The Ends of Media Theory

M. BEATRICE FAZI

University of Sussex, UK

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1. The end is nigh?

Since its original publication in *Wired* magazine nearly a decade ago, much has been said about Chris Anderson's article 'The End of Theory'. In this provocative piece, Anderson describes a technological present in which algorithms and software generate insight in ways that human experts and specialists cannot. For Anderson, the truth regimes of theories and theorists are "becoming obsolete" because high-performance and high-speed computational operations are now driving both invention and discovery. It is data – in fact, "massive amounts" of it – that offers a key to uncovering the secrets of the world. Computing possesses an ability unlike anything before it to collect and manage this Big Data into patterns for human consumption. It does so with no need for experiments, models and hypotheses, but rather by merely allowing the "numbers to speak for themselves" (Anderson, 2008).

Under different guises, the prospect of the end of theory that Anderson described in 2008 has been resonating in a variety of intellectual conversations about new technologies. It is mirrored, for instance, within debates in the digital humanities, where the slogan 'more hack, less yack' has been circulating for some years. The prospect of the end of theory is also reflected in popular concerns about the end of cognitive work due to algorithmic automation, and in related worries about the shrinking of human intellectual faculties in a society where rational decision is increasingly delegated to machines. Moreover, the prospect of the end of theory returns in the never-fulfilled methodological gaps between practical work and theoretical work, or in the never-resolved conflictual dichotomy between thought

and action. It also thrives in the present emphasis on 'making' as a more authentic mode of both individual and public engagement with the digital.

In what follows, I wish to take the launch of a new journal of media theory and its inaugural issue as an opportunity to reflect on this condition, and to address the concept of 'theory': a concept that has been celebrated by some, but which has been declared to be dead by others. My ambition here is not to offer an exhaustive treatment of what 'theory' might be in relation to media and media studies. Instead, I will signpost a few issues that demonstrate, in my view, how a post-mortem for theory is not necessary, as the patient is in fact alive and well. My aim is thus to offer some reflections on the role of theory in general, and on the role of media theory specifically, in order to show the continued relevance of some form of theoretical enquiry or speculative endeavour.

2. Creating an Abstract System

Anderson's 'The End of Theory' was not the first announcement of theory's purported demise and, most likely, it will not be the last. An ambiguity inherent in the term 'theory' can be considered to be at least partly responsible for the bad press that the concept often receives. Although the origin of the word is clear (it derives from the ancient Greek *theōria*, meaning *contemplation* and *speculation*),[1] the use to which the term is put is often less so. There is in fact a contrast between its technical and colloquial usages. Scholarly speaking, a theory is as sound as its power for generality. In common speech, however, 'to have a theory' often indicates nothing more than having a glorified guess or a lucky hunch. In my view, this discrepancy is interesting, for it highlights how, in both cases, it is the speculative and at the same time totalising aim of theoretical work that appears to cause concern or disaffection.

1 In the essay 'Science and Reflection', Martin Heidegger gives an etymology of the notion of theory. He writes: "The word 'theory' stems from the Greek verb *theōrein*. The noun belonging to it is *theōria*. Peculiar to these words is a lofty and mysterious meaning. The verb *theōrein* grew out of the coalescing of two root words, *thea* and *horaō*. *Thea* (cf. theater) is the outward look, the aspect, in which something shows itself, the outward appearance in which it offers itself. Plato names this aspect in which what presences shows what it is, *eídos*. To have seen this aspect, *eidenai*, is to know [*wissen*]. The second root word in *theōrein*, *horaō,* means: to look at something attentively, to look it over, to look it closely. Thus, it follows that theōrein is *thean horan,* to look attentively on the outward appearance wherein what presences becomes visible and, through such sigh – seeing – to linger with it" (Heidegger, 1977: 163).

To theorise is indeed often understood in terms of moving away from the reality that the theory was meant to account for. On this somewhat caricatural view of the activity of the theorist, to engage in the production of theory is to refuse to participate in the world, and to choose instead a life of the mind that bears little resemblance to that of the world. To call for the end of theory, then, or to refuse to engage in theoretical work, is often seen as an attempt to protest such detachment: empirical or practical work is seen as more concrete, and making 'stuff' is regarded as more honest than just thinking about it.

In order to explain and expand on this point, one can consider how Fredric Jameson distinguished between theory on the one hand, and philosophy on the other. The latter, for Jameson, is "always haunted by the dream of some foolproof, self-sufficient, autonomous system, a set of interlocking concepts which are their own cause". Theory, by contrast, "has no vested interests inasmuch as it never lays claim to an absolute system, a non-ideological formulation of itself and its 'truths'; indeed, always itself complicit in the being of current language, it has only the never-ending, never-finished task and vocation of undermining philosophy as such, of unravelling affirmative statements and propositions of all kinds" (2009: 59). Jameson's distinction can be seen to be epitomised in and by the intellectual efforts of poststructuralism, whose challenge to institutional and ideological forms of knowledge is accompanied by a particular attention to and care for the minoritarian, material and genealogical aspects of thought. When looking at the role of theoretical research in contemporary technoculture, I believe that it is necessary to acknowledge these debates. The prospect of an 'end of theory' should thus be situated within the broader context of long-standing critiques of rationalism and logocentrism. After all, long before Anderson's article (and to a very different extent and aim), postmodernism announced the imminent collapse of all master discourses, grand narratives and metalanguages, and cast a cloud of deep suspicion over universalist and universalising modes of thinking.

For the scope of the present discussion, however, I will not pursue the postmodern opposition between philosophy and theory in a rationalist/universal or, conversely, relativist/particular key. This is partly because I need to make this immense topic a little more manageable in the limited space at my disposal. Most importantly,

however, this is because *I wish to stress the similarities between philosophy and theory, rather than their differences*. Instead of following Jameson in distinguishing between the transcendence of philosophy and the immanence of theory, I will focus on the relation between theoretical work at large (including philosophy), on the one hand, and the concept and activity of abstraction on the other. Of course, postmodern and poststructuralist theories might employ very different abstractions than those mobilised by Enlightenment philosophy, for example. Still, whilst all philosophy is, to an extent, theory, and whilst not all theory is philosophy, to theorise, in my view, inevitably involves abstracting. Attempts at generality might be exercised to different degrees, and denotations of the concept of an 'abstract structure' may vary greatly. Yet, I would say that it is the capacity of all theoretical work (philosophical or not) to abstract that remains, if not transcendent, then at least transcendental.

In this sense, I propose that in order to address what theory in the twenty-first century might be (or what its frequently announced end might amount to), one should address the ways in which the act of theorising is often understood, both scholarly and popularly (and, as seen above, by Jameson himself), in terms of creating an abstract system. This system might be closed and absolute, open-ended and relative, or neither; nonetheless, it still involves a degree of (theoretical) distance from the very same reality that that system was meant to describe in the first place. This distance has often alienated people and generated aversions to theoretical work amongst students and university departments. The task, then, which I cannot fully take on here, but which I can at least point towards, is that of exposing a false conception pertaining to this distance; i.e. the view according to which, if to theorise is to abstract from observation, then to abstract or speculate is in turn to disengage from matter and facts. My aim is to show that abstraction is not some kind of contemplative removal from the world, but is in fact intrinsic to the latter, and to how we experience it.

3. Theoretical Distance

My argument for the salience of this task involves turning to an old, but still relevant differentiation: that between 'traditional theory' on the one hand, and 'critical theory'

on the other. I am of course referring here to Max Horkheimer, who first made that distinction and posed it as the programmatic cornerstone for the intellectual project of the Frankfurt School.

Horkheimer's 1937 essay, 'Traditional and Critical Theory', defines theory as "stored up knowledge, put in a form that makes it useful for the closest possible description of facts" (2002: 188). The aim of theory is to systematically explain and interpret facts via conceptual structures and deductively enclosed systems of propositions. In this respect, "[t]he real validity of the theory depends on the derived propositions being consonant with the actual facts. If experience and theory contradict each other, one of the two must be re-examined" (ivi). In the essay, however, Horkheimer exposes the weaknesses of this methodology and definition of theory. What he calls 'traditional theory' uses unquestioned concepts and modes of thought to test hypotheses vis-à-vis facts. Horkheimer argues that the conceptual apparatuses of 'traditional theory' are indeed instrumental to types of knowledge that are already looking for particular kind of results. In this sense, traditional theory does not recognise that "bringing hypotheses to bear on facts is an activity that goes on, ultimately, not in the savant's head but in industry" (196). To put this otherwise, traditional theory misses that science (and theory at large) always works "in the context of real social processes" (194), and according to the needs of the latter. By refusing to acknowledge its historical dimension, traditional theory ends up perpetuating the ideological assumptions of the society in which it is situated. To traditional theory, then, Horkheimer opposes an emancipatory 'critical theory' of society, which is "dominated at every turn by a concern for reasonable conditions of life" (199), and whose purpose, by contrast, is to assess the individual's "web of relationships with the social totality and with nature" (211).

Detailing the specificities of critical theory goes beyond the aim of my essay. It should suffice here to say that Horkheimer's argument is interesting in the context of the present paper because it helps us to highlight how theory, and the act of theorising, are not necessarily operations that are meant to leave reality behind, but are instead concerned with how to live in the world, and with how we can avoid being so absorbed in it as to lose any critical perspective upon it. It is then relevant, in my view, to address Horkheimer's differentiation between traditional and critical

theory. This is because, whilst the former is satisfied with operating within an existent social framework, the latter is instead concerned with questioning the characteristics of that framework in order to change it. In this sense, doing theory (in its critical mode), or adopting a theoretical distance, involves going beyond the mere observation of a given datum and towards *self-reflection*. This self-reflection, in turn, amounts to recognising oneself as different from one's object of study and yet part of a mutual self-determination.

It is useful here also to situate these considerations within the context of the Frankfurt School's fierce condemnation of 'positivist thinking'. In brief: *positivism* is a doctrine that was developed in the mid-nineteenth century by the French sociologist and philosopher, August Comte. It holds that true, valid or 'positive' knowledge should be based on the quantification of sensory experience. For positivists, all things are ultimately measurable, and all knowledge is ultimately objective. Famously, the Frankfurt School of critical theory interpreted positivism as a "trend towards the hypostatisation of science" (Horkheimer, 2013: 41). Thinkers such as Theodor W. Adorno and Max Horkheimer took issue with the idea of a value-free theory. They contested the pretence of objectivity of positivist sciences in general and, more specifically, the epistemological commitments of 'logical positivism' (i.e. a rationalist version of positivism developed in the early twentieth century, which championed the reduction of all knowledge to logical statements). Indeed, for the critical theorists, positivism epitomised a traditional mode of thought (and of theory) that confronts the world through fixed categories, and which has little regard for the specificities and contingencies of history. Moreover, and most interestingly from the perspective of the argument that I wish to develop, the Frankfurt School denounced positivism's scientific focus on bare factuality, and attacked its lack of engagement with the subjective reasons (rather than objective causes) for how these bare facts came to be in the social world or as an act of the human mind. Positivism, in other words, is seen to uncritically and instrumentally accept empirical facts whilst bracketing out the possibility of addressing any of the contextual human and social abstractive structures that shape such facts. The positivist conformism to facts, then, is viewed as a sort of dogma or truth, expressed "under the distortion of making it

exclusive" (Horkheimer, 2013: 64), and under the expectation of obtaining certain results, geared towards specific needs.

The theoretical work of the Frankfurt School profoundly challenged the assumption that data (or numbers, as Anderson would want to put it) can speak for themselves. Rather, it pushed for a reflective distance from the datum of experience: a reflective distance that would allow for a deeper, more meaningful way of engaging with said experience, in manners that would not just simply suit predetermined operational schemas. Thus, although the critical thought that the Frankfurt School proposed is not praxis (and Adorno in particular was keen to stress this point; see Adorno, 2010), neither is it mere contemplation. Instead, thinking is already acting in the world. Abstractions, in turn, are not to be discarded but understood, perhaps through the production of more abstractions, which are never identical with facts. This is because the assumption of a bare factuality is already, for the thinkers associated with the Frankfurt School, a fiction. On this view, therefore, theoretical distance is necessary in order to prevent an object of study from becoming frozen or fixed, and to integrate it into the conceptual structures that afford an explanation or interpretation of it (but which never naturalise it).

4. Knowledge Without Thought

In order to bring these observations into the field of media theory, it is necessary to say something about the relation between the latter and abstraction. This involves addressing what a theoretical distance might be, and what it might entail if one is to adopt such a distance within or in relation to a media theoretical context. First of all, it should be stressed that just as there is no a single conception of theory, so too is there no unified understanding of media theory either. Moreover, just as theory often has a contested status in the academy, it sometimes seems that media studies would happily do without its theoretical side. This means that asking what theory in media studies aims to achieve entails considering this theoretical specificity in relation to other intellectual enquiries (such as those of cultural studies, sociology and science and technology studies, for instance) that also inform much of our current understanding of technological mediation.

I propose now to do precisely this by returning once again to Anderson's *Wired* article (Anderson, 2008). This article was not aimed at media theorists, but the way in which such theorists might respond to it can help us to clarify the scope and implications of media-theoretical debates. In this respect, we must begin by observing that Anderson's argument for the end of theory is an argument about the obsolescence of the scientific method. Anderson is concerned not with the role of speculation in the humanities, but rather with that of hypotheses, experimentation and, above all, models in the sciences. This is not to deny that his claims pertain to work in the humanities. In fact, they seem intended to carry distinct implications in that regard. However, it is interesting to note that Anderson's explicit target is the methodology of theoretical science, which is pitched against that of applied technology.

Anderson observers that we are living "in the most measured age in history". This condition, he claims, calls for "an entirely different approach" to knowledge. The modus operandi of Google exemplifies, in Anderson's view, the epistemological turn offered by computation. Google did not assume, or indeed know, anything about advertising before becoming the biggest player in the business. Rather, it became so simply by using "better data" and "better analytic tools". Testable hypotheses, then, are a thing of the past, insofar as Big Data allows the luxury of not caring for objective causes or subjective reasons, and of focusing solely on *correlations*. The key example that Anderson advances is the gene-sequencing work of the American biotechnologist and geneticist J. Craig Venter. "Enabled by high-speed sequencers and supercomputers that statistically analyze the data they produce", Anderson explains, "Venter went from sequencing individual organisms to sequencing entire ecosystems", discovering, in the process, "thousands of previously unknown species of bacteria and other life-forms". Venter, however, is not a modern-day Darwin, for he is not stuck "in the old way of doing science". In distinction from Darwin, Anderson continues, Venter does not know what these new species look like, their behaviour or their morphology. In fact, Venter "can tell you almost nothing about the species he found." All he possesses is "a statistical blip", which nonetheless, helped him to advance biology "more than anyone else of his generation".

For Anderson, this example illustrates his contention that "[we] can stop looking for models", for we can "throw the numbers into the biggest computing clusters the world has ever seen and let statistical algorithms find patterns where science cannot". These comments are indicative of the sense in which Anderson's article implies a perspective that would welcome the prospect of our contemporary world becoming a kind of 'Chinese room'. In John Searle's famous thought experiment, a monolingual English speaker is locked in a room and given sets of Chinese writing, plus rules for correlating their elements with each other. Searle's point is that the English speaker could become "so good at following the instructions" (1980: 418), that "from the point of view of someone outside the room" his or her responses are "absolutely indistinguishable from those of native Chinese speakers" (ivi). Yet, this person does not really speak the language, and does not understand it; he or she only correlates symbols, without much care for meaning.

Searle used this thought experiment to claim that AI programmes might have syntax, but they lack semantics, and thus might present correct answers and yet still lack understanding. However, in relation to the epistemic prospect of an end of theory, delivered via computational automation, this concern does not seem to matter, and surely does not matter to Anderson, who is attacking the role of models in science because they constitute an abstraction from the immediacy of the correlation. Indeed, as argued by Morrison and Morgan (1999: 11), models in science are investigative mediators that represent "some aspect of the world, or some aspect of our theories about the world, or both at once", and thus, one can comment, a humanist residue of the activity of thinking that, for Anderson, one must dispose of.

Most illuminatingly, the philosopher, Bernard Stiegler (2016), has described this epistemic vision as a form of knowledge without thought.[2] This description is as conceptually poignant as it is alarming, for it implies that the end of theory, as announced by Anderson, might spell the end of understanding, and consequently, that of cognate faculties such as literacy and judgment. I would add to this that Anderson's interpretation of current technoscientific practices can be understood as

2 "The automated 'knowledge' celebrated by Anderson no longer needs to be *thought*. In the epoch of the algorithmic implementation of applied mathematics in computerized machines, *there is no longer any need to think*: thinking is *concretized in the form of algorithmic automatons that control data-capture systems* and hence make it obsolete" (Stiegler, 2016: 49).

a form of 'hyper-positivism', because of its total trust in data. However, his vision also challenges the twentieth-century positivist project, insofar as it discards the verifiability (or falsifiability) benchmarks of science that are considered key to 'positive knowledge'. Equally, Anderson's account of the end of theory carries an explicit empiricist character that, whilst celebrating the instrumentality of technoscientific observation (and the computer as the instrument of all instruments, in this case), also in a sense rejects empiricism by denying the usefulness of any observer, thus ultimately emptying empirical research itself of the source of its inferential power.

5. Media Theory After the Computational Turn

What, then, could media theorists do when faced with the prospect of knowledge without thought? In my view, they should defend the possibility of thought in knowledge even after the computational turn in culture and society. If to work theoretically is to work with understanding as an aim, then, to borrow Adorno's words, "one should hold on to theory, precisely under the general coercion toward praxis in a functional and pragmatized world" (2010: 273). I would also add, however, that one should hold on to media theory in particular, and that the need to do so is exacerbated by the present compulsion for (Big) data to functionally and pragmatically replace hermeneutics. My claim here is thus as follows: although I would certainly recognise that not all media theory is 'new media theory', and that not all of that field is strictly preoccupied with the digital, media studies, in its theoretical dimensions, is in a privileged position to understand the epistemological implications of computational technologies.

In this respect, media theory opens up, and can also overlap with, what is now frequently referred to as *media philosophy*. Within academia, the expression 'media philosophy' might denote the specific German-speaking context from which it emerged, and might thus refer to those scholarly efforts that have attempted to create a discipline capable of rethinking the 'medium' in relation to human and non-human subjectivities. However, the term 'media philosophy' might also be appropriated and used more broadly, in order to indicate a multifaceted theoretical

investigation of modes of experience and being that are engendered by, or which exist in relation with, media systems in general. It is in this sense that I adopt the term here, whilst also acknowledging the break that it might signal from the agenda of communication studies, which media studies has, in part, adopted for historical and genealogical reasons.

Media philosophy, understood in the sense proposed here, is not opposed to media theory, but is instead its ally in the pursuit of the creation of concepts suited to addressing the way in which we act, perceive and think in a highly techno-mediated world. Returning to my previous claim that the act of theorising can be understood in terms of abstracting, I would now add that the relation between media-theoretical work and abstraction is one of concept-making. In other words, one of the key 'ends' of media theory, in terms of its aims and purposes, is *conceptualisation*: it is to create conceptual structures via abstractive means, and to explain and interpret facts through and in relation to these structures. A theoretical and reflective distance is important to allow for conceptualisation to follow from *problematisation*. I understand the difference between a concept and a problem in the same manner that Gilles Deleuze did. For him, "concepts are only created as a function of problems", in the sense that "concepts are connected to problems without which they would have no meaning and which can themselves only be isolated or understood as their solution emerges" (Deleuze and Guattari, 1994: 16). Problematisation then precedes conceptualisation because the concepts of philosophy (and of theory alike) are meant to do something: they must address a problem that 'we' (as culture and society, or simply as thinking subjects) are confronted with.

For Deleuze, the freedom to identify and constitute a problem is the freedom that characterises both the nature and the destiny of philosophy (and theory). This Deleuzian argument, which draws from Bergson, is quite an unusual stance in the history of thought, which, arguably, would rather make philosophy (and theory) the intellectual space where solutions (and not problems) are to be found. However, for Deleuze, the questions that intellectual work might pose are more important than their respective answers. For him, "it is the problem which orientates, conditions and engenders solutions", although "these do not resemble the conditions of the problem" (Deleuze, 2004: 264).

In relation to this Deleuzian position, it can be argued that media theory (and media philosophy as well) offers the intellectual space to think computation precisely as a problem; as a problem in need of relevant concepts. Media theory can then think the computational, and its epistemological implications, because it does not take digital technologies as instruments or tools for knowing more, but as objects of study which we should know more about. On this view, what computational media can explain is not so important; rather, it is these computational media themselves that must be explained. Moreover, the Deleuzian argument about problematisation can provide further evidence that to adopt a theoretical stance is not a withdrawal from the world, but is instead a form of commitment to it. It is then possible to expand on Deleuze's position in a manner that accords with a very different tradition of thought, that of the Frankfurt School, discussed earlier, in order to continue to claim that media theory can cast thought as part of the process of generating knowledge (to refer to Stiegler's argument) after the computational turn, precisely because it can think the transformations of thinking by 'thinking technologies'.

In the little space that I have left here I want to bring to the fore yet another voice that can help us to make this claim, and to thereby show once again the relation between theory and abstraction as one that is key to determining the ends (and not 'the end') of theoretical projects. This is the voice of the mathematician and philosopher, Alfred North Whitehead, who published his masterpiece, *Process and Reality*, in 1929, less than a couple of decades before Adorno and Horkheimer wrote theirs (*Dialectic of Enlightenment,* 1944)*,* and who had different, but equally strong, motives for refusing to endorse the positivist trends of his time.

Whitehead's work is not a critical theory of society, but a cosmological endeavour to construct an ontology that could work vis-à-vis the mathematics and science of the twentieth century. Yet, like the Frankfurt School writers, Whitehead also profoundly disagreed with the contention that something like a "brute fact" (Whitehead, 1967: 8) could ever exist. There are many obscure and technical elements in Whitehead's philosophy, whose introduction and explanation exceed the scope and focus of the present essay. All I wish to draw attention to here, however, is the manner in which

Whitehead stressed, forcefully, that *data is not actuality*, but quantifiable records of it. What the 'scientific materialism' (i.e. positivism) of his time celebrated as 'matter', then, is already an abstraction from the immediacy of experience. The latter is seen by positivism as a collection of empty and neutral factualities in need of interpretation. For Whitehead, however, thought (or any mental consideration or 'pole', in Whitehead's vocabulary) is not external to facts, but internal to them, and to the constitution of the world.

How do these considerations relate to our concerns? First of all, Whitehead allows us to understand the central role that procedures of abstraction play in every act of experience. Most interestingly, Whitehead's argument is both epistemological and ontological: to exist is already to be abstracting. Whenever theorists are accused of being too abstract, one can refer to Whitehead and consider his view that there is no such thing as a non-abstractive access to facts. Indeed, it is abstraction that allows us to 'ingress' (a very Whiteheadian verb) reality. So, to abstract is not to move away from the real, but rather to enter it, and to construct it in terms of its actuality.

Secondly, introducing Whitehead's position allows us to move from critique to *speculation*, i.e. to highlight the speculative side of what theory can do. In this respect, I would say that the Whiteheadian observation that abstraction is a fundamental mode of experiencing can be linked to media theory in this way. It can be stressed that the abstractions of media theory are addressing what is, ultimately, another abstraction: technology. This is, in turn, an abstraction that should be situated amongst many more abstractions, such as language, for example. In this sense, abstraction becomes not only a mode of enquiry but an object (or part of the object) of enquiry in its own right. We move then from epistemology to ontology by highlighting that abstraction is constitutive not only of how one might *know* in the world, but also of how one might *be* in the world. Abstraction is not outside and apart from the object, but can be located within it. With Whitehead, the theoretical distance that this essay has addressed becomes the space necessary for the actuality (of technology, as an abstraction alongside other abstractions) to emerge and develop.

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M. Beatrice Fazi is Research Fellow in Digital Humanities and Computational Culture at the Sussex Humanities Lab (University of Sussex, United Kingdom). Her primary areas of expertise are the philosophy of computation, the philosophy of technology and the emerging field of media philosophy. Her current research focuses on the limits of the computational method and of formal reasoning, on the aesthetics of computation, and on the automation of thought.

Email: b.fazi@sussex.ac.uk