical becoming is contingent.

- Three degrees of culture: on heroes

History is not only non-accidental, but also not pre-designed. This means that there is a natural direction or impulse, but not a concrete end, already finished as a “possible” waiting to be “actualized”. In Bergson, history is neither chance nor plan. Bergson defends an idea of open progress. “Openness” is his metaphorical proposal. Opening means creation. Spiritual heroes move by attraction because their capacity of creating. They make everybody creator, in a way. This implies growth, ascension and perfectiveness.

This is coherent with Bergson’s personal account of history of humanity. The same as his vision of history of philosophy in EC.IV which is quite systematic, and in DS there is a clear succession of efforts that lead to higher momentum. In my view, just as in EC.II regarding biology and in EC.IV regarding philosophy, one finds a general movement.

My account will be undeniably rough at this moment, but still I think that a rapid overlook is useful for us, since it is illustrative. First of all, DS.II and DS.III talk about the past (primitive societies, pagan societies and early Christianity). The form that it draws is clearly ascensional. DS.IV talks about both the past and above all about the future of man in technological societies. The last chapter is extremely important for understanding Bergson’s view of history and freedom, but first we can start with the previous historical chapters.

⁷³² DS, p. 255, italics are mine.

Bergson's historical account in DS.II and DS.III can be considered a threefold historical model, and in this sense remains related to the 19th century models where the universal history schemes were ultimately considered in a triadic sequence. In my view, the primitive-pagan-Christian cultures model is to be found in DS.

In DS.II we see how primitive cultures fit with the conservative teleology or attention to life (the only "law of biology" that he admitted). Primitive cultures are the paradigm of the closed society. Closed society is not a thing (a society), but a social tendency. This tendency finds its goal in conservation, or in the defense of conservation.⁷³³

Just after primitive cultures we tend beyond the "hands of nature" as he says. It means that progress starts and human culture starts growing. From now on, Bergson understands each cultural step in history as a contribution to progress. Every culture and, especially, every cultural or spiritual hero contribute to progress *for the sake of* indetermination, freedom or transgression.

In the end of this chapter and during the first half of DS.III Bergson talks about paganism. It is a step further, in terms of perfection. The pagan society constitutes a progress, especially regarding philosophy. Contemplation is the goal of human beings for them. Pagans, and also Oriental societies, and even the briefly mentioned the Hebraic societies contributed to progress in a way.⁷³⁴ But they all take part of that intermediate step, around paganism. The pagan spiritual hero proposed by Bergson is clearly Socrates, a figure with whom Bergson is deeply familiar. Socrates appears in the first courses he taught. Socrates is a culmination of the pagan epoch and he opens new ways of feeling, thinking and moral living.

Just afterwards comes the third lapse that goes from Christianity to Modernity. Bergson compares Socrates and Christ. As it appears in DS, I think that just as Socrates is a culmination of Ancient times, the Gospels are the beginning of a new era. Certainly, one of the most important and maybe striking historical statements of DS is that there is an "evangelic spirit" which goes throughout history and culminates in democracy and the rights of man. That's why I think that the lapse between the Gospels and French Republics composes one sole step.⁷³⁵

The Christian human model is not so focused on contemplation. It is, however, not opposed to contemplation. As in biological matters, each step further includes the previous. Intuition was, in biological terms, the highest faculty. Intuition includes or better presupposes (from higher to lower degrees) intelligence, instinct and locomotion, nutrition and torpor or unconsciousness. Now, in historical terms, we see that Christianity is a progressive tendency that leads to democracy, cosmopolitanism and pacifism, but would not reach them entirely. There will also be a conservative tendency which is deeply anchored in our biology and part of the closed or primitive society. Closed society is not a useless tendency, since it promotes the conservation of each community. Anyway, there is a transgressive teleology that explains the tendency of going always beyond the fixed habits, institutions, ideas or sentiments. This means for Bergson real progress.

⁷³³ I addressed this in 4.1.a "Destination of the community".

⁷³⁴ On Oriental mysticism, DS, pp. 222-226. On the Jewish prophets, DS, p. 240.

⁷³⁵ For this statement DS, pp. 78 and 283.

Socrates, who talks about spirit and incarnates mysticism in an exemplary way, incarnates the first step of this progress.⁷³⁶ Christ defends a new mysticism. What Christian mysticism is for Bergson is a complicated issue, and many scholars have studied it, so I will not enter into that. What is interesting for us now is that mysticism produces progress and transgression. *Mysticism reproduces the élan vital*. The outcome of it is the growth of freedom or indetermination, which is the function of all of nature. It is then *superior* to the pagan contemplative mysticism, that is why Bergson himself calls Christian mysticism “complete mysticism”, identified with “action”:⁷³⁷

“For the *complete* mysticism is that of the great Christian mystics. Let us leave aside, for the moment, their Christianity, and study in them the form apart from the matter. There is no doubt that most of them passed through states resembling the various culminating phases of the mysticism of the ancients. But they merely passed through them: bracing themselves up for an entirely new effort, they burst a dam; they were then swept back into a vast current of life; from their increased vitality there radiated an extraordinary energy, daring power of conception and realization”.⁷³⁸

By stressing the importance of the notion of charity, for instance, Bergson is giving importance to the “superabundant activity”⁷³⁹ and creativity of the Christian human model.

Now one can say that Bergson adds on new aspects to his theory of the *élan vital* in EC. Unlike Spencer, Bergson’s history is led by heroes and saints. Bergson philosophy of history is a doctrine of heroes, and not laws. Strong individuals incarnate the power of the *élan*. They are analogue to mutations, in the biological realm. They emerge suddenly and produce divergent branches in culture.

The heroes move regular people by attraction and aspiration. They introduce in average people the unforeseen aim of perfection. The unknown primitive epochs progressed by unknown heroes up to the pagan world. The pagan world reaches its apex thanks to Socrates. The mysticism around the idea of contemplation or *theorein* is an outcome of progress, indeed, but is a static spiritualism. It does not promote or prolong the force that led to that success. Socrates produces aspiration in uncountable generations after him, but it is an aspiration of *ataraxia*, according to Bergson.

Christ and Christian heroes attract average people in a different way. They move people to action. Strictly speaking, the Christian framework introduces history as such into human culture. And history, for Bergson, is above all progress. Christianity both discovers and promotes progress. Christianity’s “mysticism agissant”, active mysticism, is “capable of marching on to the conquest of the world”⁷⁴⁰.

As I said earlier, in DS he adds a mimetical model to his global teleology. The great artists in EC imitate the vital impetus that goes through Life and so do the heroes and saints in DS. In addition, Bergson finds out how regular people can contribute to the general good. They do it through imitation. This second-degree imitation is still a development of his theory of the *élan*, regarding only humans.

⁷³⁶ It is curious that Bergson does not think of Plato as an active promotor of primitive myth-making functions, regarding his eschatological myths in DS. Bergson only considers his rationalism and mysticism.

⁷³⁷ DS, p. 226.

⁷³⁸ DS, p. 227-228, my italics.

⁷³⁹ DS, p. 228.

⁷⁴⁰ DS, p. 240.

- Unpredictable future: open progress

Until now, in this subsection we have seen the account of Western history in Bergson. Finally we can turn to DS.IV. As Ghislain and Keck say, that conclusive chapter IV, entitled “Final remarks: mechanism and mysticism” is a certain “caesura” with regard to the rest of the book.⁷⁴¹ Its style and subject are different, as I said earlier. It is focused partially on the past too, but above all on the future. That is something different from the rest of the book. In general terms the author demands a moral reform and also the apparition of spiritual leaders.⁷⁴² Regarding the past time, the chapter is his contribution to genealogy and the philosophy of technology.⁷⁴³ Leaving these interesting topics aside, our current concern is that this chapter addresses one of our major issues: unpredictability.

Progress in Bergson is not a law but a fact. DS.I, II, III, especially II and III offer some examples of narratology or secondary teleology. They compose human history, including the history of philosophy. There is a natural tendency in nature and the human being is a fulfillment, and, among human beings, the heroes, and, among heroes, the mystic heroes, and among mystic heroes, Christian mystic heroes. These individuals attract the rest of the people and make cultures move suddenly forward. Chapters II and III show that this is precisely what happened. Chapters II and III are a philosophical description of what is history: a progress towards freedom.

DS.IV adds new features of this past (especially regarding philosophy of technology) but also applies to what he said about the illusion of progress. It is important to emphasize that Bergson does not consider progress an illusion *per se*. That would render DS absolutely incomprehensible. What he is saying is that although progress is a fact, it is a singular event. *Progress is ascension, but also openness.* This is the second progress Polin was talking about. Bergson identifies progress as an “original tendency”. It is original because, again, Bergson is deeply rooted in nature. Ultimately the universe is expressed by progress. But he seeks to provide a much more sophisticated account of humans and history by making room for freedom and, then, for unpredictability.

When Gilson says that “Bergson is a continuation of Spencer” he is right; when he states that “like Spencer’s, it [Bergsonism] is an optimistic evolutionism”⁷⁴⁴ I do not think he is entirely correct. Since *open progress* means not only room for freedom, but room for risk and, ultimately, risk of decay, morally or biologically speaking. It is true that Bergson’s view of human beings was more optimistic before the First World War. Coherently, this change of vision of mankind changed his vision of the future. Human beings are responsible, in his view. This is not necessarily an optimistic vision. It seems that, in his view in 1932, technology had developed much better than morals. Bergson says that material progress became a sort of menace for mankind, for the threat of industrial war and the decline of virtues and good habits:

⁷⁴¹ DS, 2008, p. 484.

⁷⁴² For „war conferences“ see Soulez, Philippe. *Bergson politique*. PUF, Paris, 1989.

⁷⁴³ The spiritual origin of technology is one of the topics addressed in DS.IV, usually eclipsed by other issues such as mysticism. See Sérís, Jean-Pierre. *La technique*. Cap. IV. “Techniques et machines”. PUF, Paris, 1994 and Zanfi, Caterina. *Bergson, la tecnica, la guerra*. Bononia, Bolonia University Press, 2009.

⁷⁴⁴ DS, p. 94, my italics.

“Mankind lies groaning, half-crushed beneath the weight of its own progress. Men do not sufficiently realize that their future is in their own hands. Theirs is the task of determining first of all whether they want to go on living or not. Theirs the responsibility, then, for deciding if they want merely to live, or intend to make just the extra effort required for fulfilling, even on their refractory planet, the essential function of the universe, which is a machine for the making of gods”.⁷⁴⁵

Following Polin, we can say that there are two visions of global transgressive teleology or progress. There is *closed progress*, which is, in fact, a historical application of what Bergson called “radical finalism”.⁷⁴⁶ There is an *open progress*, a translation into history of the *élan vital*'s global transgressive teleology, where natural perfectivism and human responsibility are compatible. Open progress is nothing like a law, it is made by effort of powerful individuals and their inspired imitators.

4.2.d. Global creative teleology: the destination of cosmos

We have reached now the widest domain in Bergson: cosmology. I will tackle the idea of *élan* as such, without its history in evolution and progress. It is the most abstract step in Bergson's worldview, to be found in EC. For Janicaud EC is an ambiguous theodicy.⁷⁴⁷ It is true that Bergson rejected in his famous letters to Tonquédec,⁷⁴⁸ any charge of pantheism, but he did not detail the ontological status of Life and avoided natural theology. Reasonably, Gouhier calls Life a “species of soul of the world”.⁷⁴⁹ Bergson himself defends in EC and also in his book on Einstein's Relativity, DuSi, a cosmic global duration.⁷⁵⁰ It is difficult to disentangle these remarks. For the moment it is necessary to affirm that we will remain in the realm of cosmology: it covers only two items, Life and matter. Here I tackle the relation between them, to be found in EC, especially in its third chapter (there are hints of his cosmic approach in MM and IM).

From my point of view there are two ways of seeing this relation: it is conflict or cooperation. Sometimes, it seems that Life itself is the only tendency to perfection (“ascension”, in this context) and matter is its obstacle. This ontological conflict, along with that of *anima mundi*, is the ground for the abundant studies of Bergson from Neoplatonism, and vice versa, from Bréhier onwards.⁷⁵¹ There is a second relativist understanding of this relation between the two basic cosmic items. I think Miquel is a good example of it.⁷⁵² Above all my aim is only to explain both perspectives in terms of global teleology, but I think that these two views are compatible. That is, Life and matter are two opposed tendencies, but the world is made of the two. Miquel is right suggesting the necessary relation of the two.

⁷⁴⁵ DS, p. 317.

⁷⁴⁶ See 1.1.b.

⁷⁴⁷ According to Janicaud, EC that is “une théodicée qui n'ose pas dire son nomme” in Janicaud, Dominique. *Ravaisson et la métaphysique*, Vrin, Paris, 1997, p. 205.

⁷⁴⁸ The definitive textual basis for this can be found in his famous response to Tonquédec, Joseph. “Comment interpréter l'ordre du monde?” in *Sur la philosophie bergsonienne*. Beauchesne, 1936. It is included as Appendix in EC, 2009.

⁷⁴⁹ Gouhier, Henri. *Bergson et le Christ des évangiles*. Vrin, Paris, 1999, p. 101.

⁷⁵⁰ DuSi., pp. 45-48.

⁷⁵¹ The most important work on Plotinus and Bergson is still: Mossé-Bastide, Rose Marie. *Bergson et Plotin*. PUF, Paris, 1959.

⁷⁵² For this division: François in EC, 2007, p. 499, footnote p. 304. For the relative interpretation of Life, for instance Miquel, Pierre-Antoine. “Chapitre III. De la signification de la vie. L'ordre de la nature et la forme de l'intelligence”. *L'évolution créatrice. Études & Commentaires*. Ed. A. François. Vrin, Paris, 2010, P. 179.

Secondly, I will address the source of this dual conception of the universe with regards to Aristotle. Bergson himself offers the textual basis in one passage in EC.IV, that we have already seen in 3.1.d on historical analogy (on attraction/impulsion) and also at the beginning of this chapter (on attraction). I defend that out of this specific theological framework they both fit with Bergson's cosmology. I also tackle Bergson's interpretation. As we saw in the section on evolution, Bergson considered Aristotle the founder of philosophy of biology, also at work in evolutionary biology. Now Aristotle is seen as the founder of philosophical theology. Although, his interpretation of the two Aristotelian books on theology, *Phys.VIII* and, above all, *Met.XII*, is peculiar. It comes from his course at the Collège, but I think it comes from Ravaisson's Neoplatonic view of Aristotle as a system. Although Bergson's reading of Aristotle in the course is really nuanced and based on abundant quotations, his synthetic account in EC.IV is quite violent. It is easier to find here more clearly the mark of both Ravaisson's interpretation of Aristotle and also Plotinus. These two influence Bergson's synthetic account of Aristotelian theodicy heavily.

Like with regard to the case of the army, the cosmology of EC.III is suggested in advance in EC.I. Although EC.I seems totally focused on biology, there are some scattered remarks that show Bergson's ultimate scope. In the first pages of EC.I the author compares our psychology (duration) with the Universe. This is a passage that shows relatively clearly an opposition between the two fluxes. He does not explain much about the nature of these two movements:

“The universe *endures*. The more we study the nature of time, the more we shall comprehend that duration means invention, the creation of forms, the continual elaboration of the absolutely new. The systems marked off by science *endure* only because they are bound up inseparably with the rest of the universe. It is true that in the universe itself two opposite movements are to be distinguished, as we shall see later on, ‘descent’ and ‘ascent’. The first only unwinds a roll ready prepared. In principle, it might be accomplished almost instantaneously, like releasing a spring. But the ascending movement, which corresponds to an inner work of ripening or creating, *endures* essentially, and imposes its rhythm on the first, which is inseparable from it”.⁷⁵³

While ascent is, genuinely, a teleological metaphor, descent cannot be a teleological tendency. It is obvious that Bergson is not talking about ascending in space, up in the air, but about ascension in value. Furthermore, he adds creation to ascension, the main *télos* in Bergson. He promises that “later on” the explanation of such an ambitious statement will come, but it does not. On the other hand, although it becomes much clearer, in EC the movement of ascent is, so to say, the leading characteristic: creative evolution itself incarnates that ascent. As we will see, matter incarnates the descent.

The idea of descent is changed for that of fall later on in EC: “The whole history of life until man”, he says, “has been that of the effort of consciousness to raise matter, and of the more or less complete overwhelming of consciousness by the matter which has fallen back on it”.⁷⁵⁴ Matter is related to “the fall”. In this cosmological level, it seems that matter is the counterforce of Life, it is opposed to Life.⁷⁵⁵

⁷⁵³EC, p. 11.

⁷⁵⁴EC, p. 264.

⁷⁵⁵“It does, however, behave absolutely as a force would behave which, left to itself, would work in the inverse direction. Incapable of *stopping* the course of material changes downwards, it succeeds in *retarding* it”. EC, p. 246.

Life, or Supraconsciousness is in conflict with something that is the opposite of creation. While Life ascends and remounts, matter “falls”, metaphorically speaking. In five pages of EC.III,⁷⁵⁶ Bergson addresses this opposition. Regarding the “whole of our solar system”, he says “the two most general laws of our science” are “the principle of conservation of energy and that of its degradation”. The latter is the second principle of thermodynamics. Regarding the descent movement, thermodynamics plays the role as evolution regarding ascension. In this way, they are symmetrical.⁷⁵⁷

For Bergson the physicians Sadi Carnot, Rudolf Clausius and Ludwig Boltzmann add different aspects to the same “the law of the degradation of energy” which “does not bear essentially on magnitudes”. In sum, the tendency towards degradation or, at least in this discourse, entropy, incarnates the movement opposed to Life. It is not necessary for us to analyze Bergson’s interpretation of thermodynamics, I will quote just one passage where I believe Bergson shows, in general terms, what he thinks about this law and, more importantly for us here, the role that matter plays in his framework.

“Essentially, it [the law of degradation of energy] expresses the fact that all physical changes have a tendency to be degraded into heat, and that heat tends to be distributed among bodies in a uniform manner. In this less precise form, it becomes independent of any convention; it is *the most metaphysical of the laws of physics* since it points out without interposed symbols, without artificial devices of measurements, *the direction in which the world is going*. It tells us that changes that are visible and heterogeneous will be more and more diluted into changes that are invisible and homogeneous, and that the instability to which we owe the richness and variety of the changes taking place in our solar system *will gradually give way to the relative stability of elementary vibrations continually and perpetually repeated*. Just so with a man who keeps up his strength as he grows old, but spends it less and less in actions, and comes, in the end, to employ it entirely in making his lungs breathe and his heart beat. From this point of view, a world like our solar system is seen to be *ever exhausting something of the mutability it contains*. In the beginning, it had the maximum of possible utilization of energy: *this mutability has gone on diminishing unceasingly*”.⁷⁵⁸

This law is the most metaphysical law in physics because it expresses the irreversible direction or movement of the world. It is a tendency towards stability and repetition, and it means the diminishing and exhausting of mutability. As I said, EC.III defines Life in relation to this tendency, as a sort of counter-force.

Sometimes, on the one hand, it seems that contingency is an effect of Life itself, and sometimes, on the other, it seems that it comes from the collision of evolution and entropy. To this extent, Life is “an effort to remount the incline that matter descends. In that, they reveal to us the possibility, the necessity even, of a process the inverse of materiality, creative of matter by its interruption alone. The life that evolves on the surface of our planet is indeed attached to matter. If it were pure consciousness, *a fortiori* if it were supra-consciousness, it would be pure creative activity. In fact, it is riveted to an organism that subjects it to the general laws of inert matter. But everything happens as if it were doing its utmost to set itself free from these laws. It has not the *power to reverse* the direction of physical changes, such as the principle of Carnot determines it. It does, however, behave absolutely as a force would behave which, left to itself would work in the inverse direction. Incapable of *stopping* the course of material changes downwards, it succeeds in *retarding* it”.⁷⁵⁹

⁷⁵⁶ EC, pp. 241-245.

⁷⁵⁷ EC, p. 241.

⁷⁵⁸ EC, p. 243.

⁷⁵⁹ EC, p. 242.

The degrading tendency suggests the idea of a thing *unmaking itself* and evolution would be the opposite. Now, we can come back to the special metaphor of EC.I, ascent and descent, in EC.III: “The vision we have of the material world is that of a weight which falls: no image drawn from matter, properly so called, will ever give us the idea of the weight rising. But this conclusion will come home to us with still greater force if we press nearer to the concrete reality, and if we consider, no longer only matter in general, but, within this matter, living bodies”⁷⁶⁰.

There is also a more relativist view of the relation between matter and Life. In EC.II he refers to the harsh collision, again with regard to the inversion, but we see how Life, in the end, works upon matter. Matter is disposable to Life, it seems. We have seen the first sentence of the following passage throughout this work:

“The impetus of life, of which we are speaking, consists in a *need for creation*. It cannot create absolutely, because it is confronted with matter, that is to say with the movement that is the inverse of its own. But it seizes upon this matter, which is necessity itself, and strives to introduce into it the largest possible amount of indetermination and liberty”⁷⁶¹.

And also:

Also: “If our analysis is correct, it is consciousness, or rather supra-consciousness, that is at the origin of life. Consciousness, or Supra-consciousness, is the name for the rocket whose extinguished fragments fall back as matter; consciousness, again, is the name for that which subsists of the rocket itself, passing through the fragments and lighting them up into organisms. But this consciousness, which is a *need for creation*, is made manifest to itself only where creation is possible. It lies dormant when life is condemned to automatism; it awakens as soon as the possibility of a choice is restored”⁷⁶².

This need is relatively fulfilled by biology and, moreover, by human spirit. But humans and evolution are, in the end, material. Matter is here the opposite to duration/Life, and Bergson does not regard them as equal counter-forces. In short: *Life tends to perfection, and matter does not*. Duration and creativity are the basis of the cosmos. The need of the cosmos is life and perfection. This means that they are not mere opposites, *different in kind*, but also subordinated. Thus, Life possesses matter to create. This issue is, however, full of obscurity and it is unclear to me to what extent Life needs matter to create. Also, their union is unclear. For instance, we know that from the development of Life through matter contingency unfolds, but it is uncertain for me whether contingency arises from Life itself only or also from the collision with matter. I am inclined to support a combination of these two.

I follow Miquel on saying that in our world Life is for Bergson relative to matter. It is finite and concrete. Sometimes, it seems that Bergson talks about matter as a lack and limit for something that, by nature, shouldn't be. Also, it seems that Life is contingent in itself. At other times, it seems that matter's opposition is the source of contingency and is necessary to understand Life. They are two complementary perspectives of a general subject, though, in any case, global teleology is at stake. Just as how the soul and the body take part in a teleology of development in individual teleology, survival and well-being, Life and matter are both parts of the same thing: a tendency towards creativity, newness and perfection.

⁷⁶⁰ EC, p. 245.

⁷⁶¹ EC, p. 251, italics are mine.

⁷⁶² EC, p. 261.

We can now ask whether at this cosmic level there is any sort of teleology involved. There is, certainly, a global teleology at stake. Bergson stresses the idea that the Universe, as a whole, endures. That was his mysterious claim at the beginning of EC.I, which he will address again in EC.III and in DuSi. The Universe also ascends and creates. It means progression in time and directedness. As I said in advance, matter can be opposed in nature to Life, but it seems that everything in this world is a mixture of the two. It is reasonable to think that Life possesses matter, since it is hierarchically superior. Although it needs creation, it also needs matter.

As François says in footnote 198 of EC.III with regard to the cosmic opposition between Life and matter, evolution and thermodynamics: “Bergson, ici, est au plus près des cosmologies plotinienne et ravaissienne évoquées à la note 1 de la page 211, à cette différence près (et elle rend les doctrines inconciliables) que le principe qui “se défait”, chez lui, n’est pas l’Un immuable, mais du mouvant”.⁷⁶³ I agree with this scholar: ancient cosmology is here at stake. It is worth noticing that the next chapter of that book, EC.IV, devotes some interesting pages to ancient cosmology. Following François there may be some link then between EC.III and EC.IV. I claim there is.

Nevertheless, my agreement with François is not total. I believe that his statement lacks one thing. I think that it becomes clear when reading EC.IV, on ancient cosmology. Although, maybe surprisingly, I think he should have included Aristotle along with Plotinus and Ravaisson. He is not in the footnote he mentions, but he certainly is in the cosmological account of EC.IV. In fact, it is a major issue in this account. If I am not wrong, it is not only the most important reference to theology in the book, but also the only one: he seems like the founder of theology.⁷⁶⁴ More important for us, I believe the ascension/descent view of the cosmos comes from a peculiar reading of Aristotle’s theology, influenced by Plotinus and Ravaisson. This is not so difficult to demonstrate, since in EC.IV he addresses Aristotle’s theology and cosmology in these terms, as we will see soon. Again, Bergson’s vision of Aristotle is deeply influenced by Plotinus.⁷⁶⁵ Also Ravaisson’s interpretation of Aristotle in *Essai sur la Métaphysique d’Aristote* was a major influence regarding the Aristotle’s cosmology. It is surely a peculiar interpretation, but in the end, it is a reading of Aristotle. Moreover, it also comes from a direct, intensive reading of Aristotle.

As the author himself says in a footnote, EC.IV is a summary of the lessons that Bergson gave in the course *L’Histoire de l’idée de temps* at the Collège de France, from the years 1902 to 1903. Bergson devoted four lessons of this course to Aristotle: on the 16th of January, the 30th of January, and on the 6th of February and the 13th of February. The Aristotelian theological contents in EC can be found mainly in the lesson of February the 13th.

According to the philosophical scope in this historical research, Aristotle is conceived as one crucial step in a universal philosophical evolution that starts with Zeno and finishes in the 19th century, with Fichte and Spencer. To this extent, Aristotle “develops” or, even “evolves” Platonic thought.⁷⁶⁶ But the most interesting aspect for us, regarding the cosmic teleology of

⁷⁶³ EC, 2007, p. 491.

⁷⁶⁴ That is the case if we don’t include the reference to the Spencerian “Unknown” as theology properly speaking. Besides, Aristotle, as a theologian, precedes Bergson’s account of ancient metaphysics.

⁷⁶⁵ EC, 2007, p. 510. Footnote 128 and 130.

⁷⁶⁶ See EC, p. 321.⁷⁶⁶

Bergson's interpretation, can be found in the problematic question of the relation between cosmos and god. We already know the text, but it is necessary to quote it again:

"There is, then, immanent in the philosophy of Ideas, a particular conception of causality, (...) Sometimes, indeed, they [Greek philosophers] speak of an *attraction*, sometimes of an *impulsion* exercised by the prime mover on the whole of the world. Both views are found in Aristotle, [a] who shows us in the movement of the universe an aspiration of things *toward the divine perfection, and consequently an ascent toward God*, [b] while he describes it elsewhere as *the effect of a contact of God with the first sphere and as descending, consequently, from God to things* (...) Everything is derived from the first principle, and everything aspires to return to it".⁷⁶⁷

Impulsion and attraction are the two main types of causality in Aristotle, according to Bergson's view. In his opinion, Aristotle's cosmic view can be summarized according to these two tendencies. He is referring to one classic topic: the influence of god upon the world. Bergson is using his own words for addressing two of the four causes at stake in this ground. Impulsion is the efficient cause and attraction the final cause.

In *Histoire de l'idée du temps*, years before EC, he puts it in clearer terms. He also addresses the question by quoting the texts with rigor. There Bergson holds that "Aristotle says to us that the prime mover could be examined as final cause or efficient cause, and it is according to the second point of view he is in touch with the mobile", that is, the cosmos.⁷⁶⁸

"Therefore, we perceive God as efficient cause or as final cause, according to the point of view", Bergson says.⁷⁶⁹ "Attraction" is nothing but final cause. As one can read in the passage, in [a], it means perfection, ascension and aspiration. That is: god is the cause of movement by being the most desirable being ("*erómenon*", *Met.XII. 7.1072b2*). Tendencies such as rotation among the heavens and reproduction or even any kind of perfection (development) could be explained by this sort of metaphysical attraction. It is the standard interpretation of this issue among Aristotelians. For Bergson then the prime mover of *Met.XII. 7* and *9* *attracts* all beings. It is certainly a "broad interpretation" of the prime mover's influence.⁷⁷⁰

The role given by Bergson to the second theological tendency, "impulsion", which fits more or less with the notion of efficient cause, is more uncommon. Anyway, it is relevant to notice that important interpreters nowadays defend it as well.⁷⁷¹ This vision implies that the Aristotelian god exerts power *directly only* upon the last heaven. Bergson proposes this interpretation in the course at the Collège, with the basis from texts such as *Phys.VII. 2.* and, especially, *VIII. 5*, where Aristotle also talks about this Prime mover, within the context of demonstrating the everlastingness of movement. The relation between god and the universe in efficient terms, by means of physical contact, is maybe more peculiar, but still based on the text. Moreover, Bergson is completely aware of the singularity of this interpretation at that

⁷⁶⁷ EC, p. 323.

⁷⁶⁸ "Aristote a parlé de cause efficiente et de cause finale (...) si je me place dans ce qui est causé, j'aperçois ce qui est causé comme en mouvement et ce mouvement est un travail pour réaliser la perfection de la Forme: c'est le finalité. Si je me place dans la cause, j'aperçois dans cette cause, comme contenues en elle, tous les diminutions d'elle qui seront son effet. Et alors je dirai que cette cause est efficient". *Histoire de l'idée du temps*, PUF, 2016, p. 180.

⁷⁶⁹ EC, p. 325.

⁷⁷⁰ See Kahn in 2.2.b.

⁷⁷¹ See Berti, Enrico. "La finalità in Aristotele". *Fondamenti*, Pisa, 1989. See also Laks, André. "Le moteur immobile". *Lire Aristotele*. Ed. Enrico Berti, Michel Crubellier. PUF, 2016.

time.⁷⁷² He is, on the other hand, convinced of its validity. Right or wrong, in 1902, Bergson states that this issue of the *double chain of causality* is the “fundamental principle of Aristotle’s philosophy”.⁷⁷³

As I said, the text of EC is less rigorous and maybe the traits in common between Aristotle and Plotinus are overemphasized. But notice that in EC.IV Bergson doesn’t confuse Aristotle with Plotinus: he thinks that the latter and, in general, the Neoplatonists, continue some of the genuine Aristotelian traits. He says it openly: “The Alexandrians, we think, do no more than follow this double indication when they speak of *procession* and *conversion*”.⁷⁷⁴ To Bergson’s eyes, the double causal chain is Aristotelian.

This reading of Aristotle’s theodicy can be found in Ravaisson, to whom theodicy was central in Aristotle (despite his rejection of Aristotelian scholastics).⁷⁷⁵ The cosmic “double chain” or double causality, and the causal “attraction” can be found particularly highlighted in the *Essay on Metaphysics by Aristotle*, published by Ravaisson in 1837. As we know, it is a text with which Bergson was highly familiarized from his early years.⁷⁷⁶

On the “double chain”, check the following passages from *Essai sur la ‘Métaphysique’ d’Aristote*, where he relates aspiration/ascension with final cause and impulsion/descent with efficient cause: “la nature motrice (...) s’agit par impulsion. Dans la sphère des mouvements et des actions libres, c’est l’attrait de la cause finale”⁷⁷⁷ Ravaisson talks openly about two chains of movement. The mechanical (downwards) movement and the teleological one (upwards): “double chaîne qui vient de lui [god] et qui retourne à lui [god], qui en descend et qui y remonte. D’un côté, c’est le système du monde dans l’ordre de la succession de ses parties élémentaires, depuis le ciel jusqu’ à la terre ; de l’autre, le système des puissances successives de la nature, depuis la forme imparfaite de l’existence élémentaire jusqu’ à la forme accomplie de l’humanité.”⁷⁷⁸

Furthermore, Ravaisson talks about Aristotle’s scale of being in dynamic terms, definitely closer to Bergson. He talks about the general constitution of Aristotle’s cosmos, the ascending scale as the “progression ascendante”,⁷⁷⁹ or even as the “marche de la nature”.⁷⁸⁰

So, I do think that this impulsion/attraction formula is part of the *Ravassonian Aristotle*. As I say, this is related to Bergson’s cosmic view of Life and matter. Bergson has got rid of the

⁷⁷² Bergson, Henri. *Histoire de l’idée du temps*. Op. cit., pp. 178-179.

⁷⁷³ Ibid., p. 180.

⁷⁷⁴ EC, p. 323.

⁷⁷⁵ Hadot, Pierre. “Introduction”, *Le Néoplatonisme*, CNRS, 1971, p. 2.

⁷⁷⁶ For the relation between Bergson and Ravaisson, and also between the latter and Plotinus. Janicaud, Dominique. *Ravaisson et la métaphysique*, Vrin, Paris, 1997.

⁷⁷⁷ Ravaisson, Félix. *Essai sur la ‘Métaphysique’ d’Aristote*. Cerf, Paris, 2007, p. 344.

⁷⁷⁸ Ravaisson, Félix. *Essai sur la ‘Métaphysique’ d’Aristote*. Op. cit. p. 401. Also : “Le premier moteur touche le monde et n’en est pas touché. Le mouvement du monde n’est donc pas le résultat fatal d’une *impulsion* mécanique. Le premier moteur est le bien où il *aspire*. La série descendante des causes motrices se renverse ici en quelque sorte, et se convertit encore en une série ascendante de causes finales. ... Le mouvement circulaire du ciel est la cause motrice de la génération dans le monde sublunaire ; mais c’est que la génération est l’effort de la nature pour atteindre à la continuité du mouvement et de la vie céleste ; à son tour, le mouvement continu de la révolution du ciel n’est que la tendance du monde à réaliser en lui-même l’unité et la simplicité absolue de son principe. Rien n’a de réalité que par sa fin et dans la tendance à sa fin ”. Ibid., p. 373.

⁷⁷⁹ Ibid., p. 303.

⁷⁸⁰ Ibid., p. 339.

mentioned Aristotelian theological aspects, since natural theology is absolutely absent in his works. The model descent/ascension could remain, remodeled, in EC.⁷⁸¹ In this work “attraction” is not unwinding, or creative tendency. But, as I have shown, he uses it in DS.

From the widest perspective, nature can be understood in Bergson from two perspectives: it is Life, and hence an unforeseen *need for* and *tendency toward* creation, perfection or indetermination. Or it is Life versus matter. According to this, matter slows down and concretizes the power of Life. It also could add contingency to the results of Life itself. But still in this last version, the teleological model would be equally teleological: matter is clearly subordinated to the real tendency of the universe, which is on the side of Life.

The influence of god upon the material world is translated into modern language. Evolution and thermodynamics express, in our current context, two types of causality that come from ancient thought, and namely, ancient theodicies. Aristotelian final causality is based on god’s perfection, but as we already know well, it doesn’t imply providence. For Aristotle inspires a perfective tendency among individual supralunary and infralunary beings and there is no providence or *prónoia*. In Aristotle, God neither arranges nor even knows the world.⁷⁸² As I have been claiming during this work, there is a deep affinity between this view and the Bergsonian conception of cosmology.

When Riquier says that “d’un côté, la causalité ascendante de *l’élan vital*, renverse la causalité descendante de l’ancienne métaphysique et s’appelle plus proprement création” seems to forget that there is an ascensional causality for the Ancient thinkers. Bergson’s view implies creation, as Riquier says, but he replicates in modern terms the aspirational and perfective causality of the Aristotelian cosmos.

The immanent tendency of nature towards indetermination or perfection, inspired in the broadest context by an *élan vital* is in my view global teleology. The Universe tends toward the best. At this level, there is no subsequent “for the sake of”. Indetermination, creation or freedom are considered the best in itself.

⁷⁸¹ Guthrie, G. K. tries to establish an eloquent comparison between Aristotle and evolution, which has something in common with Lovejoy’s “great chain of being”. See my Introduction note 38. *A history of Greek philosophy*. VI. Cambridge, 1981, pp. 117-118.

⁷⁸² Riquier, Camille. “Causalité et création: l’élan vital contre Plotin et la cause émanative”. Op. cit., pp. 304-305.

Conclusion of Chapter 4

[A] While in 3 we saw the structural elements of this worldview, in 4 we have seen what perfectiveness concretely means. There, all the structural elements are more or less at work regarding concrete natural phenomena. As I did in Aristotle, I divide these phenomena in two. Based on one relatively clear passage from CV I have distinguished two basic domains of perfectionism.

[B] Reproduction, attention to life and maturity are examples of what I call conservative teleology. There the beneficiary of the process of change is the substance involved, namely, living substance. It implies the fulfillment of one specific function of one organism, one human being. Like Aristotle, Bergson addresses communities as if they were organisms too.

Bergson's view of teleology in life does not need the term 'form'. Perfection here refers to that ontological fulfillment and being in time, and to maturity. In the case of embryology and maturity, I think that the author is using the model of duration from his early philosophy: still in maturity, like in any other process of growth, there is teleology implied. This section aimed at showing that Bergson's account of the world is pluralistic. There are multiple irreducible perfective trends in the cosmos.

[C] The second domain of immanent teleology is called by me transgressive teleology. It is compatible with the other one. The *télos* or perfective feature here is not fulfillment or maturity, but contributes perfection to the whole of nature. In this case, stability is not the perfective item to contribute to, but rather change. I think that the model of global immanent teleology is here at stake, although this framework is to be understood within evolutionary thought. There is no god that exerts influence upon the heavens or cosmos. Here there is contribution for the sake of transgression. The set of phenomena here are to be found in four groups. They are individual freedom, evolution, history and cosmology. Every ground has its own peculiarity.

[D] The destination of the human soul is in between individual conservative teleology and transgressive teleology. I have noted it in the two subsections: "Creation for the sake of joy", which implies a beneficiary, as in the conservative teleology. The horizon becomes suddenly expanded within a global framework in the next subsection: "Joy for the sake of progress". Individual freedom has this twofold structure between the two domains. In the end, the most important feature is creation, before any other notion, and that is because I included it in the second group. Here I give the first idea of how paradoxical Bergson's view is as part of our modern understanding of human beings: fulfilling our *télos* implies creating our *télos*. The goal is here not specific, but personal.

[E] The section of global teleology regarding the *élan vital* is the longest. It shows all Bergson's problems for reforming the model of immanent teleology. The doctrine contained in EC is a mixture of different teleological issues. In this section I first define the idea of the global impulse to perfection and afterwards I show how it is applied to scientific phenomena. The global impulse is, according to Bergson, a global natural tendency. Bergson includes in it the feature of simplicity. Its nature is referred to by Bergson in terms of exigency or need. In the end, global teleology is at stake.

He includes the concept of divergence, contingency and singularity. These features mean that an account of the development of Life has to deal with great amount of contingency. Life is

not unilinear, but plurilinear. Life is also unpredictable, and any sort of pre-design must be rejected. There are multiple branches or lineages within Life. This fits with the idea of pluralism. Also, the idea of narratology or secondary teleology must be mentioned now. The forms in nature, which are an outcome of the creative evolution through spontaneous mutations, are contingent. This includes plants, animals and also humans. They are to be understood in a singular history full of unpredictable newness. This means that Life is unrepeatably and that it can be narrated, but never deduced from the beginning in all its traits.

At the same time, against certain readings, I find one dominant trend in nature. EC makes clear that the narration according to which plants give energy to animals, and among animals one lineage tends to exploit more and more of this energy, points to one dominant trend. This trend is the development of the central nervous system. This lineage is understood by Bergson as ascension of the spirit, incarnated only by humans. When Bergson says that humans are the only fulfillment of nature, he is not appealing to secondary teleology or narratology, but to the primary one. This fulfillment is not contingency. Thus, in Bergson's global teleology there are two different levels. According to the historical development of Life, there is a great deal of contingency. According to the goal of nature and its fulfillment, the statement is made in terms of primary teleology: the goal of nature is always indetermination, and human beings are a fulfillment of that. The human form is contingent, to some extent, but because of the freedom implied, it is the goal of the universe. To this extent, plants and animals are for the sake of freedom. This composes a new type of mitigated anthropocentrism: everything is for the sake of freedom and humans are the only species that can be called free. Bergson combines the branching pattern of the Darwinian tree of Life with the hierarchical understanding of the cosmos of the Aristotelian natural scale. Finally, in this section I emphasize the importance of the cosmic army passage, a paradigm of ancient global teleology. It also comes out in the reformed Bergsonian framework.

[F] Bergson's teleology of history in DS is as subtle as his doctrine of evolution. I partially reproduce what I do regarding EC, although with little additions. Bergson considers a sole function in the entire world: indetermination. At the same time, he has to nuance this idea of global tendency in order to make room for real spontaneity. Dichotomy, the sudden leaps in history and the idea of the retrospective illusion nuance this global teleology. Three stages of culture, produced ultimately by spiritual geniuses and their imitators, are the material of a narratology. This does not mean, again, that everything in history is contingent. Progress is not an illusion in Bergson, but a reality. It is certainly not a law. I think it is a fact, for him. The fulfillment of freedom in the world and through democracies is nothing contingent in itself, but grounded in nature, for Bergson.

In DS Bergson does not merely focus on history: coherently he addresses the question of the future. Here is where Bergson illustrates his doctrine better, I think. He says that the growth of freedom may imply real progress and a real progress may imply the fulfillment of the function of nature. But progress in the future cannot be deduced, since there is real contingency. There is an open future. It is open to decay and failure.

The main addition in DS is the mimetic model. Bergson's view of history is deeply based on heroes: strong individualities that contribute to progress.

[G] In 4.2.d I deal with the most obscure area in Bergson, the most abstract one: cosmology. Here I only consider two basic items: Life or the *élan*, and matter. At this level, Bergson makes Life confront matter. Life and matter are, respectively, understood as ascent and

descent tendencies. In this context, Bergson thinks that thermodynamics address rightly the nature of matter. It plays a symmetrically opposite role in Bergson's cosmology. Thermodynamics is for matter in Bergson what evolution is for biology. In some passages, Bergson seems to consider the history of Life the outcome of the collision between matter and Life. The scope of this statement is rather unclear, but in the end, it means that, given that Life is ontologically superior to matter, the former possesses matter teleologically. Matter is for the sake of Life. Life in itself may include the feature of contingency, but surely an additional amount of contingency is unfolded from this clash.

Furthermore, in this section I claim that this view is taken from Bergson's peculiar reading of Aristotle's cosmology. This interpretation is based on Bergson's own reading of Aristotle, and hardly influenced by Neoplatonism and, namely, Félix Ravaisson, his master.

[H] In terms of what I called the temporal dimension of teleology there is something more to say. Whereas conservative teleology implies a primary teleology, the teleology of regular events, the transgressive imply partially a secondary teleology. In his vision of Life and history the outcomes or actual forms that compose the whole are only contingent, while the teleological ground (fulfillment of worlds function) is addressed as if it were regular. This implies that whereas in Aristotle secondary teleology did not imply the fulfillment of one substance (since it was chance), in Bergson it is something natural. Contingency is placed by Bergson at the center of natural teleology, and not as an alternative to exceptions.

The pluralistic vision of the world implied in teleology recognizes always the value of non-human forms of perfection, as we saw. Bergson adds to that the recognition of the essential superiority of human freedom. The teleology of human beings is a teleology of creation, in the level of ethics. The paradox here is easy to expose: the attainment of something that someone has to create. Creation here is, however, part of immanent teleology. In bigger levels, such as cosmology, biology and history this paradoxical teleology without a goal in view is the same, but bigger. There is a second problem, which I find more acute. It is the clash between the individual creative teleology and the global one. In biology, the *élan* is an overarching figure. It is difficult to differentiate individual consciousness from nature. Even when Bergson talks about the genius he says that he or she is closer to the main source of creativeness. If the spiritual genius is just an emanation of Life, then personal freedom becomes something difficult to maintain. Contingency and our experience of freedom imply the existence of freedom, this is beyond doubt. What is not totally clear to me is whose freedom that is.

General conclusion: The masks of Proteus

The historian of philosophy and philosopher Nicolai Hartmann says in 1944: “traditional metaphysics have been frequently exposed in their core ideas and guidelines and have often been criticized for their mistakes, but they have not been investigated according to their *intimate driving motive*. I see this motive in the irresistible *tendency to teleology*, which, as Proteus, is harbored by innumerable figures, that often remain hardly recognizable, yet always the same”.⁷⁸³ I find this passage particularly pertinent. Here teleology or final causality is seen as something deeply anchored in metaphysical thinking. Even in the middle of the 20th century, teleology is seen by this author as something “intimate” to metaphysics and, at the same time, something “irresistible” to the philosophers who want to give a complete account of what nature is, beyond material physics, atoms and movements. Even more interestingly, Hartman also claims that teleology is *a Protean concept*.

According to this very idea, this work has shown that teleology, and namely, the model of immanent teleology, can change, and at the same time remain "the same". We have seen that the "articulated intimate driving motive" that remains between Aristotle and Bergson is none other than perfection and the tendency towards it. We also have seen some of those "innumerable figures" in their discourses on nature and human beings. In my account, the series may be understood in a couple of opposites: transcendental teleology/immanent teleology, individual teleology/ global teleology, development teleology/ contribution teleology, beneficiary teleology/ aim teleology, teleology based on vertical/horizontal analogies, conservative teleology/transgressive teleology, primary teleology/secondary teleology. Eventually, there are hybrid cases that challenge those labels: the city in Aristotle or individual freedom in Bergson. All the masks of this Proteus harbor in the end the same ontological claim: there is a need to reach completion in this world, a need that is natural and by no means tragic. The model of immanent teleology that we have seen is an account of this fulfillment.

We have seen in which sense Bergson thought that immanent teleology is *essentially psychological*, and according to the Protean status of the topic, why it is so *flexible, extensible* and *comprehensive* too. These questions appear in Chapter 1 and have been answered in detail all throughout the dissertation. It is psychological because it is analogical. It is analogic because humans are not an external spectator of nature anymore. Human knowledge is here integrated within nature. I have shown that there is a structural familiarity between human consciousness and the living.⁷⁸⁴ Finalism is flexible because it changes according to the conception of perfection that we want to apply. We can move from the world of forms and eternal stability to the cosmos, to creativity and continuous change, and remain perfectly finalistic. The world-view of teleology understands nature as a both plural and articulated drives towards activity and function.

Although Aristotle, the founder, as we saw in Chapter 2, conceived teleology in the domain of regular phenomena, in an everlasting world, he also left open a path for reformers of teleology with his considerations on unpredictable events. I hope I have demonstrated to what extent Aristotle's framework is rich and comprehensive. We see in 3 how Bergson uses the

⁷⁸³ Hartmann, Nicolai. *Teleologisches Denken, [El pensar teleológico]*. Trad. José Gaos. FCE, México, 1966, p. 227, translation and italics are mine.

⁷⁸⁴ Spaemann, Robert. (*Die Frage Wozu*) *Fini naturali. Storia & riscoperta del pensiero teleologico*. Op.cit.

term perfection and analogy, how he also understands mitigated anthropocentrism in an evolutionary way and, finally, how he recombines primary secondary teleology. In his global accounts of Life and history he uses both temporal dimensions of teleology. The cosmological ground is regular, although the particular events within the process are contingent, a matter of secondary teleology. Hence Bergson introduces contingency at the center of his global conception of nature. Secondary teleology is not part of exceptional cases as it was in Aristotle, here it is at the core of nature. In 2.1 and 3 we can see the depth and complexity of the reformer of immanent teleology. We can see what he meant with *going further*.

In general terms, in 2.2.a and 4.1 we have seen an important agreement between the founder and the reformer of immanent teleology. According to this model of thinking, Aristotle's and Bergson's philosophy of nature understand the world of life as plural, against anthropocentrism. Aristotle wrote against anthropocentric Platonism, but Bergson attacks the post-Cartesian tradition, in which analogies and anthropomorphism are rejected. I believe, with Johnson (2.1.c), that immanent teleology automatically rejects anthropocentrism by appealing to anthropomorphism. This fits with Bergson. I understand his natural philosophy as an attack on modern anthropocentrism, in which providential teleology is not the problem anymore but the mechanistic conception of the world. Bergson certainly did not think that a living being can be reduced to atoms moved by inertial determinate laws.

The large set of phenomena gathered in 2.2.a and 4.1 show that immanent teleology considers life as an irreducible striving towards the fulfillment of one function as far as possible. Bergson highlights the Aristotelian teleological notion of function and got rid of that of form. Immanent teleology understands nature as a sum of functions. They are irreducible to each other. Each kind of living being has inscribed in its nature one type of completeness and perfection. Immanent teleology recognizes innate goals and perfection in the natural world. Among them, again, the human species finds itself within that plurality, and not outside. Thus survival, reproduction, well-being, destination and maturity are applied to embryos, wasps or mature humans. Bergson's approach is not evolutionary, in this sense, so it remains in primary teleology, as if living beings were always the same. The approach of both is not so different.

This naturalistic philosophy can have some accounts that sound strange to our contemporary ears (namely, their understanding of cities or communities), but also has elements of great value. Like in the case of Johnson with Aristotle, my view of Bergson can be supported with solid arguments from environmentalist readings.⁷⁸⁵ Furthermore, more importantly from the theoretical point of view, teleology is a proper philosophy of life and biomorphism. This permits us to understand the ontology of life.

The embryos movement and change, the wasp's and human's growth and behavior tend all to avoid death, the permanent menace of every living being, and they tend to reach the best of our potentialities, the permanent ambition. That is, living (or survival) and living-well are the goal of every entity from the moment it is alive. In a recent study on teleology from a modern perspective, the philosopher Hans Jonas developed this line in emphasizing the irreducible value between life and death.⁷⁸⁶ It is a value that could not be noticed beyond life. Only from the perspective of living beings could we finally understand the absolute value, the level of

⁷⁸⁵ A line started by Gunter, Peter. "Bergson and the war against nature". Op. cit.

⁷⁸⁶ Jonas, Hans. *Das Prinzip Leben. [El principio vida]*. Trans. José Mardomingo. Trotta, Madrid, 2000.

perfection or *telos*, of being alive. As Aristotle says, “living is better than not living”.⁷⁸⁷ I think there is a teleological meaning in this line. From the moment something is alive, it understands this perfection spontaneously and not by any logical skill: there is the tendency to survive and reproduce. There is the teleological striving to perfection, to what is “better”. In the most abstract terms, the ontology of life implies a natural non-conscious tendency to overcome death by flourishing. This is the immanent goal of every living being. The Darwinian term “struggle” dramatizes the process of survival and reproduction, but in the end it is based on a hard teleological claim. Life is for the sake of living in the best possible way. Aristotle and Bergson are both philosophers of pluralism, anthropomorphism and life. Death is not at the core of their philosophy. Aristotle has several commentaries on biological death and decay, and one short physiological treatise, but the most part of his huge biological work and his ethics is devoted entirely to life, led by his teleological perspective. By no means he followed his master in his speculations regarding the afterlife. Bergson's teleology expresses the same idea. Activity, maturity, emergence and flourishing were the center of the worldview of this reformer of teleology. Following Horkheimer, Benjamin has written “in Bergson there is no death”.⁷⁸⁸ I interpret this affirmation as deeply right: Bergson focused his sight on being alive, on the *télos* and not the *escháton*.

With the human realm, what we call goal, perfection or the for the sake of becomes much more complex. Not just survival of the individual or of the species is to be considered a goal. Among superior animals, the *télos* is well-being. Among humans, in Aristotle, that is called happiness or *eudaimonía*. In the realm of human ethics Bergson held a eudaimonistic perspective. On the one hand, we saw in 4.1 that Bergson addresses human life in conservative terms, namely, in terms of attention to life. But at the beginning of 4.2 we find a second way of addressing the goal of human beings, compatible with the previous. There I show how Bergson introduces transgressive teleology or freedom (production of unforeseeable novelty in the world). The distance between this faculty and attention to life in Bergson is comparable to contemplation and the rest of human faculties in Aristotle. Transgressive teleology means that the specific goal inscribed in the individual is precisely to overcome the general average conception of the human being for the sake of a self-made personality. In Bergson we find the only case in which transgressive teleology is individual. As we saw in 4.2.a this transgression can be understood from two perspectives. There is a beneficiary here, but at the same time there is a contribution to the whole.

Bergson introduces free-will, seen as creativity, at the center of his ethics. This leads to the idea that in creativity lies the ultimate completeness and happiness of every human being. Now we have departed from the ancient framework and gotten closer to contemporary thought, more concerned with concepts like creativity. According to Bergson, happy maturity or, in his terms, deep joy implies self-creation. The teleology that understands well-being or happiness as freedom, transgressive teleology, implies the paradox of finalism without goals.

The paradox becomes bigger when the domain of transgressive teleology becomes bigger. Between 2.2.b and 4.2 I have shown the conceptual roots of the modern term progress. In Aristotle we saw different kinds of global teleology, where perfection or *télos* must be understood as contribution. What in Aristotle is eternal, in Bergson is in constant change.

⁷⁸⁷ “GA.II.1.731b20-2a1. See 2.2.a.

⁷⁸⁸“Dass im Bergsons *durée* der Tod ausfällt, dichtet sie gegen die geschichtliche (...) Ordnung ab“. Benjamin, Walter. *Baudelaire*. Suhrkamp, Frankfurt am Main, 2017. p. 139. Horkheimer, Max. “On Bergson’s metaphysics of time”. Trans. Frances Stracey. *Radical Philosophy*, 131. May/June 2005.

What in Aristotle is contribution to one order, in Bergson is contribution to one transgression to better subsequent stages. Teleology, seen as one static contribution, appears in the modern concept of ecology, but global transgression appears in the usual concept of progress. Regarding the whole cosmos or only mankind, the paradox of transgressive teleology reappears. It is, again, teleology with no *télos*.

In 4.2.b, 4.2.c and 4.2.d we have the widest scope of Bergson's teleology. The proportion between the cases of individual teleology in Aristotle is directly proportional to the cases of global teleology in Bergson. This is one of the differences between our two treatises on teleology, *Phys.II* and *EC*. Furthermore, in Bergson the global passages are held with the macrocosmos/microcosmos analogy and this is not the case in Aristotle. This has to do with the fact that Bergson was closer to the notion of *anima mundi* than Aristotle. In 4.2.b and c I have demonstrated the cosmological roots of Bergson's view of Life or biology in *EC*. In 4.2.d I show what Bergson does regarding history in *DS*. This global teleology is not inspired by any prime mover, as we found in Aristotle. So, this idea of the *élan* involves only its own perfective nature. This reformed model of immanent teleology challenges in other ways the classic one.

Regarding its origins, I have noted to what extent the tendency to perfection is rooted in nature. The impulse called Life fulfills a regular need, exigency or function of the cosmos. To this extent, it is global teleology with no go. It qualifies as primary teleology since the nature of Life, consciousness or the *élan* is regular, and not contingent. According to Bergson it does not change. The cosmos and Life are *always* the same.

Apart from completing Bergson's point, I have used the model of the secondary teleology, found in my Aristotelian account 2.1.d. This means that to some extent, the historical outcome of this force is to be interpreted retrospectively: because of its unpredictability (noticeable with the form of divergence) and uniqueness (every even in Life and history is unrepeatable). The plant form or any major historical event are all contingent. Bergson understands Life as "a tree" and took the Darwinian branching pattern. He transferred that to his account of history too. In sum, there are multiple lineages in Life. This nuances his view of global teleology.

At the same time as he deals with such a great amount of contingency, he points to one lineage that is not accidental, nor contingent, but necessary. It is the development of the central nervous system: it leads to man, the only success in nature. Success means fulfillment. Notice that human form as such is contingent, but its freedom, its creativity, means a goal in nature. The goal of nature is creativity, but not human beings as such. Evolution has not stopped yet. As I said, Bergson combines in his vision of the *élan* primary regular teleology and secondary teleology for contingent events. Contingency is not mere chance, but one main feature of Life. Bergson's contribution to the model of immanent teleology is complex and sophisticated.

This complexity is due to the aim of combining natural teleology and a hard theory of freedom. Teleology without a goal leads, as I have said, to one severe problem. Namely: it is impossible to define a possible Bergsonian goal of history, or even a goal of nature. Bergson applies coherently, I believe, ethics to cosmology. Free will overcomes any sort of limit. In cosmic terms, nature is also this openness to new evolution, to new transformation. Like any of our self-creations it is unpredictable. When we defend immanent teleology and creation at the same time, the teleology with no goal, or open progress, may arise at some point of the

discourse. While there is a component of creativity, the goal cannot be already finished. This can be expressed regarding human beings, in a eudaemonist framework (our goal is self-creation, and self-creation may imply completion and happiness). It can also be expressed in a cosmological framework: the Universe, and more concretely, Life, tends toward better expressions of its own essence.

This idea comes from Bergson's view of global teleology as something philosophically *sensible*. This is, I think, a contemporary feeling. Descartes and Bacon saw providential teleology as something useless, but not dangerous. Bergson in PR considers that global providential teleology tends to annul human freedom and that a *heroic* philosophy has to face it.⁷⁸⁹ He coincides on that with Hartmann as well, and talks in the same terms.⁷⁹⁰

In different contemporary philosophers and historians, I find a certain reluctance regarding the question of global teleology, even in cases of non-providential teleology. At different levels, teleology is seen as a philosophical risk that involves a rejection of pluralism and that impoverishes richer speculative perspectives. Global teleology seems to impose tyrannically one principle upon the rest of nature. This is the case among recent interpreters of Aristotle, as we have seen in 2, but also regarding XIX history, closer to Bergson, like global teleologies of history⁷⁹¹ and evolutionary thought.⁷⁹² Global teleology is also considered to be potentially dangerous if it is taken to the political arena, where human individual goals can be subsumed for the sake of higher purposes. Partially, I believe that Bergson shares with contemporary intellectuals this suspicion regarding global overarching views, global teleologies among them. As we have seen, with a philosophical sensibility familiar to us nowadays, Bergson pointed out the risks of big systems with regard to ontological pluralism and also personal freedom. At the same time, he did not avoid the grandiose approach, although he endeavored to make it compatible with those two claims.

At the same time, Bergson openly defends global teleology against other authors like Driesch, as we have seen in several occasions from the first chapter. Bergson rejects global providential teleology in the case of Leibniz, for instance, and also Spencer's progressive view. He just promoted another kind of global teleology based on a vertical analogy, from the part (human) to the whole (nature). I find a certain tension in his work with regard to this question, but he manages to combine the global immanent drive and openness. Like every defender of the model of immanent teleology, he recognizes plurality and freedom but a global drive through Life and history. In any case, there is no need among the Bergsonian scholars to adapt his doctrine to the current ideology, and to overcome their reluctance if they find it is so preposterous that there are dominant lines in evolution. Anyway, we have seen

⁷⁸⁹ Bergson in PM, p. 123-124.

⁷⁹⁰ In Hartmann: "The idea of providence is then an argument by human weakness, passivity and letting go. It is the tacit axiomatic characteristic of almost whole of the speculative metaphysics. It has to be openly said that that this venerable metaphysics has been essentially the point of view of the weak and retarded, almost a sole series of teleologisms. Its creators had worked mainly from theology. There is scant metaphysics straight and heroic" *Teleologisches Denken [El pensar teleológico]*. Trad. José Gaos. FCE, México, 1966, 383. My translation.

⁷⁹¹ In a recent book entitled *Dialectique sans téléologie. Hegel, Gentile, Adorno* one can read that "the Hegelian dialectique (...) has been regularly interpreted as *irremediably* teleological" and that is possible to "release it" from teleology. Buisnière, Evelyne. *Dialectique sans téléologie. Hegel, Gentile, Adorno*. Éditions Kimé, Paris, 2016. I quote from the back cover of the book. My emphasis.

⁷⁹² Richards, Robert. *The Meaning of Evolution: The Morphological Construction and Ideological reconstruction of Darwin's Theory*. University Chicago Press, 175-176.

that the roots of this global thinking are venerable and the approach at stake is, in many cases, modern and concerned with those problematic issues.

There is still a second problem for Bergson. I think this problem is even philosophically harder. The paradox of teleology without a *télos* entails a certain obscurity, but produced by clear ideas: namely, the perfective spontaneity of nature, the naturalistic conception of man, the need for a creative free will at the core of ethics and, ultimately cosmology. Bergson's teleology with no goal is the product of naturalizing the human being (there is a function in man, as in every organism) and humanizing nature (there is indetermination and creativity in Life).

But the second *aporia* comes from the tension within the theory of free will, the core of Bergson's thought. The problem is that one can ask whether there is a clash between his early approach to individual humans (from DI to IM) and his mature global approach (in EC, CV and DS). Roughly speaking, his mature grandiose understanding of nature as moved by a sort of soul of the world can be seen as a menace to the autonomy of the free individual human being. Bergson shows how teleology can be combined with unpredictability. This means that there is freedom and creativity. But in the end, it is unclear to what extent we are all independent, responsible sources of creativity. The genius is Bergson's paradigm of freedom, but in CV he says this is *closer* to "the source" of Life.⁷⁹³ It could be interpreted as if human freedom was an emanation of Life, since Life comes to be such an overarching entity. Given that there is freedom in the world, we can ask *whose* freedom this is. In general, Bergson talks about an overarching *élan*, but eventually he talks about a personal *élan*: that of the genius.⁷⁹⁴ It is difficult to know when Life's impulse finishes and when human responsibility starts. I think this problem is unsolved and certainly goes beyond my aim in this work.

⁷⁹³ CV, in ES, p. 32.

⁷⁹⁴ DS, 2012, p. 80

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Summary in English

Several ancient, medieval and modern philosophers have used final causality or teleology in a transcendental way. This means that everything tends naturally toward its own completion, in harmony with the rest of the cosmos, because of some divine causation. In different ways, they claim that the individual developments and the convergence of all of them in a general equilibrium are made by one divine providential entity. In some of these frameworks the final cause can be conceived as a sign of god's wisdom or a proof of its existence. However, final causality can also be understood in an immanent way, without the participation of any kind of divine artisan or creative god. From that perspective, nature is not seen as a passive matter upon which god works and introduces perfection, but as an innate tendency to completion and perfection. The tendency of a seed towards growth, and ultimately to reach maturity, or the general equilibrium in the cosmos made by the convergence of every perfective tendency, is understood by Aristotle, the father of this philosophical perspective, without the contribution of any providential god. I claim that, in the post-Cartesian and deeply Darwinian era starting around 1900, the influential philosopher Henri Bergson used final causality in an original way, applying it to the restricted field of the biological world.

Although I address the big differences between the Aristotle and Bergson, my main aim is to show the common roots of immanent teleological thought. The main ideas behind this framework are: i) nature is something active, spontaneous; ii) perfection is not restricted to divine or human intelligence, hence nature is to be conceived as composed by an uncountable plurality of beings; iii) immanent teleology implies a naturalistic conception of human beings. For this reason, certain anthropomorphic analogies between humans and their surrounding nature are philosophically permitted. iv) there is individual immanent teleology, expressed in development, growth and plenitude regarding one substance (plant, animal, human). Furthermore, there is a global immanent teleology that makes all the particular flourishing processes converge in one general good. In Aristotle this good can be seen as equilibrium and its everlasting duration. Far from this view of global perfection, in Bergson there is a dynamic and progressive conception of the evolutionary world: life and, ultimately, human life are part of a process that tends toward freedom or contingency. Harmony and stability are not the goal of the cosmos, but rather complexity and freedom.

In opposition to the widespread understanding of Bergson as a philosopher of pure becoming, in Chapter 1, I defend the claim that, in his view of the living world, everything has to be linked to its specific action. As I show in detail in this dissertation, non-human organisms, embryos, human souls, human societies and the whole cosmos are conceived with regard to specific actions, that is Bergson's modern way of interpreting the abstract term "perfection". Furthermore, I defend this claim by appealing to plenty of analogies between the human mind and different natural phenomena.

In Chapter 1, I gather together Bergson's critiques of the excesses of final causality. We can also find these critiques in Aristotle, but unlike to Aristotle in the *Physics*, Bergson focuses his philosophical considerations on teleology only with regard to global teleology. It is true that Bergson rejects certain analogies between nature in general (what he calls Life or the vital impulse) and a human artisan. In addition, he denies that there is any kind of general harmony in the world. I do not disregard these statements, but I believe that they have been overemphasized and we have to contextualize them cautiously. I think it is obvious that Bergson defended the use of analogy between mind and nature, because for him mind is part

of nature, and not an isolated entity. So, he does not reject *all kinds* of analogy. As I show in Chapter 3, Bergson uses analogies constantly for the purpose of illustrating his original final causality. Secondly, Bergson by no means rejects *all kinds* of “general goals” by rejecting the idea of harmony. As I said, the general goal, function or end of the entire cosmos is freedom, according to Bergson. For this reason, Bergson sees the appearance of human beings as a relative success of this tendency. At this point, Bergson introduces another critique of global teleology. It is the most important critique, in fact: for him the global doctrine of final causality can lead to determinism or fatalism. Bergson’s theory of the vital impulse is both perfective and relatively unpredictable. Bergson combines openness and directionality, creating some philosophical problems far from Aristotle. It is part of what I call the reform of immanent teleology. In Chapter 1 I also stress the value of some passages from *Creative evolution* in which he finds himself as a reformer of both individual and global teleology. After refuting the a-teleologist readings of Bergson, it is necessary at this point to show what is the classic model of teleology, for having a clear idea of what a reform of it means.

In Chapter 2, I analyze Aristotelian teleology, and also address two closely related topics (the natural scale and Aristotle’s theory of chance) that may have importance for Bergson. The line of argument in this long chapter prepares the structure of the following chapters. Section 2.1 deals with Aristotle’s argument for endorsing teleology and its structural parts. I do the same in Chapter 3 regarding Bergson. Section 2.2 focuses on the fields of application of teleology in Aristotle; Chapter 4 follows the same order for Bergson.

Aristotle’s structural elements of teleology have to be found within his theory of causality in *Physics*.II. The most important feature of final causality is perfection or completion. This term can be interpreted in multiple ways. In Aristotle, perfection is related to the form or the species, the metaphysical substratum of any natural item. For Aristotle one child is imperfect in comparison with its mature form, where the form human has attained the full definition. The form is necessarily linked with another notion, that of function. Attaining a form means, in Aristotle, attaining fulfillment regarding one specific action. Perfection, form and function have a circular relation in this context. Every species and every function is a different form of perfection in Aristotle’s pluralistic world.

The second structural element is that of analogy. As I mentioned above, analogy means that human beings are part of nature. There is a plurality in the world, but also a common root that permits analogy. The analogy between the artisan and the process of growth is typical in Aristotle. To this extent, “art imitates nature” since it follows the same teleological model: the goal (perfection, form, function) is at the end of any rational activity. Health, victory and dwelling are the ends of walking, fighting and constructing houses, respectively. Aristotle defends anthropomorphism, if anthropomorphism means that there are features in our mind that can be transferred to the natural world.

The third structural element is implied in the previous argument, and not openly stated. In Aristotle there is no anthropocentrism, since the natural world is not for the sake of human beings and the natural world can be thought with no reference to us. At the same time, according to this philosopher, human beings are the most perfect being within the infralunary world. It means that they can establish special analogies with heavenly bodies, for instance. This third element nuances the feature of pluralism: there are multiple kinds of perfection, but some are better than others. The fourth structural element is regularity. It is explicitly used by Aristotle. Regularly, the natural items attain their ultimate goal, form and function. That is why natural failures, such as monsters, are exceptions. For Aristotle, in nature things tend

toward the good or the best. In this section I have also analyzed Aristotle's theory of chance, since it will also play a role in the chapters on Bergson. He thought that non-regular events could also be reconstructed in the framework of teleology. That is what I call secondary teleology, against the primary teleology of regular events.

The domains of teleology illustrate, with different forms, what perfection can mean. Regarding individual teleology, I ascend in the natural scale from the lower levels to the upper ones. Since Bergson will apply teleology exclusively to living beings, I have stressed Aristotle's teleology in the biological realm. Survival (including nutrition and reproduction), and well-being among the superior animals (horse life for the horse) may represent perfection in this field. In the case of humans, well-being means happiness, which includes the fulfillment of the rational faculties. This can also be applied to the heavenly rotatory bodies. The peak of the scale is god, an entity that also has a function: thinking of itself.

The second part of 2.2 shows how we should interpret perfection in the global teleology passages. This meaning is compatible with survival and well-being, although it establishes a second wider perspective. Individual perfection may imply in this context a contribution of some kind to the environment or the cosmos. The mere activity regarding the specific function implies participation in the general order. Also, reproduction implies the stability of the species in an eternal world: Aristotle thinks that through reproduction the individual, perishable, infralunary being participates in eternity. Aristotle uses the Platonic language of imitation when talking about this second form of contribution. In short, these obscure passages, with less use of human analogies, show that perfection can be seen beyond the boundaries of one substance or species.

Chapter 3 is devoted to the structure of the teleological view. I show the different terms that Bergson uses by means of perfection, through analogy with human consciousness. I find four types of analogy in Bergson's entire career. In general terms, two of these imply perfection in the sense of being, of the conservation of being. The other two refer to change, transgression and ontological progress. Bergson sees both tendencies in nature and in us as well. This chapter also deal with the peculiar status of mankind in nature, for Bergson. According to Bergson human beings are natural and, at the same time, special. I also define Bergson's view as mitigated anthropocentrism: human beings are the summary of nature (now from the evolutionary perspective) but also add special faculties that imply special analogies. There are no heavenly bodies to be analogous with here, but every individual being, and especially geniuses, are similar to Bergson's Life or *élan vital*, an overarching composite entity that has to be with the ancient soul of the world, something that is not found in Aristotle. In Chapter 3, I also distinguish two levels of teleology. There is regular teleology, related to conservative teleology: survival and action is as regular among living beings here as in Aristotle. Furthermore, there is a global teleology involved in his view of history of Life and history of mankind. Bergson's global teleology combines primary teleology (since the cosmos, and namely, Life, regularly tend toward contingency and freedom) with secondary teleology: history of Life and mankind is singular, unpredictable and contingent. Although there is directionality and perfection, the concrete forms, outcomes of this evolution, and the final attainment of the goal of the world is uncertain. In comparison with the rest of the living world, humans are a relative success, that is all. The future is open.

In Chapter 4, I illustrate the different forms of perfection noted above. It plays an identical role as 2.2 did. Approximately, individual teleology is linked in Bergson with what I called conservative teleology. Here I use the term destination, as Bergson does. The destination of

living organisms, embryos, humans and societies are analyzed in this section. Concepts familiar to us such as survival, conservation or, a key Darwinian term, adaptation are at stake here.

Furthermore in 4.2 I deal with transgressive teleology which is surely the most original part of Bergson's approach, although it also introduces several problems. Apart from one case, the field of transgressive teleology is history of Life, history or cosmology, that is, global teleology. The non-global field is the human being. While in 4.1 I highlight human's tendency toward survival and adaptation, here I address his or her tendency to overcome already-made limits. For Bergson, human being's ultimate destination is to create something new and unpredictable. In his eudaimonistic perspective, maturity is self-creation: thus, to create something includes us. We are the product of our original choices. As we can see there is directionality, but still openness in this level. In the next levels—that of evolutionary biology, history or cosmology—this paradox is transferred to Life or Consciousness, understood as an overarching entity that progresses through individuals. In Bergson, transgressive teleology must be unpredictable and any success (like human beings) can become a decay.

In my Conclusion, I defend the deep understanding of life that seeks immanent teleology. It is what Bergson took from Aristotle in first place. Bergson's individual teleology is to be understood in terms of his concept of attention to life. Immanent teleology implies both a need to understand living beings beyond concepts and human rationality, and to understand human beings within nature. The organism tends toward life naturally, with no help of reasoning. Life, being on earth, is then perfection. Survival, living-well and all fulfillment of innate potencies are, against death or decay, irreducible notions for understanding the living being from the moment it is alive. Not only the coordination of the parts in view of the whole, but especially the particular good that the whole is seeking are important. These notions are to be found in our consciousness, but the philosophy of immanent teleology does not think that it should lead to a total refutation: human beings are part of nature, and, namely, part of life. Since the root of life is this tendency toward survival, etc., final causality may be thought of as biomorphism, rather than anthropomorphism.

Secondly, transgressive teleology is more original to Bergson, since such a topic is alien to the Aristotelian worldview. While applied to individual persons it tries to combine directionality and eudaimonology with freedom, openness and unpredictability. The result is that happiness is to be found in pure creation. This upshot, expressed as the paradoxical notion of teleology with no goal, becomes much bigger when the field also becomes bigger: in the rest of the cases of transgressive teleology Bergson erects a global immanent evolutionary teleology that combines one regular element (the goal of the world) and contingency (the effective history of Life and mankind). Although submitted to innumerable contingencies and eventual decay, Life or the *élan vital* are directed towards what Bergson considers is perfect. It reproduces the previous paradox (teleology with no goal) in global teleology, a philosophical field seen as archaic and problematic nowadays. Moreover, within Bergson it introduces a new major problem. Given that Life is free, that is, unpredictable and creative, it is difficult to demarcate the limits between this overarching force and individual human beings. When Bergson talks about the heroes, the peak of freedom among humans, he says that they are closer than any other individual to the source of Life. While there is in Bergson an unpredictable creativity in the world, it is not clear *whose* freedom this is. Certainly, the borders between individual transgressive teleology and global transgressive teleology look blurred.

Summary in Dutch

Antieke, middeleeuwse en moderne filosofen hebben finale causaliteit, ofwel teleologie, transcendentaal gebruikt. Dit betekent dat alles van nature gericht is op zijn eigen vervolmaking, in harmonie met de rest van de kosmos, vanwege een zekere goddelijke causaliteit. Zij claimen op verschillende wijze dat individuele ontwikkelingen en de convergentie daarvan in een algemeen evenwicht veroorzaakt worden door één goddelijke voorzienige entiteit. In sommige van deze denkkaders wordt de finale oorzaak beschouwd als een teken van gods wijsheid of een bewijs van het bestaan daarvan. Finale causaliteit kan daarentegen ook begrepen worden op immanente wijze, zonder de invloed van enig soort goddelijke maker of scheppende god. Vanuit dat perspectief wordt de natuur niet gezien als een passieve materie waar een god mee werkt en waarin hij perfectie aanbrengt, maar als een aangeboren gerichtheid op vervolmaking en perfectie. De gerichtheid van een zaadje op groei, en uiteindelijk op het bereiken van volledige wasdom, of het algemene evenwicht in de kosmos dat tot stand komt door de convergentie van elke gerichtheid op perfectie, worden door Aristoteles, de grondlegger van dit filosofisch perspectief, begrepen zonder bijdrage van welke voorzienige god dan ook. Ik betoog dat in het post-Cartesiaanse en diepgaand Darwiniaanse tijdperk rond 1900, de invloedrijke filosoof Henri Bergson finale causaliteit op originele wijze heeft gebruikt door het toe te passen op het afgebakende domein van de biologische werkelijkheid.

Hoewel ik hier de grote verschillen tussen Aristoteles en Bergson behandel, is mijn belangrijkste doel om de gemeenschappelijke wortels van immanent teleologisch denken te laten zien. De belangrijkste ideeën achter dit denkkader zijn: i) de natuur is actief en spontaan; ii) perfectie is niet beperkt tot goddelijke of menselijke intelligentie; daarom is de natuur te beschouwen als samengesteld uit een ontelbare veelheid van zijnden; iii) immanente teleologie impliceert een naturalistische opvatting van de mens; daarom zijn bepaalde antropomorfe analogieën tussen mens en de omringende natuur filosofisch toegestaan; iv) er is individuele immanente teleologie, uitgedrukt in ontwikkeling, groei en volheid met betrekking tot één substantie (plant, dier, mens); daarnaast is er een alomvattende immanente teleologie die alle afzonderlijke processen laat samenkomen in één algemeen goed. In Aristoteles kan dit goed worden gezien als evenwicht en de eeuwige duur daarvan. In tegenstelling tot deze omvattende perfectie vinden we in Bergson een opvatting van de evolutionaire wereld als dynamisch en progressief: leven, ook menselijk leven, is deel van een proces dat gericht is op vrijheid ofwel contingentie. Niet harmonie en stabiliteit zijn het doel van de kosmos, maar eerder complexiteit en vrijheid.

In tegenstelling tot de wijdverbreide opvatting dat Bergson een filosoof van het pure worden is, verdedig ik in Hoofdstuk 1 de stelling dat in Bergson's visie op de levende werkelijkheid alles verbonden moet zijn met specifiek handelen. Zoals ik in detail laat zien in dit proefschrift, worden niet-menselijke organismen, embryos, menselijke zielen, menselijke samenlevingen en de gehele kosmos beschouwd in relatie tot specifieke handelingen – dat is Bergson's moderne manier om de abstracte term 'perfectie' te interpreteren. Verder verdedig ik deze stelling door een beroep te doen op een groot aantal analogieën tussen de menselijke geest en verschillende natuurlijke verschijnselen.

In Hoofdstuk 1 verzamel ik Bergson's kritiek op extreme vormen van finale causaliteit. We kunnen deze kritiek ook vinden in Aristoteles, maar, anders dan Aristoteles in de *Physica*, concentreert Bergson zijn kritiek alleen op alomvattende teleologie. Bergson verwerpt bepaalde analogieën tussen de natuur in zijn algemeenheid (die hij leven of levensimpuls—

élan vital—noemt), en een menselijke ambachtsman. Bovendien ontkent hij dat er enige vorm van algemene harmonie in de wereld bestaat. Zonder deze feiten te veronachtzamen ben ik van mening dat ze teveel nadruk hebben gekregen en dat we ze zorgvuldig in hun context moeten lezen. Volgens mij is het evident dat Bergson het gebruik van de analogie tussen geest en natuur verdedigde omdat voor hem de geest deel is van de natuur, niet een geïsoleerde entiteit. Hij verwerpt dan ook niet *alle vormen* van analogie. Zoals ik in Hoofdstuk 3 laat zien, gebruikt Bergson voortdurend analogieën om zijn originele opvatting van finale causaliteit te illustreren. Bovendien verwerpt Bergson met het verwerpen van de notie van harmonie geenszins *alle vormen* van ‘algemene doelstellingen’. Volgens Bergson is vrijheid het algemene doel, de functie van de gehele kosmos. Daarom ziet Bergson het verschijnen van de mens als een relatief succes van deze gerichtheid. Op dit punt introduceert Bergson een andere kritiek van alomvattende teleologie. Dit is de meest belangrijke kritiek: de doctrine van alomvattende teleologie kan leiden tot determinisme of fatalisme. Bergson’s theorie van de levensimpuls is zowel gericht op perfectie als relatief onvoorspelbaar. Bergson verbindt openheid en gerichtheid, waarmee hij een aantal filosofische problemen genereert die niet bij Aristoteles optreden. Dit is deel van wat ik de hervorming van de immanente teleologie noem. In Hoofdstuk 1 benadruk ik tevens de betekenis van een aantal passages uit *De scheppende evolutie* waarin Bergson zichzelf ziet als hervormer van zowel individuele als alomvattende teleologie. Na het weerleggen van a-teleologische lezingen van Bergson wordt het noodzakelijk om te laten zien wat het klassieke model van teleologie behelst, om een helder idee te krijgen wat de hervorming ervan inhoudt.

In Hoofdstuk 2 analyseer ik de aristotelische teleologie, en behandel ik twee nauw samenhangende onderwerpen, nl. de natuurlijke hiërarchie (*scala naturae*) en Aristoteles’ theorie van het toeval, die van belang kunnen zijn geweest voor Bergson. De opzet van dit lange hoofdstuk wordt herhaald in de hoofdstukken over Bergson. Sectie 2.1 bespreekt Aristoteles’ argumentatie om teleologie aan te nemen, en de structuur ervan. Ik doe hetzelfde in Hoofdstuk 3 met betrekking tot Bergson. Sectie 2.2 richt zich op de toepassingsgebieden van de teleologie in Aristoteles; Hoofdstuk 4 doet hetzelfde voor Bergson.

De structurele elementen van de teleologie van Aristoteles vinden we in zijn theorie van oorzakelijkheid in *Physica* II. Het belangrijkste kenmerk van finale causaliteit is perfectie of vervolmaking. Deze termen kunnen op verschillende wijzen worden uitgelegd. In Aristoteles is perfectie verbonden met de vorm of species, het metafysisch substraat van elk natuurlijk ding. Voor Aristoteles is een kind onvolmaakt ten opzichte van zijn volwassen gedaante, wanneer de menselijke vorm zijn definitie volledig waarmaakt. De vorm is noodzakelijk verbonden met functie. Een vorm realiseren betekent in Aristoteles vervulling realiseren met het oog op een specifieke handeling. Perfectie, vorm en functie verwijzen naar elkaar in deze context. Iedere species en iedere functie is een andere vorm van perfectie in Aristoteles’ pluralistisch universum.

Het tweede structurele element is dat van de analogie. Analogie betekent dat mensen deel uitmaken van de natuur. Er is pluraliteit in de wereld, maar ook een gemeenschappelijke grond die analogie toestaat. De analogie tussen de ambachtsman en het groeiproces is typerend voor Aristoteles. ‘Kunst imiteert de natuur’ omdat het hetzelfde teleologisch model volgt: het doel (perfectie, vorm, functie) is het eindpunt van iedere rationele activiteit. Gezondheid, overwinning en wonen zijn de doelstellingen van respectievelijk wandelen, vechten en huizen bouwen. Aristoteles verdedigt anthropomorfisme, als anthropomorfisme betekent dat er kenmerken in onze geest zijn die kunnen worden overgedragen op de natuurlijke werkelijkheid.

Het derde structurele element is impliciet in het voorgaande. Er is geen anthropocentrisme in Aristoteles, omdat de natuurlijke werkelijkheid niet bestaat omwille van de mens, en omdat de natuurlijke werkelijkheid gedacht kan worden zonder verwijzing naar de mens. Tegelijk zijn mensen volgens Aristoteles de meest perfecte levende wezens in het ondermaanse. Dat betekent dat er specifieke analogieën zijn tussen mensen en, bijvoorbeeld, hemellichamen. Dit derde element nuanceert het kenmerk van pluralisme: er zijn vele vormen van perfectie, maar sommige zijn beter dan andere.

Het vierde structurele element is regelmatigheid en wordt expliciet door Aristoteles ingezet. In de regel bereiken natuurlijke entiteiten hun uiteindelijke doel, vorm en functie. Daarom zijn mislukkingen in de natuur, zoals ‘monsters’, uitzonderingen. Voor Aristoteles tenderen natuurlijke dingen naar het goede of het beste. In dit hoofdstuk heb ik tevens Aristoteles’ theorie van het toeval geanalyseerd omdat het ook een rol zal spelen in de hoofdstukken over Bergson. Aristoteles was van mening dat niet-regelmatige gebeurtenissen ook konden worden gereconstrueerd met behulp van teleologie. Dat noem ik secundaire teleologie, ter onderscheiding van de primaire teleologie van regelmatige gebeurtenissen.

De domeinen van de teleologie illustreren in verschillende vormen wat perfectie kan betekenen. Ten aanzien van individuele teleologie bestijg ik de ladder van de natuur van de lagere tot de hogere niveau’s. Omdat Bergson teleologie alleen zal toepassen op levende wezens, heb ik de nadruk gelegd op Aristoteles’ teleologie in het biologisch domein. Voortbestaan (inclusief voeding en voortplanting), en—onder de hogere dieren—welzijn (het paardenleven voor een paard) kunnen dienen als voorbeeld van perfectie in dit domein. In het geval van mensen betekent welzijn geluk, inclusief de vervulling van de rationele vermogens van de mens. Dit kan ook worden toegepast op de omwentelingen van de hemellichamen. Aan de top van de piramide staat god, die ook een eigen functie heeft: zichzelf denken.

Het tweede deel van sectie 2.2 laat zien hoe we perfectie moeten interpreteren in de passages over alomvattende teleologie. Perfectie is compatibel met voortbestaan en welzijn, hoewel het een tweede, ruimer, perspectief opent. Individuele perfectie kan in deze context ook een of andere bijdrage aan de omgeving of de kosmos betekenen. De activiteit ten aanzien van de specifieke functie op zichzelf impliceert al deelname aan de algemene orde. Reproductie impliceert bovendien de stabiliteit van de species in een eeuwige wereld: Aristoteles meent dat vergankelijke individuele ondermaanse levende wezens door reproductie deelhebben aan de eeuwigheid. Aristoteles gebruikt de Platoonse terminologie van imitatie als hij over deze tweede bijdrage spreekt. Kortom, deze obscure passages die minder gebruik maken van analogieën met de mens, tonen dat perfectie gevonden kan worden buiten de grenzen van één substantie of species.

Hoofdstuk 3 is gewijd aan de structuur van het teleologisch wereldbeeld van Bergson. Ik behandel de verschillende termen die Bergson gebruikt voor perfectie, in analogie met het menselijk bewustzijn. Ik vind vier typen van analogie in Bergson’s carrière. In algemene termen impliceren twee ervan perfectie en behoud van zijn. De andere twee verwijzen naar verandering, overgang en ontologische vooruitgang. Bergson ziet beide tendenzen zowel in de natuur als in ons. Dit hoofdstuk behandelt tevens de bijzondere status van de mensheid in de natuur volgens Bergson. De mens is volgens Bergson natuurlijk, en tegelijk bijzonder. Ik identificeer Bergson’s visie als gematigd anthropocentrisme: mensen zijn de samenvatting van de natuur (nu vanuit evolutionair perspectief), maar ik voeg daaraan ook speciale kenmerken toe die samenhangen met speciale analogieën. Er is hier geen sprake van analogie

met hemellichamen, maar elk individu, en de genius in het bijzonder, lijkt op Bergson's leven of levensimpuls, een overkoepelende samengestelde entiteit die in contact moet staan met de aloude ziel van de wereld—iets wat we niet bij Aristoteles aantreffen.

In Hoofdstuk 3 onderscheid ik ook twee niveau's van teleologie. Er is reguliere teleologie, verbonden met teleologie van behoud: voortbestaan en handelen zijn net zo regulier onder levende wezens bij Bergson als bij Aristoteles. Verder is er alomvattende teleologie in Bergson's opvatting van de geschiedenis van het leven en de geschiedenis van de mensheid. Bergson's alomvattende teleologie combineert primaire teleologie (de kosmos en vooral het leven zijn in de regel gericht op contingentie en vrijheid) met secundaire teleologie: de geschiedenis van het leven en de mensheid is singulier, onvoorspelbaar en contingent. Hoewel er gerichtheid en perfectie is, zijn de concrete vormen, de uitkomsten van deze evolutie, en het uiteindelijk bereiken van het doel van de wereld onzeker. In vergelijking met de rest van de levende werkelijkheid zijn mensen relatief gezien een succes, dat is alles. De toekomst is open.

In Hoofdstuk 4 geef ik illustraties van de verschillende vormen van perfectie die hierboven werden genoemd. Het hoofdstuk speelt dezelfde rol als sectie 2.2. Bij benadering is individuele teleologie in Bergson verbonden met wat ik teleologie van het behoud noemde. Hier gebruik ik de term einddoel (*destination*). Het einddoel van levende organismen, embryo's, mensen en samenlevingen wordt in deze sectie geanalyseerd. Hier komen bekende concepten als overleving, behoud, of (met een Darwiniaanse term) adaptatie aan de orde.

In sectie 4.2 behandel ik de overgangsteleologie (*transgressive teleology*) die zonder meer het meest originele aspect van Bergson's benadering is, hoewel deze ook met problemen komt. Met één uitzondering is het domein van de overgangsteleologie de geschiedenis van leven, of kosmologie, ofwel alomvattende teleologie. Het niet-alomvattende domein is de mens. Waar ik in sectie 4.1 de menselijke tendens tot overleving en adaptatie benadruk, bespreek ik hier de tendens om bestaande grenzen te overstijgen. Volgens Bergson is het einddoel van de mens om iets nieuws en onvoorspelbaars te creëren. In zijn eudaimonistisch perspectief is volwassenheid zelf-creatie: iets creëren omvat onszelf. Wij zijn het product van onze originele keuzes. Er is gerichtheid, maar ook nog steeds openheid op dit niveau. Op de volgende niveau's—die van evolutionaire biologie, geschiedenis of kosmologie—wordt deze paradox overgedragen naar Leven of Bewustzijn, begrepen als een overkoepelende entiteit die voortgang boekt middels individuen. In Bergson moet overgangsteleologie onvoorspelbaar zijn en kan ieder succes (zoals mensen) vergaan.

In mijn conclusie verdedig ik het diepe inzicht in het leven dat de immanente teleologie zoekt. Dit is wat Bergson vooral aan Aristoteles ontleend heeft. Bergson's individuele teleologie moet begrepen worden in termen van zijn concept van de aandacht voor het leven. Immanente teleologie impliceert zowel de noodzaak om levende wezens te begrijpen los van concepten en menselijke rationaliteit, en om mensen te begrijpen in de natuur. Het organisme is van nature gericht op leven, zonder hulp van redeneren. Leven, bestaan op aarde, is dan perfectie. Overleven, welzijn en het vervolmaken van aangeboren potenties zijn, anders dan dood of vergaan, niet verder te reduceren begrippen om het levende te begrijpen vanaf het moment dat het leeft. Niet alleen de coördinatie van de delen ten opzichte van het geheel, maar vooral het specifieke goed dat het geheel nastreeft is van belang. Deze begrippen zijn te vinden in ons bewustzijn, maar in de filosofie van immanente teleologie leidt dit niet tot een weerlegging: mensen zijn deel van de natuur, en vooral, deel van leven. Aangezien de bron van het leven dit streven naar overleven etc. is, kan finale causaliteit eerder gedacht worden als biomorfisme dan als anthropomorfisme.

Overgangsteleologie is nieuw bij Bergson; zo'n wereldbeeld is Aristoteles immers vreemd. Toegepast op individuele personen wil overgangsteleologie doelgerichtheid en eudaimonisme verbinden met vrijheid, openheid en onvoorspelbaarheid. Het resultaat is dat geluk gevonden moet worden in pure schepping. Deze conclusie, uitgedrukt als de paradoxale notie van teleologie-zonder-doel, krijgt meer betekenis zodra het domein groter wordt. In de resterende toepassingen van overgangsteleologie ontwerpt Bergson een alomvattende immanente evolutionaire teleologie die een regelmatig element (het doel van de wereld) verbindt met contingentie (de feitelijke geschiedenis van Leven en van de mensheid). Hoewel het Leven en de levensimpuls onderhevig zijn aan ontelbare contingenties en uiteindelijk vergaan, zijn ze gericht op wat Bergson als perfect beschouwt. Dit reproduceert genoemde paradox (teleologie-zonder-doel) in alomvattende teleologie, een filosofisch onderwerp dat heden ten dage als ouderwets en problematisch wordt beschouwd. Bovendien introduceert het in de context van Bergson een belangrijk nieuw probleem. Aangezien Leven vrij is, dat wil zeggen onvoorspelbaar en creatief, is het moeilijk om de grenzen te bepalen tussen deze overkoepelende kracht en individuele mensen. Wanneer Bergson spreekt over de helden, het toppunt van vrijheid onder de mensen, zegt hij dat zij dichterbij de bron van Leven staan dan ieder ander individu. Hoewel er in Bergson een onvoorspelbare creativiteit in de wereld is, is het niet duidelijk *wiens* vrijheid dit is. De grenzen tussen individuele en alomvattende overgangsteleologie blijven onduidelijk.

Curriculum Vitae

Álvaro Luis Cortina Urdampilleta was born in Bilbao, Spain, the 9 October of 1983. In 2007 he obtained the degree on Philosophy in the University of Navarra, and wrote a Thesis on Spinoza's theology under the direction of Prof. Alejandro Llano. During 2006 he studied at Università degli Studi di Roma. La Sapienza, in Italy. At the same time he obtained the degree in Communication also in Navarra and studied during 2004 at Paris II Panthéon-Assaz, in Paris. Between 2007 and 2014 he focused on literary criticism for several relevant cultural publications in Spain and published one novel *Deshielo y ascensión* (Jekyll&Jill, 2013), selected in the Festival du Premier Roman de Chambéry in 2014. In 2013 he received a Master's Degree in Philosophy at the Universidad Complutense de Madrid, and the supervisor of his Master's Thesis was José Luis Villacañas. In 2014 he obtained a four-year scholarship from the Universidad Diego Portales in Santiago de Chile, with a *Cotutelle* in Leiden University. Between Autumn 2013 and Spring 2018 he has given seminars at the Universidad Complutense de Madrid, Instituto de Humanidades de la Universidad Diego Portales, Leiden University, École Normale Supérieure of Paris, Universidad Eclesiástica de San Dámaso of Madrid and in the Commissio Leonine (Paris) on Bergson and Aristotle. He also has worked and published on philosophical figures of the beginning of the 19th century, such as Spengler or Unamuno. In Autumn 2017, he took part in the Selbstorganisierte Gruppe zur klassischen Deutschen Philosophie at Humboldt Universität of Berlin, on German philosophy. He has given lectures at Oxford University, Manchester University, and Groningen University. His current research is in aesthetics.