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Doomen, J.

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Information Inflation

Jasper Doomen

Abstract

Information has come to be perceived, on the whole, as something ordinary and seems to be slowly losing its value. In this article, this is explored in four areas. It is no longer possible to have an overview with respect to the information at one's disposal. Furthermore, there is a relatively great supply of information, provided by a greater number of contributors than before. Some recent developments in education are also relevant in evaluating the situation. The impact of technical developments, in particular the Internet, on present society, is important from several points of view. This is given attention accordingly.

Introduction

In this article, a number of recent developments in the way information is processed will be discussed. It will be argued that the possibilities which have emerged to access information have some side effects with regard to the way it is perceived. What these are, how they affect various domains of society, and how they are interrelated will be the general themes. In section 1, the diffusion of information is expounded. At the moment, there is so much potential information for an individual to come to know that one needs to specialize in order to master to some degree one of the fields of research. It is examined what the consequences with regard to information for individuals and, consequently, for society as a whole are.

Section 2 deals with the availability of information. What are the results of information being constantly at one's disposal? In this section and the third,



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the electronic character of a significant part of the information plays an important role. The relevance of the origin of information is the topic of section 3. It has become rather easy to contribute to the body of information for a general public. The effects of some recent developments in education will be examined in section 4. In all cases, it will be argued, information inflation is present, albeit in different guises.

1. Diffusion

It is an unmistakable given that a far-reaching specialization has developed in western society. Not only has the number of sciences vastly increased, they have also been successful in that their respective domains have expanded according to the discoveries made in their names. Concerning the first matter: it seems hardly imaginable from a modern point of view that, apart from some preliminary subjects, mainly dealing with basic mathematics and grammar, it was only (at least formally) possible to study medicine, law, philosophy and theology during the Middle Ages. One thus focused on a — from a modern stance — small number of topics, and had the opportunity to investigate matters thoroughly (which, it must be admitted, sometimes resulted in almost trivial inquiries, though not, perhaps, as is sometimes caricaturely suggested, in each instance).

For a long time, perhaps up to the 17th century, one could, provided, of course, as ever, that special talents were available, be a “*homo universalis*,” a scholar commanding in broad lines the knowledge available at the time. Although it would be unwarranted to exclude the possibility nowadays forthright — as it cannot be *a priori* dismissed — it seems safe to say that a quest for a modern-day Leibniz or Da Vinci would be in vain.

As to the second matter, the sciences have made many claims, which have resulted in a large number of theories, hardly surveyable. This situation is, of course, connected with the first; as a field of study develops and produces ever more details — a development comparable to that of a great tree, having sprouted gradually from the basic elements and still steadily growing — it becomes increasingly more difficult to juggle the several intellectual products and keep even a general perspective on things. In this state of affairs, the need to specialize to an ever greater extent is clear.

For the individual scientist, whose position has slowly drifted from the ideal of the “*homo universalis*,” this means that the information at his disposal, merely partly assimilated by himself, is only a fragment of that which is available. This may also be qualified as a sort of alienation, as an intellectual variation of the familiar Marxist theory that a laborer is alienated from his products and the way they are produced, since one loses the overview. The

information can no longer naturally be produced and absorbed as one has to focus on a selection based on a particular position as an individual scientist. Marx distinguishes in total four kinds of alienation (Marx, 1982: pp. 236–242); the fourth kind — the alienation of people from one another — is of course an interesting topic in an “electronic society”; cf., in this respect, Poster’s observation: “Every age employs forms of symbolic exchange which contain internal and external structures, means and relations of signification. [...] The third [stage] is characterized by informational stimulations. [...] In the third, electronic stage the self is decentered, dispersed, and multiplied in continuous instability” (Poster, 1990: p. 6). The alienation is, in these new circumstances, no longer limited to the working class (Zuboff, 1988: pp. 240, 241).

For society as a whole, it means an appeal to a scientist as a tower of strength is not possible (anymore); in its fiercest form, individual scientists are even unable to understand each other’s research or to make themselves understood to one another. This may result in a decline of the scientist’s position as an authority (cf. Stehr, 2001: pp. 150, 151). It is no surprise that this is, as it were, a situation of communicating vessels: the prospect of an overview declines as the amount of information increases.

The diffusion of information, therefore, manifests itself both in individuals and in disciplines. This process is not limited to the sciences. It applies to the other domains of society as well. Any sort of profession, for example, involves a degree of specialization. Still, too easy generalizations are of course to be avoided since there is a danger of oversimplifying matters here (cf. Form, 1987: p. 43). (The number of professions has, of course, increased, too.) The diffusion of information in diverse fields is, then, an indication that the information that is potentially at the disposal of the members of society is in practice consumed only partially by them. From the individual’s perspective, only a small part of it can be valued. One may even say: “Specialization is no proof of progress; it has often meant displacement of penetrating insights in favor of technical manipulations of little interest” (Chomsky, 1993: p. 15).

A solution to this problem is not to be expected in the short term; indeed, it will in all likelihood grow. A shared frame of reference (for the sciences) can no longer be found, and an effort to construct one will be futile. Still, the inflation manifests itself at this level merely in the literal sense, i.e., as an increase — the word “inflation” can be traced back to the Latin “inflatio,” the verb “inflare” meaning “to blow into” (from “in” and “flare”). There is, in other words, no necessary connection between the inflation with this meaning on the one hand and the evaluation of the information on the other. That this is different in other respects will appear further on.

2. Availability

Relatively recent technological developments have had a major effect on the way information is dealt with. It is remarkable in how short a time substantial changes have occurred. It is difficult to chart historical data, let alone assess them, but an outline may be relevant here. As far as can be gathered, the invention of the art of printing, which took place in Europe in the 15th century, had (obvious) far-reaching consequences: once the technology could widely be dispersed, it was no longer necessary to transcribe texts and complete books and it was henceforth possible to share information on a scale which must have seemed hardly imaginable before.

It is always dangerous to speculate on possible historical analogies, but a development with a similar influence on the present age — or, in order not to fall prey to the charge of exaggerating, with outcomes that are so important for the present age that the comparison is at least justified — as that of the art of printing was to its own, is that of the Internet. (Of course, the invention of the computer has to be incorporated when evaluating this development.) After all, information can now be accessed and communicated practically immediately — at least, in contrast to the situation before the appearance of the Internet.

In the wake of mechanically produced books, the rise of entire libraries has had a revolutionary effect on the availability of information. The presence of the Internet has not only constituted an elaboration of this process quantitatively, but in other respects as well. After all, the obvious quantitative elaboration as such only means that literature and other sources may be consulted relatively swiftly (indeed, entire books may be found online, and it would not be strange, extrapolating the development, to suppose that paper books will eventually be replaced by electronic substitutes). This is, by the way, by no means to be trivialized; it contributes in an important way to the valuation of the information.

Still, this is only one aspect of the current offer. Another crucial factor, related to this, consists in the absence of the need to commit the relevant elements to memory. This need has practically disappeared since one can virtually (in both meanings of the word) always and everywhere check the facts. Information is no longer appropriated, but consumed. A corollary to this is that it is also easily discarded once its use (at least, its use in the short term) has expired. Borgmann puts it as follows: “There is a real possibility [...] that natural and cultural information will decline to mere utilities, tools we need but fail to sustain as signs of irreplaceable kinds of excellence” (Borgmann, 2000: p. 219). (The issue is also relevant with regard to a recent evolution in education, as will be pointed out.)

That the information is consumed rather than considered as something valuable, in combination with its abundance, means that the position of the

individual — the consumer — is downgraded. As McKibben puts it: “We believe that we live in the “age of information,” that there has been an information “explosion,” an information “revolution.” Although in a certain narrow sense this is the case, in many important ways just the opposite is true. We also live at a moment of deep ignorance, when vital knowledge that humans have always possessed about who we are and where we live seems beyond our reach. An Unenlightenment. An age of missing information” (McKibben, 2006: p. 9). This observation was made, moreover, without yet taking into consideration the appearance of the Internet (McKibben, 2006: p. 256).

The fact that the information itself has become more unstable needs to be mentioned as well. This is not just a result of the success the sciences obtain, which necessitates a constant reconsideration of the conclusions reached, but is also connected with the possibility to continuously change it. This manifests itself most clearly in the organization of the Internet encyclopedia *Wikipedia*, to which in principle anyone can contribute (although some control mechanisms have been implemented in order to dispel disinformation). The first of these changes, which may be dubbed external — external to the information as the change occurs in the sciences — is perhaps less significant here than the second, internal changes — internal as the change occurs in the information itself. After all, external changes have emerged from the moment man has started to think critically at all — albeit that these have steadily increased — whereas the latter are intrinsically connected with the technological possibilities.

The internal changes lead to an additional information increase: it is hard to keep up with the latest news, when this is the result of a change that occurred a short time ago, and is probably about to change again. It is not hard to see a link with some of the observations already made. I just mentioned the way one considers information — one consumes it. This is naturally facilitated as the information is up for grabs, not only to be actually consumed (used), but to be altered, too. This last point, the alteration, will be discussed in the next section, when the matter of who creates the information is elaborated.

There is also a parallel with the scientist’s position. After all, the scientist needs to manage in a state of flux, the difficulty to continuously incorporate the changes provided in and through the sciences themselves (which changes were called external) being accelerated by the fact that the information itself is changing. In this case, it may be difficult to decide whether something is an internal or external change, since it depends on the way one conceives the changes the sciences produce: are they independent of the information flux (in which case they merely have to be processed), or are they influenced by this flux themselves? This issue will not be elaborated, since it is not crucial to the discussion.

The developments pointed out — an increase in the accessibility of the information, along with the consequences of this for its usage, and the incres-

sant changes that are implemented—constitute a crucial part of the new way information is conceived. The previous section ended with a qualification of inflation that applied to the situation established there. The inflation had a literal meaning. In this section, conversely, the inflation takes a more familiar form, the true—economic—meaning: the fact that a lot of information is available entails a decrease in its value. So here we find a significant qualification of information inflation: information is relatively easily available and as a consequence is not considered as precious anymore.

3. Origin

“Information” is a broad notion. In the preceding, not all possible meanings have been brought under attention, in that only a segment has been dealt with. Particularly, the “informal” sorts of information have been passed over. The reason for this is that these are not relevant for this inquiry. That does not mean that it should be restricted to an “elitist” approach in which only the academic results would be accounted for. In fact, it was already anticipated in the previous section, when the rise of the Internet was mentioned as a crucial factor in the diffusion of information, that the range of contributions is far wider. In this section, some of the consequences of this will be indicated.

A historic parallel may be useful here; just as in the beginning of sections 1 and 2, though, as I remarked above, one must be careful not to grant this greater importance than is warranted. The parallel meant here is that between a period of time in which the ability to read and write was considered as something special, followed by a transition to a time when basic education became available for an ever growing group of people and finally for practically everyone in the western world on the one hand, and the opportunity to contribute to the body of information on the other. (As will appear, though, this latter element is present in both cases.)

On the whole, it appears that in the Middle Ages only clerics and scholars (whose occupations often overlapped) commanded the written word. The books produced were by their hand, and they were few in number. Gradually, as others could also profit from some form of education, a large potential of information providers emerged. An important factor in this process was the development of the sciences. So the possibility to partake in the information distribution has led to an actual increase. One may regard this as an information democratization, in that the information has not only lost its halo, but was also (at least potentially) produced by a larger group than before (these two developments are, of course, related).

This is the first historical process. The second, more recent one consists in the opportunities the computer age has offered. If the first process was one

of communication skills (the ability to read and write) being spread, the second is one of the state of literacy expanding to the skills of producing information electronically. There are ample applications of this process, the most obvious example being the already mentioned *Wikipedia* encyclopedia. It is now possible for anyone with some basic technology at his or her disposal to contribute. The way this, and in fact the entire Internet, is organized can be seen as opposed to the classical model of information organization (Bilder, 2006).

It must be acknowledged that the written word has lost its former value. Prior to the first major development, that of the application of the art of printing, a text must have commanded — as far as I am able to imagine — a considerable esteem. There is, as far as I know, no way to assess whether the general appraisal of texts descended after this application. I can, however, as a witness to the recent developments, ascertain the descent of the appraisal in the present age; this is, in fact, part of the justification of the observations made in section 2. The descent in the present age is obvious, and is not merely a result of the fact that one has a lot of information at his disposal. It is also a matter of origin. If the information no longer necessarily derives from those with the required expertise, it faces a loss of credibility.

Unfortunately, the inflation is not simply a result of this situation. The uncritical way in which the information is processed by those who find it is at least as important. Here, again, communicating vessels appear: if one is to escape the Scylla of the uncritical stance, one falls into the claws of the Charybdis of the appraisal of the information. Either way, the information is downgraded: in the first case — if one remains critical — this is a result of a conscious stance, in the second — if one takes it at face value — it happens unbeknown to oneself.

The situation expounded contributes to information inflation. This time, the inflation is not, or rather not merely, a result of the availability, but of the activities of the information contributors, since not only the number of contributors has grown, but the activities per contributor as well. That information has become widely available and, in its wake, can be constituted by a greater number of people than before, is a positive development from an emancipatory point of view, but the downside to this is not to be overlooked. The information is — to put it dramatically — corrupted from the inside, and consequently slowly loses its value.

4. Education

An obvious theme to be discussed at this point is the role of information in education. This is the area par excellence for information to be acquired. This can be organized in various ways. The simplest, “classical” model consists in a

teacher transferring what he knows to one or more students. This model has provided a standard; a recent and quite recent development have made it outdated. The recent one is the accessibility of education to a relatively large group, as was already briefly mentioned. The quite recent one is the integration of the latest technology into the education process; it has utilized the possibilities from the start (Spennemann, 2006: p. 101). In fact, the availability of information is a downright invitation to follow such a course of action. One may even say that the use of technology is inevitable (Collis & Moonen, 2002: p. 31); “you can’t not do it” (Collis & Moonen, 2002: pp. 37–40).

Caution is, of course, called for; one needs to make sure this does not end in an excess, in that one merely concentrates on the means to obtain information and is no longer occupied with the information itself. An example to demonstrate a possible realization of this danger is a recent phenomenon in the Dutch secondary education system. Since 1998, a new method, called the “second phase,” has come into effect; part of this is that students are expected to work more on their own than before, the teacher functioning as a “coach” rather than as a primary source of information. Representative research has shown that an appeal to the independence and self-reliance, which is called for in this model, cannot be accounted for in all cases (Bolhuis & Voeten, 2001: pp. 840, 852).

Still, this aspect is just a matter of application; a more fundamental problem lurks. This is important in the appraisal of information: it concerns the way students deal with (potential) information. It agrees with the observations made in the preceding. I have already mentioned the increased availability and the origin of information, the number of contributors having expanded. The problem referred to consists in the way information is transferred to students by teachers and how their own contributions are produced, e.g., in the form of theses.

The first point — the changed role of the teacher in the process — means that less time than before can be spent on actually conveying information (Bolhuis & Voeten, 2001: p. 846). This has led to the criticism that some students do not receive the proper guidance; recently, a student at a college for prospective teachers (which is part of the highest level of vocational education in the Netherlands, which is, in turn, the highest level of education below university) complained that in his school, students themselves on the whole primarily learn to master certain “competencies” and do not focus enough on the topics of which they are supposed to have a command (De Jong, 2007).

The second point — the students’ activities — is naturally closely related to the first. As the students have a greater leverage on their learning process, the temptations of an information society are never far away. The Internet in particular provides information which is up for grabs for a survey assignment (an assignment at the level of secondary education and some forms of vocational

education). Since the examination at this level is not (primarily) directed at a student's ability to produce novel insights but rather to ascertain whether he has grasped the subject material, is able to produce a grammatically correct paper, etc., it is relatively easy to copy a useful text, slightly modify it and pass it off as one's own contribution. The availability is not just relevant insofar as a student barely has to go to any pains in order to find useful information. The problem also consists in the teacher hardly being able to determine whether a student has plagiarized.

This is a consequence of the availability itself (the bulk of information cannot be entirely surveyed, not even by an expert) and, in connection with this, of the origin and in some cases of the diffusion. In what, then, does the inflation in education consist? In the devaluation of the experience the students obtain from it. If they predominantly master skills and cannot fall back on some facts and methods of reasoning, they will be destined to drift through the (ever expanding) ocean of information, like a captain without a proper compass. The situation is not one of black-and-white, though. Nowadays, one strongly relies on means and skills the students are expected to have come to know once they are to apply their education. Besides, in today's society, it is necessary to continuously update one's skills and knowledge (cf. Strassmann, 1985: pp. 67, 68; Zuboff, 1988: p. 395). This insight has also been conveyed into a policy for an education throughout life for the 21st century (Delors, 1996).

A middle course may perhaps be found in having students acquire the necessary skills without having this come at the expense of the contents. To this end, a number of basic tenets could serve as points of reference, or, to persevere in the metaphor, "beacons." It will be helpful, e.g., to ascertain a canon of basic literature with which students are minimally expected to familiarize themselves. This will not undo the inflation, but might slow it down or even make it somewhat manageable.

Conclusion

A number of characteristics of information in present society have been associated with inflation. In particular, I have indicated that it manifests itself in diffusion, availability, origin, and education, which are interrelated in several regards. First, the diffusion is linked, in a way, with the educational inflation: as the teacher is no longer able to maintain an overview, the student is to a greater extent than before left to his own capacities, which may have significant consequences for the level of education. Second, a parallel between the growth of information contributors (and thus the availability) and the increased opportunities to pursue education is obvious.

Meanwhile, the level of information is not necessarily higher as a result

of this development; in fact, the reverse is the case. This is corroborated by a third observation: as information becomes available on a large scale, it tends to be devaluated. This finds its expression in the fiercest case in the information being regarded as a mere commodity, to be replaced in a flash. Ironically, the present article itself contributes to the inflation described. It is too modest, however, to render its own presence problematic in the light of its outcome.

The effects of the various evolutions are not just negative, although, because of its topic, this article has highlighted some unfavorable outcomes. The fact that education is no longer reserved for a small elite can be deemed positive, just as are scientific disclosures which may benefit society. Still, without overstating the problems, it is prudent to at least point them out and look for remedies. To that effect, in education, some basic body of knowledge to be relied upon could be propagated. Nonetheless, not every difficulty can be solved easily, if at all. Most of the problems ascertained are more likely to increase than disappear. In an ever more complicated society the information issues outlined should at least be taken seriously.

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