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Towards a New Paradigm for Argumentation Theory

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ABSTRACT: Recent argumentation theory has three main perspectives each of which shares an empiricist preference for actual argumentation. We suggest is that such an empirical perspective, although useful in setting the parameters for understanding argument requires a deeper theoretic foundation to be found in cognitive psychology and semiotics, moving the analysis and evaluation of arguments beyond explicit statements to the underlying structures that support the overt content of an argument.

KEYWORDS: argumentation theory, bias, cognitive science, memetics, persuasion, politics, pragmatics, semiotics

1. INTRODUCTION

It is arguable that recent argumentation theory has among its theoretic foundations three main perspectives: rhetoric, speech act theory and informal logic. Each of these has a clear epistemological focus, an empiricist preference for actual argumentation. The history of rhetoric begins with Aristotle who, notably, frames his discussion with the specifics of actual oratory (Reeve, 2018; Rapp, 2022). The history of recent argument theory begins, tellingly, with van Eemeren and Grootendorst, whose influential *Speech Acts in Argumentative Discussions* (1984), sees argument within the context of speech acts, exemplifying the empiricism that characterized much of the work that followed. Countless informal logic textbooks relied heavily on fragments of actual arguments, beginning with the influential text by Johnson and Blair (1983) reflecting the concerns with actual argument, the basis of Toulmin (1969). A telling effort is the work of James Freeman, whose initial exploration of overt argument structure in *Dialectics and the Macro Structure of Argument* (1991) was later grounded in the unapologetic common-sense empiricism of his *Acceptable Premises* (2005).

The thorough-going empiricism of argument theory served the purpose of moving away from the abstract, and possible irrelevance of the mathematical approach to argument characterized by formal logicians. Although useful in setting the parameters for understanding argument, such empiricism has out-lived its usefulness and a deeper theoretic foundation is needed. This is apparent to me if we construe argument as rational persuasion, and move from the specifics of normative structure to a more pragmatic stance,

implicit in a main focus of argumentation theory, aptly titled, pragma-dialectics (Eemeren, 2002). For it is the pragmatic failure of normatively constructed arguments to persuade, especially argument in the public sphere that prompt the need to reconsider how we understand how arguments function, and why they so often fail to result in the changes of perspective that rational persuasion sought to accomplish.

Arguments about social and political issues are notorious for being unpersuasive. Entrenchment of social and political postures is increasingly obvious as divisions on such issues are the basis for the new tribalism and other deep divisions within democratic societies, where political and social argumentation is both common and freely exercised (see Edsall, 2022a for a comprehensive analysis). The unwillingness of people to alter their views on issues of social and political concern in the face of counter argument and contrary evidence has been generally construed as bias within the psychological literature. Early research was focused on the persistence of racial bias, and its resistance to evidence in support of prior beliefs (Ehrlich, 1973). More recent work has focused on social issues and economic issues (Lewandowsky et. al. 2012) offering possible insights into what Nobel Prize winning economist Paul Krugman called “zombie ideas- ideas” that “should have been killed by evidence but keep on lurching along.” (Krugman, 2020).

Such a profound alteration of the paradigm for argumentation requires a complex argument, for argument theorists are no less than others committed to the perspectives that they instantiate. What we will first do is argue for the relevance of cognitive science. Then we will rehearse the background in the attempt by psychologist to understand bias and belief preservation in the face of counter-evidence. Then we move to the heart of the presentation a sketch of some recent speculation about the brain and its structure, and finally the connection with semiotics, the relation of significant signs to behavior and the brain.

The foundation, for this paradigm shift, we will argue, can be found in cognitive science, particularly the developing science of how human brains support cognition, and semiotics, construed as the meaning of utterances, the symbolic underpinning in the intention and understanding of language users. Such a shift in theoretic foundation reflects two major paradigms in scientific thought. The first, and perhaps most compelling to me is the movement from empirical chemistry to deep theoretic underpinnings prompted by the periodic tale of elements (Weinstein, 2018). The history of this discipline points to the essential role of deep theory in human understanding. More obviously salient is the move in psychology itself from behaviorism to cognitive science. Although behaviorism set the parameters for modern psychology, the deepening of psychological theory through speculation as to the underlying process is arguably the most important advance in the history of psychology, pointing to both more adequate functional analysis and to deep understanding in terms of neuro-physiology (Gardner, 1987). These, however, are metaphors no matter how provocative, when applied to argument theory. The adequacy of the proposal for a new paradigm must rely on the details of the new theoretic perspective.

This paper will sketch out those details by identifying two source perspectives from recent speculations in brain science and semiotics. The first will be the speculations of cognitive neuro-scientists, in particular Thagard and Aubie (2008) and Antonio Damasio (2012). The second is the revolutionary concept of Richard Dawkins (1976) and his introduction of the meme as a parallel in human cultural evolution with the gene in biological evolution. The meme, as we shall argue, is the key to the semiotic basis for

conceptual change that parallels the force of an argument when it moves an interlocutor from his or her prior position, to consideration of the position of the proponent. It is how the newly considered meme restructures the conceptual basis for commitment that, internalized in the brain structure of the interlocutor, accounts for the ability of an argument to persuade.

The consequences for the analysis and evaluation of arguments moves argument theory from the explicit statements to the underlying structures that support the overt content of an argument. Central to this are the warrants stated or assumed. These need to be excavated and evaluated for their role in supporting the selection of reasons put forward, and especially in terms of the resistance to counter-evidence. It is the perspective of the new paradigm that the depth of commitment to warrants and their pervasive role in the commitment structures of proponents and interlocutors is essential to understand the arguments put forward and sustained. This is a central concern in socially significant arguments of all sorts, and moves argument theory to an arena that highlights the importance of arguments to essential aspects of human life. An interesting consequence of this approach is the shift from an oft-cited stance in understanding the unstated background of overt argumentation, the so called ‘principle of charity’ needs to be replaced by a principle of suspicion (for a detailed recent discussion of the purposes and issues in the principle of charity see, Stevens, 2020).

2. WHY COGNITIVE SCIENCE?

Cognitive scientists, rather than looking at behavior alone, build functional models that account for the behavior using theoretic constructs (Gardner, 1987). I see this to have a clear analogy with early physical chemistry. In the history of physical chemistry, the increasing degree of articulation in the details that chemical theories explained, what I call ‘consilience’, was combined with breadth, that is, with the scope of a theory, all predicated on a concern with deep theory, such depth is arguably the source of its enormous epistemic power (Weinstein, 2011). A parallel analysis of cognitive science can be seen as plausible evidence that cognitive science is in a position to sustain indefinite empirical growth and increasing theoretic strength (Weinstein (2015). The promise of increasingly sophisticated computer simulations of mind offers possibilities for the description of the complex theoretic structures put forward. Complex descriptions that require computer modeling for their articulation offers a test of consilience unlike anything in the prior history of psychology. Computer simulations of interactions employ theoretic constructs based on a vastly increased knowledge of the structure of the brain, available through powerful advances in instrumentation, brain scans of various sorts. This enables the analysis of the range of cognitive behaviors.

We do not know which theories in cognitive science are correct, but if they can be developed consistent with the available evidence, they have the potential to grow in scope and detail as the theoretic predictions of ever-finer models of complex systems can be ascertained through computer simulations corresponding to the increasingly detailed experimental knowledge of the brain. That is, cognitive science shows potential for consilience. Like early physical chemistry, we don’t know which theories in cognitive science will be sustained, but if a theory continues to yield important explanations, the

potential for a growing and all-encompassing theoretic structure of psychology becomes plausible.

Cognitive science is, if nothing else, exceptionally broad in the scope of its concerns. The *Cambridge Handbook of Cognitive Science* (Frankish & Ramsey, 2012) lists eight related research areas that reflect different aspects of cognition, including perception, action, learning and memory, reasoning and decision making, concepts, language, emotion and consciousness. In addition, they list four broad area that extend the reach of cognitive science from human cognition standardly construed to include animal cognition, evolutionary psychology, the relation of cognition to social entities and artifacts and most essential, the bridge between cognitive science and the rest of physical science: cognitive neuroscience. Each of these is a going concern, and none of them is free of difficulties. Yet in all cases there is a sense of advance, of wider and more thoughtful articulation of theoretical perspectives that address a growing range of cognitive concerns. But as compelling as these characteristics are, it is depth that cognitive science shares with physical science, as both structures enable micro-explanations that can be seen to yield an over-arching ontology (Weinstein, 2002).

The key to the epistemological power of cognitive science is its foundation in neuroscience. Speculations of instantiated neural mechanisms have systemic power much greater than their evidentiary weights. Such speculations offer an image of enormous potential warrant. For their enterprise, bridging between fundamental pre-cognitive processes such as physiological control and emotions to build the functional potential for memory and cognition offers deep structural warrants supported by reliable evidence and accepted theories. Moreover, their materialist assumptions permit a deep reduction to physiology, neurobiology, biochemistry and electrochemistry. A materialist foundation that any adequate theory of brain function must ultimately depend on. The question for us is what cognitive science has to offer to argumentation theorists, whose concern is understanding the role of evidence and underlying belief commitments in explaining the strength of arguments and especially their resistance to, what seems to be the heart of rationality, change in the face of counter-evidence.

3. BIAS AND PERSUASION

Research over decades indicates that our past associations affect our ability to alter our beliefs (Jacoby, et. al, 1989). A study of political beliefs showed resistance to argument that challenge our memories and commitments: “the persistence of misinformation might better be understood as characteristic of human thinking” (Lewandowsky et al., 2012, p. 114). Much of the available research relevant to the role of emotions in cognition focuses on bias and stereotyping (Blair, Ma, & Lenton, 2001). Unacknowledged, such attitudes may remain disconnected from a person’s avowed beliefs (Greenwald & Krieger 2006). Such implicit biases create emotional disturbance when in the face of social pressure such views are put into question (Dovidio and Gaertner, 2005).

There are neural mechanisms that account for such phenomena. The prefrontal cortex which processes conscious thought and the so-called “executive functions,” planning, goal setting, evaluation, and cognitive control is connected to other parts of the brain organizing input together into a coherent whole. Under the prefrontal cortex is the

orbitofrontal cortex, which broadly supports self-regulation: physical, cognitive, emotional and social. These regions combine inputs to create the image of our physical body as well as perceptions of the external world and mental constructs (Dehaene, 2014). Research indicates that mirroring of emotions, the degree of empathy we show others, is modifiable by real or perceived social relationships supporting ethnic or gender stereotypes (Iacoboni, et. al. 2005; Amodio & Devine, 2006). There is evidence that biasing emotions reach deep into our biographies and are expressed in implicit biases (Rudman, 2004). Childhood based biases cause strong reaction such as fear of unfamiliar others, which has been correlated with activation in the amygdala (Dunham, Baron, & Banaji 2008). Biases interfere, on a neural level, with the ability to experience others (Lebrecht, et. al., 2009). Mirror-neuron systems, the basis for empathetic understanding are less responsive to outgroup members than to ingroup members (Gutsell & Inzlicht, 2010).

Such results have been generalized in a theory of the “automaticity” of higher mental functions, which sees ordinary cognition as dependent on environmental and social factors (Bargh & Ferguson, 2000). Evans (2008) offers a complex image of the interaction between what he terms unconscious and conscious cognition, seeing a variety of distinct and possibly incompatible systems: System 1 (unconscious/automatic/low effort) and System 2 (conscious/explicit/high effort). Kahneman (2011) distinguishes between entrenched and rapid cognitive responses and more careful deliberative thought. The work continues with the development of neural models that indicate the integration of cognition and emotion through abstract structures based on the known physiology of the brain.

4. MODELS OF THE KNOWING BRAIN

Speculations as to the neural mechanisms have systemic power much greater than their evidentiary weights. Although speculative and very likely inadequate, they offer an image of enormous potential warrant. For their enterprise, bridging between fundamental pre-cognitive processes such as physiological control and emotions to build the functional potential for memory and cognition, offers deep structural warrants supported by reliable evidence and accepted theories. As indicated, materialist assumptions point to the deep reduction to physiology, neurobiology, biochemistry and electrochemistry that an adequate theory of brain function would depend on. As the models, indicated below, show, the brain coordinates functions across an array of inputs permitting an integrated response that enables perception, memory and purposes to bring together information necessary for coordinated action in the world. I see this as a clear parallel with consilience, the increasing systematic effectiveness across areas on concern as the sciences develop and new problems are confronted. Second the brain integrates the broad array of disparate information, proprioceptive, hormonal, electrical, and chemical, integrating new input with stored impute and modifying content in relation to newly acquired stimuli of many kinds. This seems to me parallel to breadth, the range of concern typified by physical chemistry (Weinstein, 2016). Most importantly, all of these functions are accounted for on increasingly defined more abstract levels, moving from gross physiological function to the operation at the cellular level, and if we accept materialism, to the molecular level, as we understand the functions of the neurological array on the deepest physiological levels. This has a clear parallel with the depth characteristic of physical chemistry, the reinterpretation

of a theory in terms of a higher order, more abstract and more deeply ontological sense of the ultimate realities behind the phenomena. This is exemplified by the ambitious attempts of Thagard and Aubie, (2008) and Damasio (2012) to bridge the gap between abstract structure and available physiological knowledge.

Thagard and Aubie draw upon both neurophysiology and computer modeling. This enables both theoretic depth and the possibility of increasing adequacy, even if the latter is no more than computer simulations of simplified cognitive tasks. They cite ANDREA, a model which “involves the interaction of at least seven major brain areas that contribute to evaluation of potential actions: the amygdala, orbitofrontal cortex, anterior cingulate cortex, dorsolateral pre-frontal cortex, the ventral striatum, midbrain dopaminergic neurons, and serotonergic neurons centered in the dorsal raphe nucleus of the brainstem” (Thagard and Aubie, 2008, p. 815). With ANDREA as the empirical basis, they construct EMOCON, which models emotional appraisals, based on a model of explanatory coherence, in terms of 5 key dimensions that determine responses: valance, intensity, change, integration and differentiation (pp. 816ff). EMOCON employs parallel constraint satisfaction based on a program, NECO, which provide elements needed to construct systems of artificial neural populations that can perform complex functions (fig. 11, p. 827; see pp. 831 ff. for the mathematical details). The upshot is to show “how interactions between cognition and emotion can be understood in terms of parallel constraint satisfaction, if mental representations are assumed to have an emotional value, called a valence, as well as a degree of acceptability” (p. 827). The construction of EMOCON points to the potential power of their approach. Computer models, even if gross simplifications, permit of ramping up. A logical basis with a clear mathematical articulation has enormous potential descriptive power as evidenced by the history of physical science.

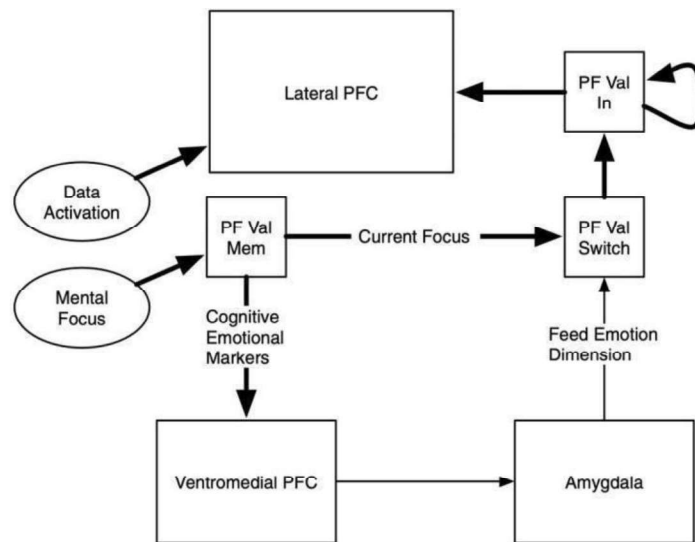


Fig. 11. NECO model of emotional coherence. Lateral PFC is lateral prefrontal cortex. Ventromedial PFC is ventromedial prefrontal cortex. Mental focus is an external signal corresponding to working memory.

Damasio (2012) has a similarly ambitious program. He begins with the brain’s ability to monitor primordial states of the body, for example, the presence of chemical molecules

(interoceptive), physiological awareness, such as the position of the limbs (proprioceptive), and the external world based on perceptual input (exteroceptive). He construes this as the ability to construct maps and connects these functions with areas of the brain based on current research (pp. 74ff.). This becomes the basis for his association of maps with images defined in neural terms, which will ground his theory of the conscious brain.

Given that much he gives an account of emotions elaborating on his earlier work, but now connecting emotions with perceived feelings. As with the association of maps and images, Damasio associates emotions with feeling and offers the following account: “Feeling of emotions are composite perceptions of (1) a particular state of the body, during actual or simulated emotion, and (2) a state of altered cognitive resources and the deployment of certain mental scripts” (p. 124). As before he draws upon available knowledge of the physiology of emotional states but the purpose of the discussion is not an account of emotions *per se*, but rather to ground the discussion of memory, which becomes the core of his attempt at a cognitive architecture (p. 139ff.). The main task is to construct a system of information transfer within the brain and from the body to the brain. The model is, again, mediated by available physiological fact and theory about brain function and structure. The main theoretic construct in his discussion of memory is the postulation of “convergence-divergence zones” (CDZs), which store “mental scripts” (pp. 151ff.). Mental scripts are the basis of the core notion of stored “dispositions”, which he construes as “know-how” that enables the ‘reconstruction of explicit representation when they are needed’ (p. 150). Like maps (images) and emotions (feelings) memory requires the ability of parts of the brain to store procedures that reactivate prior internal states when triggered by other parts of the brain or states of the body. Dispositions, unlike images and feelings are unconscious, ‘abstract records of potentialities’ (p. 154) that enable retrieval of prior images, feelings and words through a process of reconstruction based in CDZs, what he calls “time-locked retroactivation” (p. 155). CDZs form feedforward loops with, e.g., sensory information and feedback to the place of origination in accordance with coordinated input from other CDZs via convergence-divergence regions (CDRegions) by analogy with airport hubs (pp. 154ff.). Damasio indicates empirical evidence in primate brains for such regions and zones (p. 155) and offers examples of how the architecture works in understanding visual imagery and recall (pp. 158ff.).

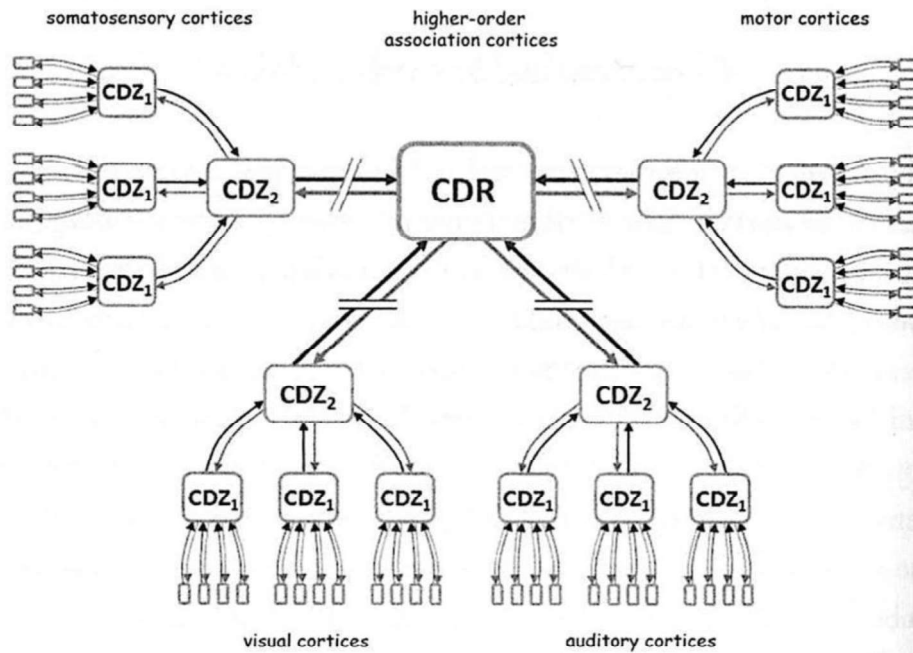


Figure 6.1: Schematics of the convergence-divergence architecture. Four hierarchical levels are depicted. The primary cortical level is shown in small rectangular boxes, and three levels of convergence-divergence (larger boxes) are marked CDZ₁, CDZ₂, and CDR. Between CDZ levels and CDR levels (interrupted arrows), numerous intermediate CDZs are possible. Note that, throughout the network, every forward projection is reciprocated by a return projection (arrows).

Damasio (2012, p. 152)

Damasio, like Thagard and Aubie, offers speculative models that reference current physiological knowledge, rely on concepts from computer science and information theory and bypass the deep philosophical issues that are seen by many to create an unbridgeable gap between the mental and the physical short of deep metaphysical reorientation (Chalmers, 1996). Yet, whatever the ultimate verdict on these two authors, the rich program in cognitive science persists and has a strong appeal. The reason is the potential strength of the warrants, that is to say, if such models prove to be correct, the epistemic force of the warrants that support them will be enormous, for they are presumptively warrants with increasing consilience and breadth, and most importantly warrants that have great ontological depth. And thus, they are warrants that swamp the alternative approaches that rely on, for example, psychological generalizations alone.

5. NEURAL MEMETICS

As originally proposed by Richard Dawkins (1976), the meme is defined as a self-replicating unit of cultural transmission, paradigmatic examples of which are blue jeans, the introductory musical phrase of Beethoven's 5th symphony and memorable commercial brands and their slogans. These memes have a crucial semiotic function. It is not their physical or even communicative properties that give them their importance but rather than symbolic role, their semiotic function as signs that organize concepts and behaviors. So, for example, blue jeans, a functional piece of clothing became in the 1960's the emblem of first the counter culture in the US and thereafter as a symbol of everything that the US offered to countries throughout the world, especially in the USSR where blue jeans became a symbol of resistance to communism and a physical emblem of the search for freedom. The opening notes and rhythms of Beethoven's 5th symphony, and their symmetry with the Morse code sign for the letter 'V,' conjoined with Churchill's ebullient hand signal become an organizing conceptual structure in the fight against Nazi Germany, as did the *Ode to Joy* of his 9th symphony, an emblem of the hope and the possibility of universal brotherhood.

Conceived as the analog of the biotic genetic replicator, Dawkins' analysis offers the meme as a means of explaining cultural evolution through the lens of Darwinian competition. Subject to the same selective forces of biotic evolution, Dawkins proposes that extant cultural diversity and complexity are a result of both the replicative capabilities of memes and their differential fitness, where successful memes are those whose replicative power results in their pervasive presence in an environment comprised of entities capable of hosting their encoded information. Indeed, the entire description of a memosphere is founded upon a strict analogy with biotic evolution.

It is perhaps not surprising then that over the past several decades, memetics has been leveraged in the field of cognitive theory and philosophy of mind. In *Consciousness Explained* (Dennett, 1991), Daniel Dennett posits a core role for the meme in a computational theory of mind that seeks to account for the development of cognitive capacity that has transpired over the last 10,000 years with little change to underlying brain structure. To this end, Dennett postulates that memes serve not only as inert semantic tokens manipulated by the parallel architecture of a brain - the operands of a functionally defined operator - but as agents cognitive change. Given the computer metaphor at the heart of Dennett's model, memes can be said to reprogram the software responsible for information processing.

More recently, Willard Miranker (Miranker, 2010) has proposed a viable and empirically reasonable physicalist reduction of Dennett's intentionally described memes. While we are not committed to the details of Miranker's account, we offer it as an exemplar of the viability of memetic theories of cognition given our current understanding of neuronal architecture. Adhering to the genotype/phenotype distinction at the heart of biotic evolution, Miranker's model details the structure and function of the meme's phenotypic neuronal manifestation as it relates to the specifics of cognitive development. Starting from Gerald Edelman's theory of neuronal parsing (Edelman, 2003), where brain development involves the programmed cell death of unused neuronal arrays, Miranker identifies the brain as the site of evolutionary selection, where neuronal arrays that fire often enough survive, while those that do not, die. This process of pruning itself defines the mechanics

of cognitive development, which, over time, yields an increasingly complex grammar of the mind that underwrites our understanding of the world.

Neuronal firing is itself informed by the activity of the afferent synapses of the neuronal array, which Miranker, in keeping with the biotic/memetic analogy, tags as the information-bearing genotypic component of the meme. At the scale of the neuronal array, it is the set of afferent synapses that constitutes the encoded memetic information, in much the same way that chromosomal material encodes genetic information. Given that the efficacy of the afferent synapse set to induce neuronal firing determines the likelihood of survival of the array, we can speak of meme success in a manner like that of the gene. That is, afferent synapse sets that result in the survival of the array long enough for the host to broadcast copies of the encoded memetic information through the speech acts, writing, or other semantically pregnant forms that become neuronally instantiated in other hosts are successful in the same manner as their biotic counterparts – relative to other memetic genotypes, they are effective at propagating their encoded information.

6. CONCLUSION

It seems obvious that constructing and responding to arguments is affected by preconceptions of all sorts. This seems particularly true in respect current argumentation about political and cultural disputes whether in government fora, in the media or in the voting patterns of citizens. This offers a challenge to traditional models of argument which sees people's attitudes responsive to reason and open to persuasion. It is the thesis of this presentation that an explanation of the phenomena is increasingly available in cognitive neuro-science, which can retrospectively account for similar periods of recalcitrance, whether as evidenced by religious wars or secular revolutions. On the model we describe, commitments are wired into the brain, self-reinforcing and difficult to change. And if combined with the evolutionary struggle between competing points of view, it is not surprising that the classic models of logical persuasion fall short in accounting for the persistence of entrenched political and cultural perspectives. That is not to deny that change occurs, but it indicates that change occurs when a new vision, a compelling idea, or equally likely an image or even a song captures the imagination of people and triggers a readjustment of the cognitive architecture.

If my analysis is at all correct, the consequences for argument theory are significant. For, if as I maintain, arguments both in successful areas of inquiry like physical chemistry and cognitive science have analogous structural architecture to those found on a neural level, then argument theorists should consider expanding their analysis of argument structure in significant ways, responding to the pervasive interlocking structure of cognitive functioning arrays. As a start, the model of argument as a structure whose form offers an indication of its adequacy must be expanded. Argument must move from description of the surface structure to the underlying functions the structures exemplify. In particular, argument theorists should consider strategies to identify the substructure of warrants that reflect the relative strength of underlying networks of commitments. These deep structural warrants, identified by their role in organizing diverse claims, afford additional support by virtue of the variety of the claims they support and by their increasing effectiveness in directing and sustaining argument. Generally, more abstract than the variety of claims they

support, and I think here of, for example, broadly political or even moral commitments, such underlying warrants explain the tenacity of positions in social argument that are resistant to counter-argument, and even contrary evidence. This is describable in terms of a model of warrant strength based upon the structure of scientific discourse in such theoretically advanced inquiry such as physical chemistry. I have developed such a model based on the structure of physical chemistry (Weinstein, 2013) developed in response to the history of the periodic table (Scerri, 2007), grafting my analysis of warrant strength onto a formal model of adaptive logic developed by Strasser & Seselja (2011). Although, perhaps not the last word in understanding how a theory of warrant strength may be articulated and combined with an account of evolving argumentation, it is at least a step in the direction that argument theorists might find worth considering.

A position such as mine requires a refocusing of recent efforts in argumentation theory. For example, moving critical questions as pioneered by Walton (1996) from a framework of fallacies to a concern with belief structures and underlying commitments. It requires more than a complication of argument diagramming (Freeman, 2011) and moves argument analysis to models of belief stores that reflect dimensions of commitment (Paglieri & Castelfranchi, 2005). Such a perspective challenges the idea of a topic neutral theory of argument, requiring an exploration of movement into the epistemic and even emotive details of support networks that underlie claims, and the justification tacit or explicit that warrant their support. The most critical question of all is: How does the level of commitment to warrants and the networks of beliefs that they represent alter the evaluation of evidence, both evidence sought and evidence already available? (Weinstein, 2006).

As important, the hard and fast distinction between fact and value needs to be overcome, especially in areas of social significance, for values affect the way we look at facts. The gloss of value as emotions, is not the main concern, it is rather the affect-laden nature of our commitments that must be taken into account, for the force of value-laden commitments in making determinations of facts used as evidence are all too often more powerful than the force of facts alone (See Edsall, 2022b for an interesting account of voting preferences; Edsall 2023b for the deep emotive roots of political decision making). How does the value of individual freedom as compared to the value of lives possibly at risk, determine the gun debate? How does the religious perspectives on the meaning of life affect views of a women's right to control her reproductive choices? How does a commitment to a political party affect our willingness to believe hyperbolic claims and promises? On and on! It is the network of commitments of all sorts that determine the force of arguments and if argument theorists want to get serious about understanding the force of arguments, it is these underlying networks that must be addressed. Such views require students of argument to go into the 'weeds' of an argument, to look at the range of the supporting warrants and beyond (Edsall, 2023a offers a well-documented analysis of the deep structures supporting political choices in the USA). Argument theorists must engage with the more difficult terrain of backing, in my gloss on Toulmin (Weinstein, 2006), the deep theoretic reinterpretation of warrants in terms of deeper and more theoretically laden perspectives: worldviews and standpoints.

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