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# “MEME THEORY”

by

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degree of Doctor of Philosophy

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## DECLARATION

The author declares that thesis is his own work in its entirety. He also declares that this thesis has not been submitted for a degree at another university.

## ABSTRACT

The internet meme is one of contemporary online culture's definitive media. They're widely distributed online and, in the past few years, have had an increasingly large impact on offline culture as well. The premise of this thesis is that the internet meme poses a theoretical problem for media theory, because they're difficult to conceptualise as media.

This thesis uses this premise as the basis for a wide-ranging epistemological analysis of how we practice media theory in the present. The internet meme, it argues, exemplifies a wide-ranging problem in media theory: that the discipline has yet to adequately conceptualise circulation. This is problematic for the internet meme, because it's defined by its capacity to mutate as it's circulated by users. It's also problematic more broadly, because the circulation of media is central to our contemporary media situation. This thesis frames this problem by arguing that our contemporary media situation is "indeterminate"; that is, that massive distribution and ubiquitous media challenge our capacity to think media in the present. In response, it uses the internet meme as the fulcrum for a series of propositions about how media theory might respond.

To think circulation, it adopts a method from the history and philosophy of science known as "historical epistemology". It uses this method to analyse circulation as a concept—rather than through its theoretical frameworks—and to establish why it remains undertheorised in media theory. It uses this analysis to argue that circulation is a foundational media theoretical concept; to reconstruct this concept; and to posit an approach to thinking media in the present that it calls "meme theory". This approach is characterised by emphasising the epistemological influence that media exercise over our theories of them. By positing a new concept of circulation, a new method of analysis—media-historical epistemology—and a new approach to practicing media theory, this thesis argues that to think media in the present, we have to



understand how they shape our media-theoretical epistemologies in turn. The circulating internet meme helps us to understand how we might do this.

# // INTRODUCTION

## 0. "MEME THEORY"

### 0.0 INDETERMINACY

Friedrich Kittler infamously claimed that "[m]edia determine our situation."<sup>1</sup> Today, it might be more accurate to say that our media situation is indeterminate. To be online today is to be overwhelmed by and subject to seemingly-incessant circulations—of media; of data; of content; of all that's processed by networked computation. To be in the world today is to constantly produce media, data, or content, whether intentionally or incidentally. Between the internet's massive, global distribution and what's often characterised as media's contemporary ubiquity, the boundaries between what we call "the digital" and what we don't are as tenuous as the boundaries between online and off-. This situation constitutes what some scholars compellingly describe as a "postdigital" condition.<sup>2</sup>

In the essay that first posited the concept, Florian Cramer argues that digital media are so ubiquitous that it's no longer appropriate to talk about digital media in distinction to analogue media, because the ways we use analogue media are shaped by digital media's ubiquity.<sup>3</sup> We are "postdigital" in the sense that this distinction no longer holds, in that we've passed an historical threshold. This concept also marks the shaping influence that massively-distributed digital media have on everyday life. Digital media are so ubiquitous that it's no longer appropriate to use "the digital" as a noun, as though to

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<sup>1</sup> Friedrich Kittler. *Gramophone, Film, Typewriter*. Stanford University Press, 1999. 1.

<sup>2</sup> See: David M. Berry and Michael Dieter, eds. *Thinking Postdigital Aesthetics: Art, Computation and Design* Springer, 2015; Ryan Bishop, Kristoffer Gansing, Jussi Parikka, and Elvia Wilk, eds. *Across & Beyond - a Transmediale Reader on Post-Digital Practices, Concepts and Institutions* Berlin: Sternberg Press, 2017.

<sup>3</sup> Florian Cramer. "What is "Post-Digital"?" *A Peer-Reviewed Journal About* 3, no. 1 (2013):

indicate that it constitutes a domain distinct from everyday life—if we ever could. As David M. Berry and Michael Dieter argue, these approaches are part of a “constellation” of thought that collectively registers how the reconditioning of the everyday by the internet has reconditioned our cultural practices.<sup>4</sup> To be postdigital is to acknowledge and to work through the sense that what we do comes after after the digital, that it’s a condition of thinking, making, and doing in the present.

A third sense lurks in the concept of the postdigital. The encroachment of ubiquitous media and the massively distributed internet on to the everyday has epistemological consequences—not only for thinking, but for what we use thought to do. Media are part of the everyday; which is to say, part of culture, part of society, and part of politics. Crucially for us, they are also part of the circumstances in which we must *do theory*. They constitute what I want to call our postdigital media situation. Kittler’s oft-quoted claim is underwritten by the idea that media constitute the *a priori* conditions of possibility for subjectivity: that they determine who or what we—who Kittler often glibly referred to as “so called man”—can be.<sup>5</sup> To claim that we are postdigital is to accord media a different role. It strips Kittler’s totalising pronouncement of its metaphysical baggage. It conceives of media, somewhat more modestly, as contemporary life’s concrete constituents, rather than their conditions of possibility.

Our postdigital media situation is indeterminate: media are everywhere; because they are everywhere, they are hard to apprehend; because they are everywhere harder to apprehend, they exert concrete, conditioning effects on our media-theoretical practices. To do media theory, we have to be able to apprehend, and so to know, media. Media make it hard for us to apprehend them because they’re part of the means by which we know media and do

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<sup>4</sup> Berry and Dieter. “Thinking Postdigital Aesthetics: Art, Computation, and Design,” In *Postdigital Aesthetics: Art, Computation and Design*, edited by David M. Berry, and Michael Dieter. Dordrecht: Springer, 2015. 2-3.

<sup>5</sup> Eva Horn. “Editor’s Introduction: “There Are No Media.”” *Grey Room* 29 (2007): 6–13. For background, see: Scott Wark. “Media After the “Medial a Priori.”” *Cultural Politics* 13, no. 2 (2017): 259–62.

theory. Or: media theory is situated in and subject to the same conditions as the media that it takes as its objects of theorisation. These are the conditions in which we encounter the internet meme—the vernacular, internet-native media that perhaps best defines contemporary online culture.

### 0.1 EVERYWHERE, AFTER THE INTERNET

Anyone who's had a cursory exposure to online culture will be familiar with internet memes. In online parlance, internet memes are understood to be types of media that are produced, copied, varied, and shared online by communities of users. We're most likely to recognise them in the form of images that circulate as variations on particular themes in online exchanges, but they can also take the form of phrases, hashtags, GIFs, videos, or sound clips, to list but the most frequent types of media that instantiate them. The silly pictures of cats or dogs with childish captions; the recurrent use of GIFs posted in lieu of text responses; quotes, shared in painful earnestness or ironically misattributed; strident, lo-res agitprop—these are all examples of internet memes.

Internet memes have become a fixture of contemporary online culture. We find them on the platforms, bulletin boards, and forums that constitute the slice of the internet we most often access. We find them in the tweets, chats, and posts that produce online culture in these spaces. They typify the mix of seriousness and banality, irony and kitsch, or *pathos* and *bathos* that's come to be associated with these communities and with online culture at large. Internet memes are often humorous, though their humour is often in bad taste. Their aesthetics range from cute and sweet to deliberately lo-fi, shoddy, or "shit."<sup>6</sup> They often seem impenetrably absurd to outsiders, but it's just as often their impenetrability that's the joke, for those who are in on it. They can be political, in the sense that they thematise politics overtly, but they can also be mobilised

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<sup>6</sup> Nick Douglas. "It's Supposed to Look Like Shit: The Internet Ugly Aesthetic." *Journal of Visual Culture* 13, no. 3 (2014): 314–39.

for cultural-political ends in the internet's alternately low- or high-stakes culture wars. As we've increasingly seen over the past few years, internet memes can also be glibly or, quite earnestly, hateful. In the internet meme, we find all that's good about contemporary online culture and all that makes it horrible. Insofar as online culture persists in the production and circulation of media, it in part exists in—is reflected in, expressed through, instantiated by, or even invoked as—circulating internet memes.

Internet memes are arguably contemporary online culture's definitive media because they exemplify a culture that's renewed each time our dynamic accounts, pages, or feeds are refreshed. But to qualify the contemporary culture of which the internet meme is a constituent part with the epithet "online" is a little misleading. The internet's massive global distribution, the proliferation of internet-connected media devices, and the increasing integration of distributed online services into our daily work and our everyday life has made the distinction between "online" and "offline" increasingly irrelevant—perhaps even naïve. To borrow a phrase of Hito Steyerl's, the internet has "crossed the screen."<sup>7</sup> Internet memes might be internet-native, but they are also one of the primary means by which online culture made spectacular incursions from the internet's siloed subcultures into the mainstream.

These incursions include the 2016 United States Presidential election, when the now-infamous Pepe the Frog meme became associated with both the Alt-Right—a far-right movement that fomented in online groups, chats, and bulletin boards—and with then-candidate Donald J. Trump.<sup>8</sup> Other political movements, like Occupy Wall Street or, particularly, Anonymous, made heavy use of the internet meme to shape both their politics and identities: Anonymous turned a mask from the film *V for Vendetta* from an internet meme

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<sup>7</sup> Hito Steyerl. "Too Much World: Is the Internet Dead?" *e-flux journal* 49 (2013).

<sup>8</sup> I documented this phenomenon at the time in the form of a primer. See: Scott Wark. "Does This Meme Prove Donald Trump is a White Supremacist?" *Public Seminar* October 6, 2016:

into a political icon.<sup>9</sup> In more quotidian, but no less bizarre, registers, cult online fans of the TV show *Rick and Morty* instigated a series of riots outside McDonald's restaurants across the U.S. over a dipping sauce mentioned in a particular episode,<sup>10</sup> whilst cultural critics have noted the meme-like spread of particular absurd and, at times, chilling tropes in kids' YouTube videos.<sup>11</sup> As emblematic vernacular, internet-native media, the internet meme indexes the internet's capacity to turn from distributor of services or infrastructure into something more substantive, more influential, more pervasive—or even more threatening. What Steyerl means with her claim that the internet has “crossed the screen” is that it “persists offline” as “a mode of life, surveillance, production and organisation.”<sup>12</sup> The same applies to online culture, and the internet meme is its one of its primary—*postdigital*—means.

Internet memes are everywhere. In circulation, they're a key constituent of contemporary online culture; yet their circulations take it beyond the tenuous boundaries marked out by the epithet “online” and in to culture at large. Their domain is as massively distributed as the contemporary internet itself. They demands to be thought of as a part of contemporary culture writ large, rather than a media type that's only encountered in the internet's toxic backwaters. We copy, create, and share them; we're by turns affected, pleased, or horrified by them; we analyse, catalogue, and critique them. There are websites, groups, and pages dedicated to producing, explaining, and even—ironically—trading and selling them.<sup>13</sup> We might say, in other words, that we know them when we see

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Accessed 28 September, 2018, <http://www.publicseminar.org/2016/10/does-this-meme-prove-donald-trump-is-a-white-supremacist/>.

<sup>9</sup> Ryan M. Milner. “Pop Polyvocality: Internet Memes, Public Participation, and the Occupy Wall Street Movement.” *International Journal of Communication* 7 (2013): 2357-2390.

<sup>10</sup> Aja Romano. “What Rick and Morty Fans' Meltdown Over McDonald's Szechuan Sauce Says About Geek Culture.” *Vox*, October 10 2017: Accessed 28 September, 2018, <https://www.vox.com/culture/2017/10/10/16448816/rick-and-morty-szechuan-sauce-backlash>

<sup>11</sup> James Bridle. “Something is Wrong on the Internet.” (2017): Accessed September 28, 2018. <https://medium.com/@jamesbridle/something-is-wrong-on-the-internet-c39c471271d2>.

<sup>12</sup> Hito Steyerl. “Too Much World: Is the Internet Dead?.”

<sup>13</sup> Ioana Literat and Sarah van den Berg. “Buy Memes Low, Sell Memes High: Vernacular Criticism and Collective Negotiations of Value on Reddit's Meme economy.” *Information, Communication & Society* (2017): 1–18.

them. But the very quality that makes internet memes intuitively apprehensible also makes them resistant to theorisation. The internet meme is contemporary online culture's definitive, internet-native media for another reason again: it arguably expresses and reflects media theory's struggle to conceptualise media *in circulation*.

## 0.2 MEDIA, TODAY

As its title no doubt suggests, the aim of this thesis is to formulate a theory of the internet meme. However, the approach that I want to take to this task is not straightforwardly "theoretical", in the sense of applying theory to media to generate propositions about what media are and what they do. From the outset, this aim confronts us with what I want to conceive of as a nested "problem." In the internet meme, the indeterminacy that characterises our postdigital media situation and the necessity of thinking media in circulation converge. These are the complementary basic constituents of the problem that animates this thesis and around which it will be organised.

In attempting to formulate a theory of the internet meme, it's not possible to avoid asking a—seemingly perennial, seemingly hackneyed—question: *What does it mean to theorise media, today?* Whilst there are a lot of media-theoretical answers to this question, the internet meme—the definitive media of our indeterminate postdigital media situation—arguably invites a non-standard response. It enjoins us to consider not only how it might be theorised or what theoretical resources we might use to theorise it, but what it means to theorise media when they contribute to the conditions by which they become objects of theorisation. In the internet meme, the indeterminacy that characterises our postdigital media situation and the necessity of thinking media in circulation converge, because it highlights how media theory has taken *circulation* for granted—both as concept and as concrete process.

What sets the internet meme apart from other, similar internet-native media—like viral media, for instance—<sup>14</sup>is that it's usually reiterated as it's shared, mutating as it's collectively produced and copied by communities of users. The constituent components of internet memes vary wildly, because they are iteratively shaped as internet memes are collectively produced. Internet meme formats are also subject to constant change. Up until a few years ago, we might have associated the internet meme with the macro. In the online vernacular, a macro is an image, like the seminal Lolcat meme, that's accompanied by header and/or footer text in white Impact font.<sup>15</sup> Macro-based internet memes still circulate, but they've been displaced by more complex formats and a greater variety of media types. The styles or aesthetics that define particular internet memes are also subject to constant change. Particular production techniques, aesthetics, or recurrent stylistic tropes slick the surface of online culture for short or long periods of time, but are always displaced by others. Each internet meme we encounter expresses a variation on a theme, reiterating a set of features—a base image, a phrase, a scenario, a style, a font, a sound, a plot, and so on—to instantiate that meme differently and anew.

But “internet meme” is an ambiguous locution. An internet meme can mean either a meme-instance that we encounter online, in the singular: “a” cat meme. Or, it can mean the plurality of memes that lend that instance its parameters, meaning and sufficiency: to recall one of meme culture's early classics, “the” Lolcat meme. This distinction isn't just linguistic. The plurality of internet memes is irreducible to the collection of instances that comprise it; at the same time, this series can't transcend the collection of instances that instantiate it. To reconcile this ambiguity, media theory invokes a term that it often uses to designate a process or to describe an action or a movement: we say that internet memes circulate. Like other kinds of internet-native media—

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<sup>14</sup> On the circulation of online images, see: Marissa Olson, “Lost not Found: The Circulation of Images in Digital Visual Culture.” *Mass Effect: Art and the Internet in the Twenty-First Century*. Eds. Lauren Cornell and Ed Halter. Cambridge, Mass.: The MIT Press, 2015. 159-167.



viral media, for instance—the internet meme is a type of media that circulates online.<sup>16</sup> The meme is distinguishable from these other media by virtue of being collectively produced and, crucially, by varying as it circulates. We might intuitively apprehend *that* internet memes circulate—it's self-evident that internet memes move between platforms, pages and feeds on their way to us. We could even say that what we intuit seems to merge with the theories of the internet meme that we posit. But the problem that animates this thesis arises because media theory arguably takes circulation for granted as a self-evident process.

There are a number of different theoretical and/or vernacular answers to the question, *What is circulation?* However, one of the foundational propositions of this thesis is that none provides a sufficient basis for a media-theoretical concept of the internet meme. A cursory keyword search quickly demonstrates just how commonplace circulation is in media theory. It's frequently ascribed to all kinds of media, both on-line and off-. In media theory, we often use circulation to ascribe economic, vital, linguistic, or material qualities to media. Outside of media theory, circulation has become a key concept in disciplines like sociology, science and technology studies, and global history.<sup>17</sup> My contention is that it remains under-articulated as a *media-theoretical* concept; that is, as a concept that is of media and that concerns what media are and what they do. To provide a preliminary illustration of why this is problematic, we can posit a pair of basic questions. If we ask the—media-theoretical—question, *What is circulated?*, the answer is usually a variation on media, data, or content. But if we follow this question up with another—*What is circulation?*—we end up with a tautology: in media theory, circulation is

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<sup>15</sup> Kate Brideau and Charles Berret. "A Brief Introduction to Impact: 'the Meme Font'." *Journal of Visual Culture* 13, no. 3 (2014): 307–13.

<sup>16</sup> On the circulation of online images, see: Marissa Olson, "Lost not Found: The Circulation of Images in Digital Visual Culture." *Mass Effect: Art and the Internet in the Twenty-First Century*. Eds. Lauren Cornell and Ed Halter. Cambridge, Mass.: The MIT Press, 2015. 159–167.

<sup>17</sup> For respective overviews, see: Melissa Aronczyk, and Ailsa Craig. "Introduction: Cultures of Circulation." *Poetics* 40, no. 2 (2012): 93–100; Lissa Roberts. "Situating Science in Global History: Local Exchanges and Networks of Circulation." *Itinerario* 33, no. 1 (2009): 9–30;

typically understood to be the *circulation of* media, data, or content. Circulation's self-evidence obfuscates its tautological self-reference. As a concept, it doesn't actually give us any purchase on media's circulations. Rather, it takes these circulations for granted as processes that just happen. My claim is that circulation's self-evidence is of crucial importance to the internet meme: invoking circulation fails to reconcile its ambiguous double status as instance and plurality. More than this, my claim is that circulation's self-evidence is of crucial importance to media theory, *per se*.

Part of what I want to establish in this thesis is that circulation is a foundational media-theoretical concept. Positing the internet meme as a problem for media theory helps us to identify what's at stake in this claim. Treating circulation as self-evident leaves media theory with a self-inflicted epistemological blind spot. If circulation is held to be something that just happens, taking media's concrete online circulations for granted allows the distributed computational processes that put media in to circulation online to exercise an epistemological influence over media theory itself. Online, media are actively put in to circulation by something: not just by users, singular or collective, but by media technologies, like platforms. Treating circulation as self-evident allows media themselves to be taken for granted as they are presented to us by these computational processes. Treating circulation as self-evident has an epistemological knock-on effect, informing not only how or whether we think media in circulation, but how we conceptualise media themselves. Circulation is crucial to the internet meme because the capacity for reinvention that defines the internet meme won't be found in the media that instantiate them, their particular content, their formats, or their styles. If we're to theorise the internet meme as media, my contention is that we have to theorise it *in circulation*. So, the question, *What is the internet meme?*, entails another, reiterated now with more foundational force: *What is circulation?*

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Stefanie Gänger. "Circulation: Reflections on Circularity, Entity, and Liquidity in the Language of Global History." *Journal of Global History* 12, no. 3 (2017): 303–18.

If the aim of this thesis is to formulate a theory of the internet meme, its premise is that we can only do so by working through the nested problem that the internet meme presents. This circulating internet meme is this thesis's primary object. To theorise it, we also have to posit a concept of circulation. Just as media's concrete circulations are seemingly self-evident, media theory arguably treats circulation as a self-evident process—and fails to conceptualise it. This problem is nested, moreover, because it's not restricted to abstract, media-theoretical questions about how we might theorise the internet meme differently or how circulation might be conceptualised anew. To think the internet meme in circulation—to think media in circulation—we have to be able to *think in* circulation. That is, we have to be able to apprehend media both as they circulate, with our media-theoretical concepts; and in circulation, or as they present themselves to us as objects of theorisation.

Our nested problem opens out on to—or, perhaps, circles back to—the question of what it means to theorise media today. The response to this question that I want to adopt in this thesis is at once epistemological and methodological. It necessitates treating media theory as a practice that can be worked on—not only to better apprehend its objects, like the circulating internet meme, but also to better suit the conditions that it's used to think and that inform it in turn.

### 0.3 THINKING MEDIA

To theorise media like the internet meme in the present is to attempt to think them in circulation: not only as media that circulate, but as media whose circulations both render them indeterminate and contribute to the indeterminacy that characterises our postdigital media situation. This assertion seems tautological—in fact, it seems to reprise the very tautology that renders the internet meme itself ambiguous. It's nevertheless central to the approach to the internet meme in particular and media in general that I want to adopt in this thesis. By treating media theory as a practice, we can use this tautology as

a point of departure for a method of doing theory that takes media, their contexts, and our concepts of them as material that must be made adequate to the internet meme, rather than a mode of theorisation that unilaterally takes the internet meme as its object.

To frame this method, I want to recall another of Kittler's earlier claims about media. In a little-referenced article that predates his infamous claim that media determine our situation, Kittler argued that media constitute the conditions of possibility for theorisation itself.<sup>18</sup> Reflecting both on how he himself composed his media theory, several decades before us, and on how notable philosophers once composed their work, several decades before him, Kittler describes how the composition of theory and philosophy requires what he calls a "little apparatus": notes, books, markers, words, notecards, and library stacks are all essential for the actual process by which theory and philosophy is researched, outlined, written, and circulated.<sup>19</sup> That is, Kittler claims that media are essential to the production of theory and philosophy. In this early article, Kittler uses this observation to critique the philosophical tradition for being ignorant of the role that media themselves play in the production of theory and philosophy. What's interesting for our purposes is that he also uses this observation to make a more general claim: media, he posits, are the *a priori* conditions for theorisation itself.

In one sense, his claim is banal: media's effects on theory are easily over-inflated. In another, it's reductive: if media constitute the conditions of possibility for thought, media explain epistemology in its entirety—which is another way of saying that they explain nothing about it at all.<sup>20</sup> The implication of his argument is nevertheless compelling, if we draw a modest

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<sup>18</sup> Kittler. "Forgetting." *Discourse 3* (1981): 88–121. Harold A. Innis also makes a similar point in his late work. See: *Empire and Communications*. Lanham, ML: Rowman & Littlefield, 2007. 29.

Kittler would later observe, by way of Friedrich Nietzsche, that "[o]ur writing tools are also working on our thoughts." Quoted in Kittler. *Gramophone, Film, Typewriter*. 200.

<sup>19</sup> Kittler. "Forgetting." 93.

<sup>20</sup> Krämer. *Medium, Messenger, Transmission*. 29.

lesson from it. To fail to think theory outside of the role that media play as both the means of and—more crucially—as the *objects of* thought can produce subtle, but nevertheless far-reaching consequences. Media are curious objects of thought: because they mediate, they come already-embedded with epistemologies.<sup>21</sup> Ubiquitous media and the massively distributed internet compound this capacity. The media that constitute our postdigital situation automate epistemology, processing data, experience, and even how we think in ways that potentially impact the theories we posit of them. Media might not determine how we think, as thought's *a priori* conditions; but, they certainly inform how we think of them, as the concrete constituents of what's apprehensible and what's thinkable in our postdigital present. My claim is that theory must be subject to those conditions, too—and the overarching aim of this thesis is to develop an epistemological framework that not only accounts for media's influence on how we think them, but that turns this modest claim in to a method that we can use to think *through*—to think and to think with—media in our postdigital present.

This approach to theory is further complicated by the fact that we arguably don't usually conceive of theory *as* a practice that's subject to historically-specific or concrete conditions.<sup>22</sup> Notwithstanding how we talk about theoretical practice—which we often think of as immanent to or imbricated with its objects—we tend to actually practice theory as a mode of reflection that holds its objects at a remove. Though we might fix and modify theory to suit new objects—media change, so does media theory—we often ignore the historicity of theory and all of the components that constitute its armature: its tacit methods, its relationship to its objects, and, crucially, its concepts. As a

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<sup>21</sup> Richard Rogers makes the following claim of the technologies that order the internet: "As I have remarked, search engines, a crucial point of entry to the Web, are epistemological machines in the sense that they crawl, index, cache and ultimately order content." My claim could be read as a generalisation of this—insofar as media mediate, they order the presentation of what's mediated; they're embedded with epistemologies that inform how this mediation operates. See: Richard Rogers. *The End of the Virtual: Digital Methods*. Amsterdam: Amsterdam University Press, 2009. 19.

<sup>22</sup> On the a-historical practice of theorisation inherited from the "high theory" moment, see: Ian Hunter. "The History of Theory." *Critical Inquiry* 33, no. 1 (2006): 78–112.

consequence, we don't always recognise the impact that historically-specific objects have on the formation of our theoretical frameworks or our concepts. As Peter Osborne argues, this is a hangover from the "high theory" moment. We often treat theory's main concepts—of which media is one and circulation another—as though they're "trans-disciplinary": as though they can be adopted in distinct disciplinary domains and reconciled with other concepts in the abstract medium of theorisation itself.<sup>23</sup> We practice theory, in other words, as though its constituents are all "contemporary"<sup>24</sup> with each other. Taken on their own, we might tinker with particular theories or theoretical frameworks. But we don't often reflect on what theory is *as a practice*—and how objects like media inform this practice.

To put concretely what Kittler institutes as an *a priori*, my claim is that our indeterminate postdigital media situation has real, epistemological effects on the production of media theory. So long as we think of theory as a practice carried out at a remove from the world, this claim will collapse into recursion: *media think our thoughts of media think...* If we understand media theory as a set of concrete practices, though, this claim takes on a different valence. It indicates a gap into which we can propose an alternate approach to theorisation. Or, a method: this thesis's titular "meme theory."

#### 0.4 MEDIA-EPISTEMOLOGY

I've chosen to begin this thesis by identifying its nested "problem" for both organisational and methodological reasons. The chapters that follow will be organised by the aim of "resolving" this nested problem. Yet the proposition that the internet meme presents media theory with a problem is problematic itself, insofar as it defies linear exposition. This problem encompasses media themselves, here the internet meme; the concepts we use to think them,

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<sup>23</sup> Peter Osborne. "Philosophy After Theory: Transdisciplinarity and the New," In *Theory After Theory*, edited by Jane Elliott, and Derek Attridge, 19–33. London and New York: Routledge, 2011. 21.

<sup>24</sup> Osborne. "Philosophy After Theory: Transdisciplinarity and the New." 29.

specifically circulation; and the contexts in which we adopt media theory as a practice of thinking media: what I've described as our indeterminate postdigital media situation. As I've introduced them here, each of these components is interrelated. What I've been calling a problem articulates—that is, both expresses and conjoins—each of these components in their seeming disparateness. To be able to deal with one of these components necessitated being able to deal with each, simultaneously. Thankfully, the problem also articulates its own methodological solution: it's a concept that comes with an attendant set of epistemological tools that I want to use to think media as they inform our theories of them.

The concept of the problem has been developed in different ways by a number of key philosophers working in the continental tradition. For media theorists, it's probably most closely associated with the work of Gilles Deleuze<sup>25</sup>. The concept I want to adopt comes from fields that are adjacent to media scholarship, but that don't necessarily inform analyses of media: science and technology studies and the history and philosophy of science. As media is a technology, scholars of media do enter in to conversation with scholars working in science and technology studies, particularly when working on media systems like infrastructure.<sup>26</sup> They have less cause to draw on the history and philosophy of science. The concept I want to adopt comes from an area of study that straddles these fields known as historical epistemology. As the name suggests, this subfield often focuses on the historical development of knowledge. However, it's not what we might think of as an epistemology in the classical sense. Classical epistemology is concerned with the *science of* knowledge, or how we know what we know; in contrast, historical epistemology studies how scientific knowledge is produced, focusing in

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<sup>25</sup> For a good recent overview of the use of the concept of the problem that contextualises Canguilhem's approach alongside readings of Bachelard and Deleuze—that also, ultimately, takes a different approach to the one I've adopted—see: Sean Bowden. "An Anti-Positivist Conception of Problems: Deleuze, Bergson and the French Epistemological Tradition." *Angelaki* 23, no. 2 (2018): 45–63.

<sup>26</sup> Christian Sandvig. "The Internet as Infrastructure," In *The Oxford Handbook of Internet Studies*, 86–108. Oxford: Oxford University Press, 2014.

particular on the relationship between science's material and historical conditions and scientific theory. I'll outline this subfield in much more detail in a later chapter. For now, what's crucial to note is that historical epistemology allows us to conceptualise a "problem"—like the one identified in this introduction—as an instrument of epistemological enquiry.

For proponents of historical epistemology like Gaston Bachelard, Georges Canguilhem, and Hans-Jörg Rheinberger, the problem is tied to a key component of theoretical practice: the concept.<sup>27</sup> Writing with Camille Planet, Canguilhem describes the concept as "the enunciation of a problem to be solved."<sup>28</sup> In other words, the problem articulates that for the sake of which concepts are posited. Their concept of the problem also provides us with a concept of the concept that we can use to carry out particular kinds of epistemological enquiry. Problems shape the knowledge that concepts produce, their relationship to their concrete objects, and the epistemologies into which they're enrolled and that they set in train.<sup>29</sup> This strain of historical epistemology helps us shift the domain of theoretical practice from the adoption or formulation of theoretical frameworks that can be applied to objects to the relationship between problems and concepts. What's particularly compelling about it is that it's based on another key proposition: that concepts themselves can be analysed as concrete things. Per the "historical" part of the moniker "historical epistemology", concepts are determinate and historicisable, changing as their contexts, objects, and the theoretical frameworks in which they operate also change. The problem articulates this mutability by capturing the interrelation between concept, context, object, and prevailing epistemology. It captures knowledge production's tendencies, allowing us to apprehend and engage with theory as a practice subject to concrete

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<sup>27</sup> Georges Canguilhem. "The Object of the History of Sciences," In *Continental Philosophy of Science*, edited by Gary Gutting. Malden, M.A. and Oxford: Wiley-Blackwell, 2005. 198–207.

<sup>28</sup> Canguilhem and Planet quoted in Henning Schmidgen. "The Life of Concepts." *History and Philosophy of the Life Sciences* 36, no. 2 (2014): 247.

<sup>29</sup> Elie During. "A History of Problems': Bergson and the French Epistemological Tradition." *Journal of the British Society for Phenomenology* 35, no. 1 (2004): 11.



conditions. To paraphrase Hans-Jörg Rheinberger, the strand of historical epistemology I want to adopt makes epistemology *concrete*.<sup>30</sup>

Above, I suggested that the internet meme invites us to ask what it means to theorise media today. This is not a *new* claim. As media scholars like Lisa Gitelman and Benjamin Peters have persuasively argued, the drive to confer the status of “newest” on to whatever media has most recently emerged typically operates as epistemological legerdemain, investing our theories of these media with both necessity and novelty whilst eliding their historical precursors.<sup>31</sup> My proposition is not that the internet meme invites us to think it in its “newness”, but rather that the problem it opens up invites us to place a much greater emphasis on the *theorise*. What does it mean to *theorise* media today, in their ubiquity, their massive distribution, and their consequent indeterminacy? How can we articulate a theory of a media type that defined by its capacity for reinvention, given the influence these media exercise on our theories of them and this claim’s obverse, that a practice that construes theory as “contemporary” won’t be able to apprehend, let alone deal with, the epistemological implications of this situation? Following historical epistemology, I want to suggest that we need to reconstruct our media-theoretical practices by articulating a concrete media-theoretical epistemology. We can do so by analysing concepts. To formulate a theory of the internet meme, my proposition is that we need to focus on one concept in particular: circulation.

Each of the components that make up this thesis’s particular problem has something in common. The ambiguous internet meme highlights the theoretical problem of conceptualising circulation; circulating internet memes are concrete constituents of the indeterminacy that characterises our indeterminate postdigital media situation; in circulation, internet memes

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<sup>30</sup> Hans-Jörg Rheinberger. *An Epistemology of the Concrete: Twentieth-Century Histories of Life*. Durham, N.C.: Duke University Press, 2010.

contribute to a form of epistemological indeterminacy created by the influence of media on theory. What they hold in common is *circulation*—conceived of as concept, as process, and as theoretical component of media theory, both in themselves and insofar as they express an interrelated set of processes. This commonality also allows us to articulate this thesis's organising problem with more concision. In their ambiguity, as media that contribute to media's concrete ubiquity, and as constituents of indeterminacy, internet memes continuously challenge us to theorise media in excess of themselves. They do so literally, when media are defined by their capacity to exceed themselves; in the ubiquitous and distributed excess that constitutes their contemporary context; and as objects of theorisation that influence media theory in turn. The problem they pose us is this: *How might we theorise media in excess of themselves?* The answer, as I'll spend most of this thesis arguing, is deceptively simple: *in circulation*.

The components of what I'm calling our problem converge, in circulation. It's tautological to say that media, data, or content are what circulates and that circulation is the circulation of media, content, or data. But to recognise—in a preliminary way and from an historical epistemological vantage point—that the content of the concept of circulation is informed by the concrete conditions in which it's posited, in which *it*, the concept, circulates, and to which it's applied, delimits the concrete-epistemological domain in which we might begin to resolve the problem posed by the internet meme. This thesis will use the problem—in the fullest, epistemological sense—to inform an approach to theorising the internet meme that I'll call "meme theory." This approach will draw on methodological tools from historical epistemology and adapt them to the specificities of media theory to turn theory itself into concrete material for further conceptualisation.

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<sup>31</sup> Lisa Gitelman. *Always Already New*. Cambridge, Mass.: The MIT Press, 2008; Benjamin Peters. "And Lead Us Not in to Thinking the New is New: A Bibliographic Case for New Media History." *new media & society* 11, no. 1&2 (2009): 13–30.

## 0.5 THE METHOD OF THEORY

For a thesis called “meme theory”, there are far fewer analyses of actual internet memes in the chapters that follow than one might expect. What I’m calling “meme theory” is an approach that’s concerned not with applying theory to internet memes to produce knowledge about them, but with resolving their concrete-epistemological problem. In a departure from conventional theoretical practice, this thesis will formulate its theory of the internet meme by taking circulation itself as the concrete object of a series of epistemological analyses. This approach entails forms of theoretical labour that propose and apply methods to theoretical practice itself.

Typically, we order the production of knowledge in the humanities and social sciences by distinguishing between the theories that inform, guide, and govern our scholarship and the methods we use to apprehend our objects. Whilst methods might be informed *by* theory, we tend to treat method as separate *from* theory. This thesis was produced in a research centre that takes a different approach to method. It operates very much in dialogue with a field that I want to identify as “media theory.” But given the problem that I’ve identified above, it’s also concerned with asking how we might articulate the method *of* media-theoretical practice. The conditions in which we practice theory have changed—and so, too, must our theoretical practices. What I’m calling “meme theory” mobilises this claim as methodological leitmotif. The novelty of the method that this thesis will adopt will be derived from two gestures: first, synthesising historical epistemology with media theory; and second, treating theory itself as material for further conceptualisation.

In the scientific practices analysed by historical epistemology, concepts are treated as mobile units of knowledge.<sup>32</sup> They can be assimilated to distinct theoretical frameworks, even as they’re produced in specific circumstances. Because they’re mobile, they can carry assumptions about the epistemological,

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<sup>32</sup> For a related approach in the social sciences, see: Mieke Bal. “Working With Concepts.” *European Journal of English Studies* 13, no. 1 (2009): 13–23.

technical, and institutional conditions in which they're produced and the objects they originally take into new contexts. Historical epistemologists use concepts as foci to analyse how knowledge production shifts over time. But we can also use their concept of the concept to identify and analyse the influence that media themselves exercise over our concepts of them. Media differ from scientific objects, in ways that I'll elucidate at length later on. Nevertheless, in mediating, media also inform our concepts of them. Our practices of theorising media intercede between media theory and its objects. What I'm calling "meme theory" works on this interceding space—on media, on the concepts we use to think media, and on media theory itself. For if media inform our theories of them, the theories we formulate have to be responsive: not only to what's "new", as the perpetually reinvented internet meme indomitably is, or to what's indeterminate, as ubiquitous and massively-distributed media are, but to its own concrete conditions. If circulation is the concept that's key to resolving the problem posed by the internet meme, I want to ask *how* we can make this concept adequate to its object. This question is necessary not only for our task of formulating a theory of the internet meme, but because circulation is far more fundamental to our theoretical understanding of media than we typically acknowledge.

This approach will adopt a few key concepts from historical epistemology: Canguilhem's concept of the concept, as expanded upon by Rheinberger; what Canguilhem calls the "filiation"; and Lorraine Daston's notion of the "commonplace." By positing that concepts are determinate, historicisable things, Canguilhem, and Rheinberger after him, offer us with epistemological tools that are as applicable to concepts in the present as they are to how concepts have developed in the past. We can adapt this insight to thinking media in our indeterminate postdigital media situation if we use it to acknowledge that our concepts can continue to be informed by prior theoretical frameworks, concrete-historical contexts, and the objects they were originally or subsequently used to think—and that they can carry these influences with them *into new theoretical situations*. Canguilhem calls these

persistent influences “filiations.”<sup>33</sup> In the chapters to follow, I want to use this insight to claim that media theory lacks an adequate concept of circulation because its use of circulation continuously reproduces filiations from other domains of knowledge—like political economy, biology, political science, infrastructure studies, or even conceptualisations of prior media. For Canguilhem, a filiation isn’t just a derivative relation; it’s also a determinate historical thing. Using methods derived from historical epistemology, we can work through these extant filiations to make circulation adequate to the internet meme.

Here, we run in to a seeming contradiction. I’ve claimed that we lack a media-theoretical concept of circulation; yet I’m also claiming not only that that media theory employs this concept, if incorrectly, but that it can be made adequate to the internet meme. How can we apply a method derived from historical epistemology to a concept that’s not been adequately conceptualised? Here, I want to draw on another concept from a separate branch of historical epistemology to distinguish between concepts that are formalised as such and the informal conceptual work that particular terms do for specific disciplines.

We do, in fact, claim that media circulate. This term is widely used throughout media scholarship. But it functions as what I want to call a “commonplace.”<sup>34</sup> In her historical epistemological work, Lorraine Daston makes a distinction between different epistemological registers that is essential to this thesis. One way of conceiving theoretical practice would be to say that it formalises the abstractions we use to produce knowledge about the world. For Daston, what historical epistemology is particularly adept at uncovering is those forms of knowledge that contribute to theoretical practice and that form a part of the epistemologies that inform knowledge production, but that have receded in to the background of formal theoretical practice. There are forms of knowledge

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<sup>33</sup> Canguilhem. *A Vital Rationalist: Selected Writings From Georges Canguilhem*. New York: Zone Books, 2000. 181.

that are so thoroughly woven through formations like disciplines that we take them for granted. They not only become commonplace, but can begin to function as “commonplaces” or, epistemological components that do occluded epistemological work. My claim is that circulation is just such a “commonplace.” Although circulation has yet to be formalised as a concept that’s specific to media theory, it nevertheless plays a key role in our media-theoretical practices. In discussions and analyses of contemporary media, we frequently use circulation as a descriptive term. We say that media circulate so often that we rarely question what this means. But because we don’t usually acknowledge this conceptual work, each use also risks reproducing filiations to other contexts, other theoretical frameworks, and prior media.

The internet meme remains ambiguous, because our concept of circulation is inadequate to the task of theorising it; we struggle to theorise it, because the epistemological work that circulation does for media theory remains unacknowledged; to make this concept adequate to the internet meme, therefore, we need to theorise it in its concrete circulations, in the present. By adopting methods derived from historical epistemology, what I want to show is that we can only make this concept adequate to the internet meme if we identify and articulate the kinds of epistemological work that circulation *already* does for media theory, in its role as a commonplace—and if our methods of practicing theory think across our problem’s concrete, epistemological, and theoretical-practical levels, simultaneously.

This method of practicing theory widens its scope. When we begin to ask questions like, *What epistemological work does circulation do for media theory?*, or *How do a concept’s theoretical frameworks, contexts, or objects inform them in return?*, we can’t help but begin to posit some basic questions about media theory itself. These questions don’t primarily operate in an ontological register; they’re not primarily concerned about what media *are*, for instance.

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<sup>34</sup> Lorraine Daston. “The History of Emergences”. Essay Review of Ian Hacking: *The Emergence of Probability: A Philosophical Study of Early Ideas About Probability, Induction, and Statistical Inference*. New York: Cambridge University Press 2006.” *Isis* 98, no. 4 (2007): 808.

Nonetheless, they touch on media theory's foundations. Each of the interrelated propositions I've introduced above touches on one of the key claims I want to make in this thesis: that circulation continues to recur as commonplace and despite its informality because it's *foundational* to how we think media. Adopting a term from Ian Hacking, whose work in the field of the history and philosophy of science is very close to historical epistemology, I want to assert that circulation functions as an "organising concept"<sup>35</sup>, or a concept around which media theory itself articulates its practices. In using the problem posed by the internet meme as a point of departure, this thesis will arrive at this insight from below, so to speak, by *reconstructing* the concept of circulation out of its under-articulated epistemological effects.

This approach brings the method of theory to the fore. But in positing that theory needs a method, we allow methods themselves to proliferate. After spending a major chunk of this thesis working on circulation, I will return to the internet meme and apply the renovated concept of circulation I've developed to concrete instances. Does this analysis then require us to articulate another method? If it does, which is primary—the method we apply to our theoretical practices, or the method we use to apply circulation to the internet meme? As I want to demonstrate throughout this thesis, method isn't just something we adopt to guide the application of theory to objects. Methods are better thought of in process, as frameworks that we adopt to formalise our analyses during each stage of our response to a particular problem. I want to use the methods introduced above not only to reconstruct circulation, but to renovate theoretical practice as what I'm calling "meme theory".

"Meme theory" is a theoretical practice that concretises epistemology and, in doing so, posits the concrete and the epistemological in reciprocal relation. This practice begins with problems, because it's only by beginning with problems that we can identify the lineaments of a media-theoretical epistemology that's adequate to the present, without being contemporary. It

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<sup>35</sup> Ian Hacking. *Historical Ontology*. London: Harvard University Press, 2002.

encourages us not only to recognise that theoretical practice is always guided by methods, but to seek out those methods of practicing theory that best suit a particular problem. "Meme theory" operates in the interrogative. It asks questions: *What does it mean to theorise media today? How might we think media in excess of themselves? How might we formulate a theory of the internet meme?* That is, it also operates process and responsively, by making theory responsive enough to its objects to think *with* the internet meme and *after* it. Here is where we find the relevance of an "historical" approach to epistemology for the present. In making epistemology concrete, this approach acknowledges that theory is in time, of history, and thinkable *in indeterminacy*.

## 0.6 POSITIONS

Before glossing the structure of this thesis and introducing each of these chapters, I want to clarify its disciplinary positioning. In outline, this thesis might be difficult to place within a particular discipline. Its object, the internet meme, is typically studied by media scholars; its concern with how we theorise media might be fitted into the more general field of "theory"; it derives its methods in large part from a field that straddles science and technology studies and the history and philosophy of science. To further complicate matters, its concern with epistemology is heavily informed by particular strains of continental philosophy. How, then, ought we to place this thesis within the broader disciplinary formations that govern not only how we do scholarly work, but how it's received and by whom? Though this thesis derives its methods from historical epistemology, I want to position it explicitly within a field that I want to call "media theory." More than this, I want to distinguish media theory, which is perhaps commonly thought of as a subset of a broader field of media and communications scholarship, *as* a discipline in itself.

This thesis has been written under the auspices of a research centre that investigates "interdisciplinary methodologies." It follows that it's concerned not only with methods, as we saw above, but with *interdisciplinarity*. Whilst this



context might invite us to eschew disciplines altogether, the methods I want to adopt to formulate a theory of the internet meme and, so, to rethink theory as practice actually invite the opposite. Adopting methods derived from historical epistemology necessarily enjoins us to trace concepts, filiations, and commonplaces beyond their disciplinary bounds. At the same time, these methods also tacitly invite us to examine our theoretical practices *as* they're disciplined. Though these tasks might seem to run at cross-purposes, they aren't mutually exclusive. Interdisciplinary work opens up fields of knowledge to one another. But it's also constrained by the weight of assumptions—commonplaces—that each extra discipline brings to scholarship. To work between disciplines, we have to understand how particular disciplines conceive their practices in contradistinction to other fields.

A theoretical engagement with the internet meme's natural home, the scholarship on contemporary media in general and social media in particular, includes a number of recent—and typically incisive—analyses of the internet meme. Over the past decade or so, scholars of media have produced analyses of internet memes that provide essential overviews of how meme cultures have developed as well as analyses of particular internet memes. Chapter 3 will outline these in much more detail, but for now I want to note that this work is typically animated by epistemological preconceptions—about how media ought to be conceived, what it does, and how it might be analysed—than differ drastically from those that inform this thesis. This is best expressed through the concept of the problem that I've used to frame this thesis. As I've posited this problem, the task of formulating a theory of the internet meme is contingent upon our capacity to resolve a nested problem that concerns not only what the internet meme is, but what concepts we use to think it and how the act of thinking it might be positioned in relation to our indeterminate postdigital media situation. The analyses of internet memes in the work of their three most influential scholars—Limor Shifman, Wendy Phillips, and Ryan M. Milner—don't share its abstruse epistemological concerns. Their work, whilst undoubtedly incisive and very formative, is much more concerned with

situating internet memes in contemporary online culture, conceived of as “participatory”; analysing internet memes using empirical methods, like ethnography; and teasing out the normatively-construed democratic nature of meme cultures, respectively. The field in which they operate, what I think of as “media studies”, doesn’t have room for the kind of scholarly enquiry this thesis will carry out. But what I’m calling “media theory” does.

Is “media theory” a discipline? My answer is yes—insofar as it expresses a shared epistemological interest in questions of what media are and insofar as it’s organised around collectively-acknowledged precursors. I’ll outline this particular claim in much greater depth in Chapter 6 in particular. Here, I want to note that what distinguishes “media theory” as an identifiable epistemological formation is its concern with foundational questions about what media are and what they do. The analyses in the chapters to follow will range across very different domains of knowledge. But these forays will always, though often tacitly, be concerned with examining how the internet meme might be understood as media and what this media does. This concern is not be wholly alien to the field I’ve identified as “media studies.” But the kinds of work that asks this kind of question using methods and epistemological frameworks of the kind I want to adopt won’t be found in that field. To judge these disparate approaches using the same criteria would be to commit a category error. In later chapters, this thesis will engage with broader work on the internet meme and online media from what I’m calling “media studies”, particularly when glossing how the internet meme has been theorised. Whilst it will avoid critiquing this work outright, it will nevertheless adopt different epistemological premises. It will be positioned in relation to other sets of literature that are concerned with asking theoretical questions about how we might understand media in excess of themselves, including recent conceptualisations of media; theories of media systems; and other epistemological approaches to media theory.

The analyses I want to present in this thesis will focus heavily on circulation, following its commonplace usages and its filiations from the internet meme to familiar domains, like meme cultures, contemporary online platforms, media infrastructures, the discipline of media theory and the role that materialism plays for it. But they will also take us to less familiar domains, like political economy, vitalist philosophy, and even Renaissance anatomical practices and the discovery of the circulation of the blood. Many of these domains aren't strictly media-theoretical; but taken as a whole, this thesis arguably is. It's aim, after all, is to formulate a theory of the internet meme—in circulation, through the concept of circulation, as this concept circulates; or, by whatever epistemological means necessary.

## 0.7 PROGRAMME

I have chosen to allow the structure of this thesis to be determined by the exigencies of its organising problem. This structure is a little unusual in that a significant proportion of this thesis is given over to epistemological analyses of circulation. Yet the premises that I've outlined in this introduction also demonstrate its necessity. In what follows, I aim to formulate a theory of the internet meme. But to do so, we first need to reconceptualise circulation by identifying the conceptual work it does, as a commonplace; substantiating the foundational role it plays for media theory; and establishing it as a component of a media-theoretical practice that's responsive to the concreteness of epistemological work. Guided by our problem, this thesis's three sections turn these reciprocal tasks into a programme.

The first section does the work of positioning this thesis's approach to the internet meme. Chapter 1 acts as a literature review, contextualising the internet meme in relation to two bodies of scholarship: extant work on the meme itself, including the biological work that from which it originated; and recent media theory that conceptualises media in excess of themselves. It argues that neither adequately conceptualises the internet meme—or media

more broadly—in circulation, setting the scene for the analyses to follow. Chapter 3 acts as a methods chapter, providing an overview of historical epistemology. It argues that historical epistemology can provide us with a powerful method for analysing the influence media exercise on our concepts of them, but only if we adapt its precepts to media’s epistemological specificities. In response, it posits what I call “media-historical epistemology” and, after distinguishing it from other historical approaches to studying media, uses it as the basis for a method. Where these chapters are more typical, the middle chapter in this section carries out an unconventional, more speculative, kind of preliminary work. Through an analysis of an artwork by Constant Dullaart called *Jennifer in Paradise*, this chapter demonstrates why circulation is necessary for thinking the internet meme—by demonstrating how a meme that’s no longer in circulation cannot be called a meme. In the process, it also unpacks the temporality of circulation and its relationship to media-theoretical practice, outlining in more detail how we might avoid “contemporary” media theory.

The next section uses the method introduced in the first to begin to reconstruct circulation. It does so using unconventional means: by analysing the conceptual work that circulation does as a “commonplace” in order to identify how it remains *underdetermined* as a concept of media; how it reproduces filiations; and what qualities of media we invoke it to think. Chapter 4 presents an overview of some of the typical media-theoretical uses of circulation, before arguing that invoking it as a commonplace takes for granted the media-technical ensembles that put media like internet memes in to circulation. It focuses in particular on the platform, the ensemble most relevant to online culture in general and the internet meme in particular. By taking the circulation of media by platforms for granted, it argues that we allow platforms to exercise an epistemological influence over media itself, reducing media to their “content”. Chapter 5 swerves deeper into circulation’s epistemological history. This chapter returns to the discovery of the circulation of the blood by the anatomist William Harvey to argue that our commonplace

usages of circulation retain a filiation to the anatomical body. It argues that this filiation reduces circulation to a circulation-for-the-sake-of: if not the literal body, than an epistemological substitute. The net effect is that some invocations of circulation reduce media *in* circulation to expressions of basic ontological categories.

Chapter 6 rounds out these section by returning to the much more recent media-theoretical concept of infrastructure. Media infrastructures are essential for understanding what media are in circulation in the present. Yet, the concept of infrastructure also institutes a filiation. Where the previous chapters analysed how circulation can remain filiated to specific objects or theoretical frameworks, this chapter opens our analysis out to the discipline of media theory itself. Through engagements with concepts of infrastructure, the crucial precursive work of James W. Carey, and the epistemological techniques we use to produce overviews of theoretical movements, it argues that conceiving of circulation as a derivative of infrastructure recuperates it to a problem that plays out at the level of the discipline itself, conceived of as a concrete set of practices that inform our use of concepts: the question of whether or how media ought to be materialised. So long as we construe circulation through the basic category of materiality, I argue, we can't use it to think media in excess of themselves.

These analyses culminate in the third section's two chapters. The second section's analyses of circulation's filiations provided us with insights in to those qualities of media that we use circulation to think. They also provided us with epistemological materials for circulation's reconceptualisation. Chapter 7 uses these materials to make four propositions about circulation: after platforms, circulation is technical; in circulation, media's materiality is a *technical*-epistemological product rather than an ontological predicate; circulation *bodies* media as milieu; and that in circulation, media can be expressed as instance and/or plurality. Taken together, these propositions provide us with a concept that we can use to formulate the internet meme.

And yet the very premises this thesis establishes from the beginning of this introduction all the way through preclude the positing of a concept that we could simply take up and apply to the internet meme. This concept emerges in and through concrete epistemological analyses and in response to the internet meme and its particular problem. This concept is also formulated to remain reflexively responsive to the exigencies of concrete, circulating media. Together, these premises preclude formulating a theory of the internet meme in a “contemporary” mode. Chapter 8 realises this thesis’s aim by adopting a media-theoretical practice that I call “meme theory”. This practice adopts the reconstructed concept of circulation to engage in the analysis of three internet memes associated with the new online culture wars: the infamous Pepe meme, the “Punch a Nazi” meme, and the delightfully-titled “Fuck 2016” meme. It uses our reconstructed concept of circulation to suggest that what these internet memes *body*—what they circulate *for*—is “negativity”, a complex of politics, feeling, and negation that emerges with forms of antagonism made possible by platforms.

Following the problem posed by the internet meme necessitates qualifying our aim. The internet meme *is in* circulation. If our theories of it are to avoid falling in to redundancy even as they’re posited—even as, with their positing, internet memes reinvent themselves—we have to enter media theory in to circulation, too. Rather than positing a theory *of* the internet meme, this thesis develops a media-theoretical practice that’s able to operate in responsive relationship *to* the internet meme. This is what I call “meme theory”. In the conclusion to this thesis, I’ll reflect more on how this practice might be adapted to the study of other media. What it offers, I want to suggest, is an epistemological template that we can adapt to other media and their problems. What organising role circulation might play for our concepts of media in general is unclear; that we adopt practices of thinking media *in* circulation is what’s key.

I. THE MEME IS—

# 1. THE INTERNET MEME, IN THEORY

## 1.0 NOVELTY

Keep hitting refresh on the right bulletin board, Facebook group, or community-maintained webpage and you'll be confronted with a deluge of new internet memes. Some will be variations on memes you might have seen before; some will creatively combine distinct memes to produce something else or something new; some might even present formats you've not yet encountered. This furious proliferation of novelty is a product of the internet meme's capacity for reinvention. It's tempting to base a theory of the internet meme on this novelty, or to claim that in the new, an adequate theory is to be found. But what a theory of the internet meme really has to grapple with is the threat of its own redundancy in the face of this deluge—and this deluge's its drivers, contemporary media's ubiquity and their massive distribution. The novel obscures the persistent influence of what's known, or what's receded into the familiarity of what's commonplace. It's tempting to focus on the internet meme, but it's not the—already-apprehensible—internet meme itself that requires epistemological scrutiny.

In this chapter, I want to frame the extended engagement with the internet meme by presenting a survey of extant literature on it. The first three sections are structured around a periodisation that I want to impose on extant internet meme scholarship. As most scholars of the internet meme note, the concept first originated in the evolutionary-biological work of Richard Dawkins. The first section of this chapter will specify the difference between Dawkins' original concept of the "meme" and the "internet meme", as adopted in vernacular online usage and taken up by media scholars. After this initial phase of biological meme scholarship, the next section will outline what I identify as its intermediary phase. Here, we see the concept of the meme being taken up by mid-nineties 'net critics, who wrote about online culture as participants in it, before being adopted by media theorists in the 2000's. In this phase, media



theorists express a critical relationship to the concept, whilst nevertheless enlisting it to productive ends. Nevertheless, “meme” was still treated as a broad concept that encompassed all kinds of media, from those found online to those distributed using other means. It’s not until the final phase, beginning around the 2010’s, that concept adopts the modifier “internet.” In this most recent phase, media scholarship begins to reproduce the vernacular online conception of the internet meme commonly found online.

As I’ll argue, this provenance lends the internet meme a self-evident quality—and typically leads scholars to fail to question what it means for an internet meme to be *in circulation*. In doing so, however, they also open this thesis out to a media-theoretical literature that operates beyond the internet meme. Taking its cue from this thesis’s organising problem, the fourth section of this literature review will position this thesis in relation to other, recent media-theoretical attempts to think media in excess of themselves. As I want to show, this extant literature is often very incisive, but also addresses a different set of objects and a different set of problems to those that concern us here. Outlining what’s similar in this literature and what’s different will help us to position the claims this thesis makes about internet memes, about media, and about the practice of theorising media in the present. This final section will focus on three recent media-theoretical strands: analyses of media as, in my language, in excess of themselves; epistemological approaches to media, patched together from Anglophone and German sources; and engagements with media systems.

*In toto*, this literature constitutes the natural context for the analyses I want to present in this thesis. But it’s not this literature to which this thesis will directly respond. This survey constitutes something akin to a literature review, but its aim is different. The aim of the literature review is to take stock of extant literature on a particular topic, using acts of positioning and repositioning to frame its methodological and theoretical claims. Insofar as this thesis adopts an approach that takes media theory itself as the epistemological material for

further conceptualisation, its modes of engaging with and analysing material work in constant rapport with a number of fields of literature, ranging across media theory and into the other disciplinary domains of knowledge. Much of it will be given over to extended epistemological engagements with these fields of knowledge that take forms *like* the standard literature review, only executed with the aim of producing new knowledge rather than positioning this thesis as a whole. These engagements constitute a form of continuous positioning and re-positioning. This literature review helps us establish the context for these later engagements—but it’s presented with the knowledge that later chapters will necessarily introduce and respond to other bodies of literature, too. This chapter necessarily does double duty as an epistemological anchor, fixing the engagements that follow in other chapters—which will range far from online culture and its definitive media—to the internet meme.

## 1.1 MEME BIOLOGY

The literature on the internet meme has a history that’s as convoluted as the concept itself. The concept of the meme was first coined by Richard Dawkins in his career-defining, 1976 work on evolution, *The Selfish Gene*, and expanded upon in the book’s 1989 reissue. In *The Selfish Gene*, Dawkins posited the influential argument that the object of evolutionary processes of natural selection is not the organism, but rather a smaller unit.<sup>1</sup> This unit, the titular selfish gene, is the focal point of an approach to evolution that analyses how specific genes prosper over time at the expense of others. For our purposes, Dawkins’ evolutionary biology is significant for three main reasons.

First and most obviously, it posited the “meme” as the cultural equivalent of the selfish gene. Dawkins conceived of this term—whose name he derived from the Ancient Greek word *mimesis*, which can mean imitation or mimicry—as a unit of culture that is also subject to evolutionary processes; his examples included things like the hooks from pop songs or catch phrases. Second,

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<sup>1</sup> Richard Dawkins. *The Selfish Gene [Revised Edition]*. Oxford: Oxford University Press, 1989.

Dawkins introduced a conceptual language that distinguished genes from their host organisms, which he referred to, respectively, as “replicators” and “vehicles.”<sup>2</sup> His conception of the replicator is quite specific. He originally posits this term to explain the emergence of life in the form of complex strings of chemical molecules from a primordial soup, likening the replicator molecule to a “mould or template” whose “affinity” for like molecules sets in train a process that “automatically” arranges them into a “stable chain.”<sup>3</sup> As Jeremy Trevelyan Burman notes, the replicator can either refer to something that “can make copies of itself” or to something that “is easily and automatically copied by virtue of its relationship to the medium in which it is found.”<sup>4</sup> In other words, it’s an ambivalent concept—at least, from an humanities perspective for which questions of agency are foundational. Dawkins’ concept of the meme acts as a cultural equivalent of a gene because it functions as a replicator. Third, *The Selfish Gene* had an outsize cultural impact: this book launched the concept of the meme into mainstream popular-scientific and cultural-critical discussions.<sup>5</sup>

A few other key events punctuate the broader uptake of the biological concept of the meme. In 1993, Richard Dawkins published an essay called “Viruses of the Mind”, using the concept of the meme to characterise religion with this eponymous phrase—and prefiguring his late-period, antagonistic atheism.<sup>6</sup> By 1995, “memetics” had evolved into a fully-fledged field complete with its own peer-reviewed outlet, the *Journal of Memetics—Evolutionary Models of Information Transmission*. Most crucially, in 2000 Susan Blackmore published *The Meme Machine*, which provided a book-length, coherent overview of the meme concept. Burman puts its influence like this: “ultimately”, he says, *The*

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<sup>2</sup> Dawkins. *The Selfish Gene*. 15.

<sup>3</sup> Dawkins. *The Selfish Gene*. 15.

<sup>4</sup> Jeremy Trevelyan Burman. “The Misunderstanding of Memes: Biography of an Unscientific Object, 1976–1999.” *Perspectives on Science* 20, no. 1 (2012): 80.

Burman also notes that Dawkins’ original object of processes of natural selection was not the specific unit—the gene—but the class of replicators.

<sup>5</sup> Burman. “The Misunderstanding of Memes.” 80.

<sup>6</sup> Dawkins. “Viruses of the Mind,” In *Dennett and His Critics: Demystifying Mind*, edited by Bo Dahlbom, Maldon: Blackwell, 1993.

*Meme Machine* “became the point of departure for all subsequent discussions of memetics.”<sup>7</sup> Qua Dawkins, Blackmore emphasises memes’ role as replicators; but she also specifies three key criteria by which their “fitness” might be measured: “fidelity”, or accuracy; “fecundity”, or the capacity to produce many copies; and “longevity.”<sup>8</sup> Moreover, she introduced the concept of a “memetic drive”, which claims that memes have influenced the environments that we inhabit and in which our genes are selected and, so, have informed genetic evolution itself.<sup>9</sup> Blackmore generalised the Darwinian-evolutionary logic of replication, popularising it further and providing the conceptual tools for it to be applied in general analyses of culture.

Both Dawkins’ and Blackmore’s conceptualisations of memes would go on to be highly influential. More importantly, these biologists popularised a concept that—once allowed to percolate—could be extended to media in general and, later, to the then-burgeoning internet, its online culture, and its circulating media.

## 1.2 MEMETIC MEDIA

In what I’m calling its intermediate phase, the concept of the meme enters discussions of media, but does not yet accrue the modifier “internet.” This phase was made possible by the mid-nineties internet-enraptured discussions of magazines like *Wired*, where some of the earliest and more influential popular discussions of the meme concept first took place. In 1994, Mike Godwin wrote an article for *Wired* that introduced this concept into online culture by characterising internet users’ tendency to compare other users to Nazis on bulletin boards—known, in online vernacular, as “Godwin’s Law”—as a kind of “meme.”<sup>10</sup> In the same year, Michael Schrage, then-fellow at the MIT Media Lab, wrote an article in the same magazine with the provocative title, “Is

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<sup>7</sup> Burman. “The Misunderstanding of Memes.” 97.

<sup>8</sup> Susan Blackmore. *The Meme Machine*. Oxford: Oxford Paperbacks, 2000. 100.

<sup>9</sup> Blackmore. *The Meme Machine*. 111.

<sup>10</sup> Mike Godwin. “Meme, Counter-Meme.” *Wired*, October 1994.

Advertising Dead?”, using the meme concept to discuss the interrelated futures of advertising and media.<sup>11</sup> Most importantly, Schrage wrote a longer, exhortative cover-profile on Dawkins and his meme concept for *Wired* in 1995.<sup>12</sup> Burman accords this article the largest share of the credit for placing the meme concept in the popular—North American—consciousness.<sup>13</sup> It represents the moment that the concept was taken up by media critics—and establishes the popular context in which it would be taken up by media theorists.

Media theorists responded to the meme concept in a few key ways. Scholars like Stephen Downes and W. Lance Bennett used it to conceptualise the tactical, bottom-up use of media for political ends. In 1999, Downes used the meme concept to theorise the potential uses of the internet for what he called subversive “information warfare.” A few years later, Bennett adopted the concept to explicate the more moderate, but no less activist, practices of “culture jamming.”<sup>14</sup> In these examples, the meme concept was adapted to discussions of media with little theoretical modification. A few years later, another set of media theorists adopted a more cautious and critical approach to the meme concept, citing it as a potentially-useful theoretical tool whilst also expressing reservations about the fit between its neo-Darwinian epistemology and the specificities of media theory.

In 2005, Matthew Fuller included an extended reflection on the meme concept in his influential theorisation of “media ecologies.” Fuller asserted that “the meme as conceptual device has the potential for intensifying speculation

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<sup>11</sup> Michael Schrage. “Is Advertising Dead?” *Wired*, January 1994.

<sup>12</sup> Schrage. “Revolutionary Evolutionist.” *Wired*, July 1995. 120-24.

<sup>13</sup> Burman. “The Misunderstanding of Memes.” 91.

<sup>14</sup> Stephen Downes. “Hacking Memes.” *First Monday* 4, no. 10 (1999): <http://ojphi.org/ojs/index.php/fm/article/view/694/604>; W. Lance Bennett. “New Media Power: The Internet and Global Activism,” In *Contesting Media Power: Alternative Media in a Networked World*, edited by Nick Couldry, and James Curran, 17–38. Lanham, Maryland: Rowman & Littlefield, 2003.

on the paradoxical consequences of reflexive mediality.”<sup>15</sup> He notes that one of its advantages is that it doesn’t “rely on any necessary sensibility, teleology, or interpretation in culture” in order to be used to analyse cultural products.<sup>16</sup> But at the same time, he also notes that what he calls meme theory—the echo with my “meme theory” is incidental; Fuller uses it to distinguish a media-theoretical approach to memes from the formalised scientific field of memetics—“needs to be coupled with other approaches, historical analysis for example, in order to take full advantage of its capacities.”<sup>17</sup> Moreover, he argues that “memetics” is often premised on “an artificial distinction between a hylomorphically arranged “content” and “form”” that negates the role that media play in replication.<sup>18</sup> For Fuller, the meme concept can be adopted to think media—but only if it’s revised.

Tony D. Sampson’s 2009 study of virality also addresses the meme concept whilst drawing on the work of Gabriel Tarde to develop its own, novel conceptualisation of how media proliferate. Sampson is more critical than Fuller—for him, both the meme and virality alike represent “the marketing buzzwords of the network age.”<sup>19</sup> His critique echoes Fuller’s in claiming that “in memetics, the medium in which an idea is transmitted is typically dismissed as an inert channel.”<sup>20</sup> But he also extends Fuller’s critique. When Sampson argues that it’s “the assumed capacity of the virally encoded meme to hide its source, and make its contagion appear accidental, that has arguably appealed to the marketer”, he suggests that it’s the meme’s *mediatic* capacity to recede in use that actually facilitates the epistemological spread of the concept, which is made powerful because it ignores actual memes’ contexts.<sup>21</sup> Of Dawkins’ meme concept, Sampson also observes that it denotes “a self-copying message

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<sup>15</sup> Matthew Fuller. *Media Ecologies: Materialist Energies in Art and Technoculture*. MIT Press, 2005. 112.

<sup>16</sup> Fuller. *Media Ecologies*. 114.

<sup>17</sup> Fuller. *Media Ecologies*. 113.

<sup>18</sup> Fuller. *Media Ecologies*. 114.

<sup>19</sup> Tony D. Sampson. *Virality: Contagion Theory in the Age of Networks*. U of Minnesota Press, 2012.

<sup>20</sup> Sampson. *Virality*. 72.

<sup>21</sup> Sampson. *Virality*. 65.

system, regulated by the decision-making process of an evolutionary algorithm.”<sup>22</sup> This raises the immediate question—How, then, is the meme concept compatible with the algorithmically-mediated spaces of online culture? Most damningly for Sampson, the meme concept fails to adequately identify the *unit* of memetic replication. As he puts it, for memetics, “the meme is missing.”<sup>23</sup> Jussi Parikka’s 2007 take on memes presents a critique of the meme concept that goes even further than Sampson’s: for Parikka, the influence of the meme concept can be chalked up to its role as a “viral theory of the consumer object and post-Fordist networks.”<sup>24</sup> In stark contrast to Fuller, Sampson, and Parikka’s work, Vito Campinelli’s 2010 adoption of the meme concept for thinking online culture avows the meme as the internet’s “minimal unit of information.”<sup>25</sup> Campinelli posits as a strength what Sampson argues is the meme concept’s greatest weakness, presenting a notable, positive uptake of the original biological concept of the meme in media theory.

Summarising these positions, intermediate phase media theorists weigh the relative utility of the meme concept for thinking media based on the perceived efficacy of reducing media to the “unit”; of its compatibility with the media concept; or on its tacit or explicit politics. These theorists arguably respond to the cultural prominence enjoyed by the meme concept at the time, which it accrued as a constituent part of an evolutionary, Darwinian epistemology. I want to take cues from some of these works: in particular, Sampson’s observation that “the meme is missing” and Fuller’s acknowledgement that the meme concept provides critical purchase on thinking “reflexive mediality.” That said, the meme that this thesis deals with is, arguably, not the same as the meme concept that these media theorists critiqued. Online, what’s called a meme is more properly denoted as an “internet meme.” It’s this media type

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<sup>22</sup> Sampson. *Virality*. 72.

<sup>23</sup> Sampson. *Virality*. 70.

<sup>24</sup> Jussi Parikka. “Contagion and Repetition: On the Viral Logic of Network Culture.” *ephemera* 7, no. 2 (2007): 295.

<sup>25</sup> Vito Bardo Campanelli. *Web Aesthetics: How Digital Media Affect Culture and Society*. NAi Publishers, 2010. 73.

that's the subject of this thesis—and it's the literature on this media type to which I'll now turn.

### 1.3 THE INTERNET MEME

The internet meme is not the same as the meme that Dawkins originally conceptualised. In a moment that is reminiscent of nothing other than a particularly popular Simpsons meme called “old man yells at cloud”, Dawkins has recently repudiated the general uptake of the meme concept in online culture.<sup>26</sup> For Dawkins, the meme concept is supposed to explain the broad-scale evolution of culture according to the logic of its replicators. The vernacular online usages of this concept are much more narrow, because they're restricted to media that are produced and that circulate online. They are also, arguably, more suggestive—online, the circulation of media is, necessarily, a mediated process. As already stated, my claim is that the internet meme has to be thought in circulation. I want to overview the recent literature on the internet meme with this focus in mind.

Much recent academic work on the internet meme is informed by the concept of “participatory culture”—that is, the idea that online culture is actively produced by the users who participate in it.<sup>27</sup> A significant subset of this work focuses on politics. The work of Ryan M. Milner is particularly representative: in his recent book and in an earlier article, Milner uses examples like Occupy Wall Street to argue that memes play a significant role in facilitating contemporary political commentary and action.<sup>28</sup> Andrew S. Ross and Damian

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<sup>26</sup> Dawkins. “Just for Hits.” Keynote Presentation, Saatchi & Saatchi New Directors Showcase, Cannes, 23 June, 2013. Available to watch online: <https://www.youtube.com/watch?v=GFn-ixX9edg>

<sup>27</sup> Henry Jenkins. *Convergence Culture: Where Old and New Media Collide*. NYU press, 2006. See also: Barney, Darin, Gabriella Coleman, Christine Ross, Jonathan Sterne, and Tamar Tembeck, eds. *The Participatory Condition in the Digital Age* Minneapolis: University of Minnesota Press, 2016.

<sup>28</sup> Ryan M. Milner. “Pop Polyvocality: Internet Memes, Public Participation, and the Occupy Wall Street Movement.” *International Journal of Communication* 7 (2013): 2357–90; *The World Made Meme: Public Conversations and Participatory Media*. Cambridge, Mass.: The MIT Press, 2016.



J. Rivers' analysis of the use of internet memes during the 2016 Presidential election and Heidi E. Huntington's reframing of internet memes as forms of political rhetorical speech adopt similar conceptual frameworks to analyse politics at the interface between deliberative democracy, protest, and participatory culture.<sup>29</sup> Another subset—represented by Carrie A. Rentschler and Samantha C. Thrift's feminist analysis of the "binders full of women" meme and Milner and Whitney Phillips' feminist standpoint analysis of the #yesallwomen movement—uses feminist approaches to analyse forms of activism that employ internet memes. A third significant subset focuses explicitly on the "culture" part of online culture. Phillips' and Milner's recent co-authored book on what they call the "ambivalent internet"—which proposes that online culture is best characterised by its capacity to both facilitate expression and to breed ugliness, often in dizzying simultaneity—exemplifies this approach, using the internet meme, amongst other media, to characterise online culture as a whole.<sup>30</sup> Other studies—like Jacqueline Ryan Vickery's analysis of users' reappropriation of images or Michael Soha and Zachary J. Macdowell's analysis of the monetisation of the wildly-popular Harlem shake meme—use particular case studies to reflect on the general, popular-cultural role of internet memes today.<sup>31</sup> Asaf Nissenbaum and Limor Shifman's study of the use of internet memes to build or spend cultural capital on 4Chan's infamous /b/ board represents an approach that focuses on their community-building role.<sup>32</sup> Whilst noting that some of these studies provide useful and incisive overviews of online culture, their emphasis on participation expresses a

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<sup>29</sup> Andrew S., Ross and Damian J. Rivers. "Digital Cultures of Political Participation: Internet Memes and the Discursive Delegitimization of the 2016 Us Presidential Candidates." *Discourse, Context & Media* 16 (2017): 1–11; Heidi E. Huntington. "Pepper Spray Cop and the American Dream: Using Synecdoche and Metaphor to Unlock Internet Memes' Visual Political Rhetoric." *Communication Studies* 67, no. 1 (2016): 77–93.

<sup>30</sup> Whitney Phillips and Ryan M. Milner. "Decoding Memes: Barthes' Punctum, Feminist Standpoint Theory, and the Political Significance of # Yesallwomen," In *Entertainment Values*, edited by Stephen Harrington. London: Palgrave Macmillan, 2017. 195–211.

<sup>31</sup> Jacqueline Ryan Vickery. "The Curious Case of Confession Bear: The Reappropriation of Online Macro-Image Memes." *Information, Communication & Society* 17, no. 3 (2014): 301–25; Michael Soha and Zachary J. McDowell. "Monetizing a Meme: Youtube, Content Id, and the Harlem Shake." *Social Media+ Society* 2, no. 1 (2016): 1–12.

<sup>32</sup> Asaf Nissenbaum and Limor Shifman. "Internet Memes as Contested Cultural Capital: The Case of 4chan's/b/board." *New Media & Society* 19, no. 4 (2017): 483–501.

set of founding assumptions about online culture that are incongruent with the approach this thesis adopts.

In these studies of the internet meme, participation and its cognates—like citizenship, democracy, political discourse, rhetoric, protest, and so on—take online culture for granted: the “online” part, by typically failing to interrogate the technologies that make participation possible; and the “culture” part, by uncritically according the user with agency. I don’t mean to critique these approaches so much as point out that they are informed by wholly different epistemological preconceptions. This points to two key overarching themes that organise recent studies of the internet meme. First, they fall—not necessarily neatly—into one of two disciplinary categories: media studies and media theory. In presenting these categories, I don’t mean to reproduce the reductive, canonical distinction between socially-constructivist and technological determinist accounts of media. Rather, I mean to distinguish between these disciplinary frames to position this thesis within the discipline of media theory. This disciplinary framing will become crucial in later chapters. For now, I want to use it to position this thesis’s approach to the internet meme. Second, these approaches reproduce vernacular online culture’s own concept of the internet meme to a greater or lesser extent. This is necessary, insofar as this culture is defined by its own capacity for reinvention; but it’s also problematic, because online culture also has a tendency to reproduce the epistemologies produced by the media technologies that make it possible.

This disciplinary framing helps us to contextualise different recent theoretical approaches to the question of what the internet meme *is*. Media studies scholars tend to approach this question by offering definitions. In an early attempt to clarify the concept of the internet meme, Patrick Davison defined this kind of media as a “piece of culture” with three “components”: the “manifestation” of the meme, individual or collective; the “behaviour” of the meme, as carried out by users in its “service”; and the “ideal” of the meme, or

the concept or idea conveyed.<sup>33</sup> More recently, Limor Shifman's influential work on the internet meme proposed a definition that seems to have become the scholarly standard. Shifman argues that the internet meme is characterised by three chief features: it encapsulates "a group of digital items sharing common characteristics of content, form, and/or stance"; it states that these items "were created with awareness of each other"; and it stipulates that these items "were circulated, imitated, and/or transformed via the internet by many users."<sup>34</sup> Other notable definitions include Bradley E. Wiggins and G. Bret Bowers' argument that memes should be conceptualised as a "developing genre of communication", where each type of meme is considered a genre incorporating "messages transmitted by consumers-producers for discursive purposes";<sup>35</sup> or Dominik Maeder and Natalie Wentz's adoption of the term "seriality" to characterise what I call internet memes' plurality.<sup>36</sup> These definitions are distinct and some of them—namely, Shifman's—are more influential than others. What they share is a basic belief that the internet meme is created by users; a tendency to take the technology that enables this creation for granted; and an assumption that memes are circulated. If we take Shifman's definition as their exemplar, circulation is crucial to the internet meme but is, crucially, left unconceptualised. We can only assume that internet memes are circulated *by* users.

I'll spill a lot of pixels in the chapters to come substantiating my claim that the internet meme must be thought in circulation—and that circulation must be reconstructed as a media-theoretical concept if the internet meme is to be thought at all. For now, I want to note that the assumption that the internet meme is circulated takes for granted that it can be circulated, treating it as self-evident online media "content." As I argued in the introduction, this is

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<sup>33</sup> Patrick Davison. "The Language of Internet Memes," In *The Social Media Reader*, edited by Michael Mandiberg. 2012. 122-123.

<sup>34</sup> Shifman. *Memes: In Digital Culture*. Cambridge, Mass.: MIT Press, 2014. 41.

<sup>35</sup> Bradley E. Wiggins and G. Bret Bowers. "Memes as Genre: A Structural Analysis of the Memescape." *New Media & Society* 17, no. 11 (2015): 1893.

<sup>36</sup> Dominik Maeder and Daniela Wentz. "Digital Seriality as Structure and Process." *Eludamos. Journal for Computer Game Culture* 8, no. 1 (2014): 129-49.

problematic because it produces a tautology: media circulate because they're content; what circulates online is content—and circulation is something that just happens online. As we'll see in a later chapter on the platform, the assumed self-evidence of circulating content allows media to exercise an epistemological influence on our media concepts. In treating media as "content", moreover, these approaches reproduce the biological meme concept's focus on the "unit" of cultural propagation. Though the internet meme is not the same as the biological meme, Sampson's critique of the latter is still applicable to the former. In its ambiguous double status as instance and plurality, we still might ask: *Where is the internet meme?*

The approaches just glossed belong to what I'm identifying as the discipline of media studies. The analytical work that they do is not wholly compatible with the theoretical work that I want to do with the internet meme, because it operates under different epistemological assumptions. By contrast, what I'm categorising as media theoretical approaches to the internet meme conceptualise the role of the user, to the politics of participation, and the media technologies that make online culture possible in different ways. Perhaps obviously, they also tend to embrace theoretical speculation. Alongside Fuller, Sampson and Parikka's intermediate-phase analyses of the meme concept, I want to note a few other media-theoretical analyses that this thesis will draw upon.

The media-theoretical work on internet memes I draw from most is Olga Goriunova's. For Goriunova, internet memes aren't just "content" that's produced by participatory users, but are better described as a form of "behaviour" instantiated by what she calls "human-technical systems."<sup>37</sup> As will become apparent, the epistemological approach this thesis adopts differs from that underlying Goriunova's proposition, that internet memes express a form of human-technical individuation. However, she also notes that they raise a "unique question" that's not reducible to the rubric of participation—a question

“of the kind, scale and range of phenomena that unfold online”, which she says constitutes “a new aesthetic form that individuates through larger human-technical assemblages and also individuates something through itself.”<sup>38</sup> This thesis is, similarly, occupied with the task of thinking at scale that’s opened up by the problem of thinking internet memes. It will also draw upon several studies of the technologies and aesthetics of internet memes, including Kate Brideau and Charles Berret’s analysis of the Impact font, which is recognisable as the standard font used by macros; Patrick Davison’s analysis of the influence of MS Paint on internet meme aesthetics; and Nick Douglas’s very interesting analysis of what he calls the “internet ugly” style.<sup>39</sup> But whilst this thesis is indebted to Goriunova’s work and whilst these analyses are useful, it will ultimately adopt an alternate approach to theorising the internet meme: treating it as a problem that has to be worked through, rather than as an object of theorisation. Adopting this approach shifts our focus from the internet meme itself to the concept that we enrol in order to elide its ambiguous double status and to make it tractable in analyses of online culture: circulation.

#### 1.4 THE NEW

This outline of the extant literature on the internet meme is brief because the field is still relatively new—there just aren’t that many studies out there. It’s also brief because the aim of this thesis is to open up an epistemological space which is both the field in which this thesis will be situated *and* the material it will use for further analysis and theorisation. I want to draw three points out of this brief engagement.

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<sup>37</sup> Olga Goriunova. “The Force of Digital Aesthetics. On Memes, Hacking, and Individuation.” *The Nordic Journal of Aesthetics* 24, no. 47 (2016): 56.

<sup>38</sup> Goriunova. “The Force of Digital Aesthetics.” 69-70.

<sup>39</sup> Brideau, Kate and Charles Berret. “A Brief Introduction to Impact: ‘the Meme Font’.” *Journal of Visual Culture* 13, no. 3 (2014): 307-13; Davison. “Because of the Pixels: On the History, Form, and Influence of Ms Paint.” *Journal of Visual Culture* 13, no. 3 (2014): 275-97; Nick Douglas. “It’s Supposed to Look Like Shit: The Internet Ugly Aesthetic.” *Journal of Visual Culture* 13, no. 3 (2014): 314-39.

First, the internet meme has a history. There's an obvious component to this history that most engagements with the internet meme are compelled to note, if only in passing: this history begins with Dawkins' approach to evolutionary biology. The less obvious component is that this history develops into distinct disciplinary domains as it's taken up by a succession of scholars working in different domains of knowledge. For intermediate-phase media theorists, the meme concept isn't specific to particular media, but describes the dynamics of media that proliferate. For more recent media scholars, the concept finds its articulation in online culture, presenting itself readymade and ready to use. These media scholars don't typically refer to the media theorists that precede them, instead outlining a lineage that leads from Dawkins straight to online culture. The literature sorts itself into the distinct disciplines I outlined in my introduction.

Second, recent literature on the internet meme fails to conceptualise it in circulation. This literature often describes it *as* circulating, or notes *that* it circulates, but fails to actually conceptualise circulation itself. The failure to conceptualise circulation is not limited to the literature on the internet meme. Circulation is a recurrent term in studies of media; yet, despite its centrality, it has arguably not been adequately theorised as a *media-specific concept*. This raises a two-sided question: What conceptual work is circulation doing in this literature? And, conversely, when circulation's invoked, what constituent epistemological components of theories of the internet meme is it allowed to supervene upon? In Dawkins, memes survive and propagate because they replicate. The media theorists glossed above cite more theoretically-complex dynamics that favour concepts other than circulation. Because their concept of the meme is non-media specific, this isn't an issue; they're concerned with instances that propagate. But it also means that their path-breaking work can only contribute so much to our aim of formulating a theory of the internet meme. In more recent studies of the internet meme, "circulation" typically functions as a stand-in for "participation": internet memes circulate because they're circulated by users. Yet in adopting the concept of the internet meme

as it's given online, these approaches overlook the media-technical contexts that make the massive-scale production of media like internet memes possible.

Why does it matter that this literature fails to conceptualise circulation? In failing to conceptualise circulation itself, my claim is that this literature is *apophatic*. That is, it might allow us to work on internet memes by distinguishing them from what they are not, yet it doesn't allow us to formulate a theory of what internet memes actually *are*. The two points above contribute to a third. The concept of the internet meme that's in common currency, both online and in academic literature, is informed by a number of distinct epistemological assumptions. These assumptions concern not only what media do, but how they can be understood in their plurality. This latter question is key not only to the internet meme, in its ambiguous double status as instance-plural, but to the question of how we might theorise media today. Here, we return to the problem that organises and animates this thesis: my argument is that circulation is key to thinking the internet meme both as media and in the present. But this problem and its animating question, *How do we think media in excess of themselves?*, invokes a broader contemporary literature that is also tacitly or explicitly concerned with thinking media. I want to outline some of this literature now to better situate the approach I want to adopt.

### 1.5 AN EXCESS OF MEDIA (THEORY)

One way of positioning the internet meme and its attendant problem is to think of it as inviting us to theorise “media after media”, to adopt Bernhard Siegert’s formulation.<sup>40</sup> After the advent of digital media, which are able to “comprehend all other media,” as Kittler puts it, media are supposed to have “converged” in our digital devices.<sup>41</sup> And yet media’s massive distribution has

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<sup>40</sup> Bernhard Siegert. “Media After Media.” In Ellen Ikoniadou and Scott Wilson, eds. *Media After Kittler* 2015. 79-89.

<sup>41</sup> Friedrich Kittler. “The History of Communication Media.” *CTheory* (1996): <http://journals.uvic.ca/index.php/ctheory/article/view/14325/5101>.  
J. David Bolter and Richard Grusin make one version of this argument when they assert that new media are simply ‘remediations’ — convergences and recyclings — of old. But in

created the conditions in which media circulate in perpetual *divergence*. We are “after” media, according to Siegert, insofar as many media are internet-native, media exceed the discrete media-unit, and media are no longer necessarily compatible with media concepts derived from prior media types. But rather than do away with the media concept altogether, Siegert and a number of other media theorists have tried to adapt it to our media situation by expanding the object of media-theorisation. Siegert advocates decomposing media into the constituent “cultural techniques”—like writing, counting, or drawing—that they operationalise.<sup>42</sup> For Sarah Kember and Joanna Zylinska, problems much like the one I’ve introduced here invite us to conceptualise media in vitalist process—by granting primacy to mediation.<sup>43</sup> Dieter Mersch and Sybille Krämer each favour a concept they dub “mediality”, which focuses on medial processes in lieu of media artefacts, like media receding from use or transmission respectively.<sup>44</sup> In Florian Cramer’s more tongue-in-cheek formulation, what we get after media is “[a]nti-media”, or a concept that is “what remains if one debunks the notion of media but can’t get rid of it.”<sup>45</sup>

Another set of approaches begins from the more specific premise that the internet demands new concepts of media, developing new concepts of media out of how media is used in the present. The concept of the postdigital, introduced above, is one of these. Others include Hito Steyerl’s various analyses of online media, culminating in her claim that “the internet is dead”—

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Friedrich Kittler’s version, the dissolution of the distinctions between media like the moving image, writing and sound occurs because the computer subject media to mathematisation. See: J. David Bolter and Richard Grusin. *Remediation: Understanding New Media*. The MIT Press, 2000.

<sup>42</sup> Bernhard Siegert. “Cultural Techniques: Or the End of the Intellectual Postwar Era in German Media Theory.” *Theory, Culture & Society* 30, no. 6 (2013): 48–65. It must be noted that this concept has several distinct strands. For an overview, see: Bernard Dionysius. Geoghegan. “After Kittler: On the Cultural Techniques of Recent German Media Theory.” *Theory, Culture & Society* 30, no. 6 (2013): 66–82.

<sup>43</sup> Sarah Kember and Joanna Zylinska. *Life After New Media: Mediation as a Vital Process*. Cambridge, Mass.: MIT Press, 2012.

<sup>44</sup> Dieter Mersch. “Meta/dia: Two Approaches to the Medial,” In *Media Transatlantic: Developments in Media and Communication Studies Between North American and German-Speaking Europe*, edited by Norm Friesen. Dordrecht: Springer, 2016. 170.

<sup>45</sup> Florian Cramer. “Introduction.” In *Anti-Media: Ephemera on Speculative Arts*. NAI Publishers, 2013. 8.



not only because it has “crossed the screen”, but also because it can no longer be conceived of as a space in which we might formulate liberators ideologies, right or left.<sup>46</sup> For the “post-internet” art movement and their theorists of our always-online existence, our labours—and, in particular, our aesthetic practices—come *after* the internet, whether because they work with it or, more subtly, because we now take it for granted.<sup>47</sup> Or, our relationship to media has changed, according to another set of theorists, because media’s ubiquity forces us to adopt “post-media” practices that seek out media’s “unexploited qualities” in the pursuit of tactical or subversive-political goals.<sup>48</sup> Though distinct, each of these approaches uses our novel contemporary media practices as the basis for new concepts of media themselves.

For these media theorists, what I’m calling our indeterminate postdigital media situation necessitates the development of new theories of media. Some of these theorists begin with the media concept itself; some begin with concrete contemporary practices. Together, they constitute an ongoing dialogue about what media is and how we ought to theorise it to which this thesis responds. To riff on Siegert, we are also “after” media insofar as media like the internet meme demand to be thought in circulation. This concept must be added to our media-theoretical repertoire. Per claims that we are “post-internet”, “post-digital”, or “post-media”, such revisions of our concepts of media can only proceed through engagements with concrete practices—like the production of internet memes. Whilst I’ll engage with all of this work throughout this thesis, I want to flag two approaches in particular that are much more proximate to my

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<sup>46</sup> Steyerl, “Too Much World.”

<sup>47</sup> Artie Vierkant. “The Image Object Post-Internet.” (2010): Accessed April 5, 2017. [http://jstchillin.org/artie/pdf/The\\_Image\\_Object\\_Post-Internet\\_a4.pdf](http://jstchillin.org/artie/pdf/The_Image_Object_Post-Internet_a4.pdf); Marisa Olson. “Postinternet: Art After the Internet.” *Foam magazine* 29 (2012): 59–63; Melissa Gronlund. *Contemporary Art and Digital Culture*. London: Routledge, 2016.

<sup>48</sup> Josephine Berry Slater and Anthony Iles. “Provocative Alloys: An Introduction,” In *Provocative Alloys: A Post-Media Anthology*, edited by Clemens Apprich, Josephine Berry Slater, Anthony Iles, and Oliver Lerone Schultz. London & Lüneberg: Post-Media Lab and Mute Books, 2013. 10.

interests: contagion theory, which is concerned with the dynamics of virality; and the mongrel movement known software studies.<sup>49</sup>

The approach that perhaps resonates most closely with my object—the internet meme—and the concept I want to focus on in this thesis—circulation—is the field of “contagion theory”. Particularly in the work of Sampson, contagion theory is explicitly concerned with the dynamics of virality, both online and as a more general social process. Drawing on the work of Gabriel Tarde, Sampson formulates a complex and incisive theory of contagious phenomena—including media—that is “established in complex intersection points that bring physical, biological, cultural, and political phenomena into social relation with each other.”<sup>50</sup> What’s interesting about this theory is that it emphasises the role that “imitation” plays in spreading phenomena.<sup>51</sup> Contagion theory is underpinned by a detailed conception of relations that shifts the agency of virality from participating users or media technologies to “embedded network subjectivity” situated in “flows of contaminating influence and persuasive mood settings, all of which are transmitted through mostly unconscious topologies of social relation.”<sup>52</sup> Media can only be made to spread through the cultivation of “active epidemiological spaces” “the production of sensory environments in which the contagions of a social medium can be encouraged.”<sup>53</sup> As Sampson puts it, its objects are “not consequently reducible to a unit.”<sup>54</sup> As Lisa Blackman concisely asserts, what spreads for contagion theory is “not just information as understood within traditional media theory,

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<sup>49</sup> Matthew Fuller. “Introduction: The Stuff of Software,” In *Software Studies: A Lexicon*. Cambridge, M.A.: The MIT Press, 2008. 1–13.

<sup>50</sup> Sampson. *Virality*. 87.

<sup>51</sup> For an overview of the interplay between contagion and imitation, see: Christian Borch, ed. *Imitation, Contagion, Suggestion: On Mimesis and Society* London: Routledge, 2019.

<sup>52</sup> Sampson. *Virality*. 5.

<sup>53</sup> Sampson. Cosmic Topologies of Imitation: From the Horror of Digital Autotoxicus to the Auto-Toxicity of the Social.” *Parallax* 23, no. 1 (2017): 68.

<sup>54</sup> Sampson. *Virality*. 87.

or cybernetics”, but phenomena including “political rumours, fads, fashions, trends, gossip, hype, emotions, feelings, affects, sensations and moods”.<sup>55</sup>

Contagion theory offers useful tools for apprehending virality at large scales. Yet for this very reason, it overshoots the particular object that concerns us—the internet meme. To return to the language of this thesis, contagion theory thinks media in excess of themselves by dissolving media into the set of relations constituted by the couplet contagion-imitation. As we’ll see in Chapter 5, this gesture also effects the reduction of media to a set of ontological-theoretical predicates, which in Sampson’s case are drawn from Tarde. The question I want to ask is not, “What spreads?”, but rather, *What is the internet meme in circulation, as media?* Put programmatically, the approach I want to adopt in this thesis is formulated in order to rescue the media concept from its dissolution into its constitutive relations, even as its gesture of contextualising media-theoretical practice institutes a reciprocal relationship between media and its concrete objects.

The final approach I want to note here will play a much more guiding, though often tacit role in this thesis: software studies. Software studies emphasises computer software’s capacity to bring seemingly-disparate domains of knowledge and practice—from art to white-collar work, from pop culture to institutional politics, from abstraction to its material substrates—in to frame.<sup>56</sup> Its ambition to use software to articulate and analyse the interrelations between these domains is one that my approach shares. Where software studies proceeds through analyses of particular software, however, my approach will place a greater emphasis on epistemological modes of practicing theory and conducting analyses of media. In contradistinction to software studies’ focus on the technical—“grey”—<sup>57</sup>literature that outlines how epistemologies are operationalised, I want to focus on media theory itself. My

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<sup>55</sup> Lisa Blackman. *Haunted Data: Affect, Transmedia, and Weird Science*. London: Bloomsbury, 2019. 184, f.n. 4.

<sup>56</sup> Fuller. “Software Studies Methods,” In *The Routledge Companion to Media Studies and Digital Humanities*, edited by Jentery Sayers. New York and London: Routledge, 2018. 250–57.

gambit is that this approach will allow us to think across theory, online practices, and our indeterminate postdigital media situation. Software studies is a key point of reference for this thesis for another reason again: it's an example of recent media-theoretical work that emphasises the role that media play in formalising and operationalising epistemology. In software studies, software enables contemporary knowledge work.<sup>58</sup>

But it also belongs to an occluded lineage of media theory that is concerned with the epistemological influence that media exercise over our theories of them. As outlined above, Kittler is a key thinker of this oftentimes torturously-recursive relation. One of Kittler's key influences, Harold A. Innis, also often theorised media in a tacitly-epistemological vein, particularly in his later work.<sup>59</sup> As we'll see in Chapter 6, the American communications scholar James W. Carey—also influenced by Innis—likewise emphasised the impact that media have on media theory, particularly with his claim that the telegraph enacted the separation of media's content from its material substrate.<sup>60</sup> More recently, key thinkers in the German media theory tradition have also been adopting epistemological approaches to media theory. Joseph Vogel's work on the telescope or Claus Pias's work on simulation uses analyses of particular media as the frame for claims that our media concepts are historically-variable or that media shape our theories of them, respectively. I want to explicitly position this thesis in this occluded lineage. Like these thinkers, my aim is to both identify and to formalise the influence that media exercise over our theories of them. Yet I would also claim that media theory lacks the necessary epistemological tools to transform this claim into a workable methodology that we can apply to media themselves. So whilst my approach will be informed by each of these thinkers, it will also turn to historical epistemology to develop these epistemological tools.

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<sup>57</sup> Fuller and Andrew Goffey. *Evil Media*. Cambridge, Mass.: The MIT Press, 2012.

<sup>58</sup> Fuller. "Software Studies Methods." 250.

<sup>59</sup> Empire and Communications

<sup>60</sup> James W. Carey. "Technology and Ideology: The Case of the Telegraph," In *Communication as Culture, Revised Edition: Essays on Media and Society*, 155–77. New York and London: Routledge, 2008.

## 1.6 AGAINST REDUNDANCY

The literature on internet memes is most sensible when it's parsed as a series of attempts at capturing a type of media and of translating a culture that are both subject to constant change. But to keep pace with the new, we don't necessarily need to refresh our theories of media. More recent literature on the internet meme arguably falls in to the trap of attempting to apprehend these constantly-reinvented media in their recombinant novelty. What's needed, instead, is an approach that tries to account for its own potential redundancy in the face of this change. The difference between the two is that the latter acknowledges that indeterminacy is not only an attribute of media, but a condition of theoretical practice. This review of the extant literature on the internet meme doesn't allow us to adequately situate this thesis's approach in relation to this problem, which exceeds the internet meme proper. My claim that circulation is absolutely necessary for thinking the internet meme no doubt invites scepticism. On the face of it, my further claim that it opens out on to the more general question of how we might think media in our indeterminate postdigital media situation is, perhaps, even harder to countenance. For this, we need to adopt other methods of positioning and repositioning.

To help us understand the stakes of the problem that structures this thesis, I want to turn now to an analysis of an installation by Constant Dullaart called *Jennifer in Paradise*. This gesture might seem strange. Why use an analysis to position this thesis? Why, more importantly, analyse an artwork rather than an internet meme? This artwork thematises an image that Dullaart claims to be an example of a proton-internet meme. For our purposes, it's interesting because it fails to produce the very thing that it claims to document: an actual meme and a real history. It provides us with material that we can use to test a speculative question: *Is it possible to imagine an internet meme that is no longer in circulation?* As this analysis will show, the answer to this question is *no*. More

crucially, this analysis will help us to understand why. The convoluted temporalities involved in Dullaart's artwork and its—productive and ultimately interesting—failure can help us to think through the relationship between circulation and the present.

Using this speculative exercise, I want to open circulation's insufficiency out to our indeterminate postdigital media situation. If media inform the conditions in which they become objects of theorisation, we need to challenge what it means to theorise media in the present by interrogating what we mean by the "present" of media-theoretical practice. I'll conclude this chapter by reflecting further on Peter Osborne's critique of standard theoretical practice, which he construes—negatively—as operating in a "contemporary" mode. This critique will provide a bridge to the chapter that follows on from this one, which will adapt an historical epistemological approach from the history and philosophy of sciences to posit a method that we can use to apprehend the concrete-epistemological influence that media exert on media theory itself.

*Jennifer in Paradise* exposes the temporal dynamics that inform media and the theoretical practices we train on them alike. Circulation is the concept we invoke, in commonplace form, to bridge novel media and the present they occupy. By demonstrating its necessity to media and our theoretical practices, I want to demonstrate precisely why this thesis will spend so much time tarrying with this concept. We can think of this as an epistemological form of positioning, whereby the analysis of media helps us to sort which of our concepts are most central to the problem at hand and for a form of analysis that takes our theoretical practices as its material.

## 2. NO AFTER, JUST NOW: A SPECULATIVE EXERCISE

// OBLIVION

*Is it possible to imagine an internet meme that is no longer in circulation? One that had spread and varied as it was collectively copied—or shared, sent, posted, forwarded, retweeted, uploaded, embedded, pinned— only to fall out of favour? That is, would a meme that is no longer in circulation still be a meme?*

*It's not hard to imagine the context in which a meme might stop circulating. The topology of the internet is full of dead pockets. Links break. Websites stop being maintained. Software is updated; features cease to function. Companies liquidate. In time, even those platforms that seem to define the entire media landscape, and our everyday reality, are replaced. After all, who remembers MySpace? Parts of the internet languish on forgotten servers. Online communities break apart as people's interests drift. In time, whole subcultures are superseded by new ones. Can the internet meme survive the perpetual obsolescing of its environment? We can invert this question, too. If a meme had been taken up by a particular collective or community only to fade as the community faded or the collective fragmented, what would remain? What would its residue be?*

*Say this hypothetical internet meme was an image. Out of circulation, this image wouldn't be legible as an internet meme. Out of circulation, it might not even be legible as an internet meme's residue: it would just be an image. When an internet meme stops circulating, it's consigned to oblivion.*

## 2.0 JENNIFER

A photograph—a woman sits on the pale sand of a sunny, tropical beach with her back to us, leaning to one side and gazing at the water with what, her pose and this setting would lead us to believe, could only be wistfulness. This kind of image depicting this kind of subject and this kind of setting is hardly remarkable today. From digital platforms and webpages to print publications, online and offline media alike are populated with photographs of similarly-nondescript scenes. These images might be user-generated, like the “poor” images that Hito Steyerl refers to.<sup>1</sup> They’re just as likely to be stock images drawn from databases of glossy photographs, each tagged with a keyword and ready to be searched for and inserted into articles, social media posts or advertisements. This kind of banal, glossy “content” “circulate[s] in excess” on the ‘net, as Marissa Olson puts it,<sup>2</sup> constituting one of its dominant visual languages and defining aesthetics. And our photograph, the woman on the beach? This particular image is invested with much more significance than a stock photo might otherwise be accorded. This image is the subject of Constant Dullaart’s mixed-media installation, *Jennifer in Paradise*.<sup>3</sup> What differentiates this image from an excess of others is that it is presented as the residue of an early internet meme.

*Jennifer in Paradise* provides us with an example that we can use to engage with the concept of circulation in a speculative mode. This installation presents its ostensible subject—an image of a woman, the eponymous Jennifer, on a beach—as a meme that is no longer in circulation. This installation uses digital and artistic techniques as speculative methods for engaging with, and representing, the history of our contemporary aesthetics. By presenting the

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<sup>1</sup> Hito Steyerl. “In Defense of the Poor Image,” In *The Wretched of the Screen*, 31–45. Berlin: Sternberg Press, 2012.

<sup>2</sup> Marissa Olson. “Lost Not Found: The Circulation of Images in Digital Visual Culture,” In *Mass Effect: Art and the Internet in the Twenty-First Century*, edited by Lauren Cornell and Ed Halter, 159–66. Cambridge, Mass.: The MIT Press, 2015.

<sup>3</sup> This work has been exhibited in multiple galleries and in various iterations. I saw the exhibition in Prague in 2015. Constant Dullaart. *Jennifer in Paradise*. 2013 - present. Exhibited at: *Import Projects*, Berlin, 2013; *Future Gallery*, Berlin, 2013; *Carroll/Fletcher*, London, 2014; *Futura*, Prague, 2015.



Jennifer image as an early example of a meme created and iterated in the Photoshop application, *Jennifer in Paradise* suggests that this image is a significant historical artefact from online culture's developmental period. The way it does so is particularly interesting. As I'll discuss below, Dullaart could only find the *residue* of this supposed meme. To present it in the gallery space, he had to recover it using reconstructive digital techniques. Or that's how the installation's accompanying documentation presents it. The story behind the original Jennifer image is actually much more convoluted than this documentation claims, because the idea that the Jennifer image actually *was* a meme is questionable. Later correspondence between the creator of the Jennifer image and Dullaart undermines many of the claims that this installation makes. But this correspondence also makes this work interesting for our purposes, because we can use it to expand upon the temporal dynamics of circulation—concept and process.

This section will use these convolutions to think through the relationship between a meme and its supposed residue. *Jennifer in Paradise* is implicated in multiple real and supposed temporal regimes, some of which are real and some of which are not. If we treat *Jennifer* as a work of artistic speculation, its engagement with the Jennifer image provides us with a way to critique attempts to reduce internet memes to their genetic origin, or their past. We can also use this installation to question what it means for a meme to have a present. But this work also speculates about the possibility that an internet meme might have an afterlife, because it proposes that a digital artefact of an earlier age can be reconstituted and put back in to circulation. This gesture can be framed as an attempt to grant a meme a degree of futurity through the paradoxical temporality of the "as though." After Gilbert Simondon, this gesture operates "as though" the meme *was always in circulation*. This gesture initiates a leap that secures the present by also specifying—and so constituting—its lineage from several possibilities. The "as though" demonstrates that the predicated present-of—the meme, but also the concept of circulation—is only constituted *in and through* media's concrete circulations.

More than this, it helps us to show how the present that circulations describe are different from the putative “present” in which our media-theoretical practices operate. By presenting a—speculative—example of a meme that is in and out of or that does or doesn’t circulate, *Jennifer in Paradise* can help us to establish why this concept is essential to the meme and why it needs to be theorised differently.

## 2.1 PARADISE FOUND

The premise of *Jennifer in Paradise* is that the Jennifer image isn’t just another stock image. Rather, Dullaart and his gallerists present this installation as a work of vernacular internet history. The installation’s eponymous Jennifer is the then-girlfriend, now-wife of Jeff Knoll, who co-created Photoshop in 1988. As Dullaart suggests, this image is supposed to have accompanied Photoshop’s first version to give new users something they could modify using its new tools. It’s not unreasonable to say that Photoshop is one of the most influential software applications ever developed.<sup>4</sup> This application was the first fully-featured digital image editing suite available to home consumers. In technical terms, Photoshop is a raster graphics editing application. Raster graphics, which are also referred to as “paint” graphics, are made up of a grid-like structure of discrete pixels. They’re contrasted to vector, or line, graphics, which are based on continuous forms, like curves and lines.<sup>5</sup> Photoshop continues to be the industry-standard program for editing this graphic type. It’s so ubiquitous, in fact, that it has entered the contemporary lexicon. Like the verb “to google”, “to photoshop” is now commonly used to describe the act of modifying a raster-based digital image. Its association with the slick, high-definition aesthetic that characterises contemporary images has also made it one of contemporary online culture’s defining terms. As Dullaart puts it, the Jennifer

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<sup>4</sup> Matthew Kirschenbaum. “The 10 Most Influential Software Programs of All Time.” *Slate*, July 30 2013; Patrick Davison. “Because of the Pixels: On the History, Form, and Influence of Ms Paint.” *Journal of Visual Culture* 13, no. 3 (2014): 275–97.

<sup>5</sup> Alan Parker. *Digital Imaging Primer*. Berlin: Springer, 2016. 315.

image would once have been the “most photoshopped image” in circulation.<sup>6</sup> *Jennifer in Paradise*’s central claim is that the Jennifer image is a crucial artefact in the development of this software.

On one level, his installation uses this artefact to produce an homage to the software application that launched a thousand airbrushed faces. *Jennifer in Paradise* makes a two further claims, however, that make it useful for thinking through the problem posed by the internet meme. Dullaart’s installation asserts that the Jennifer image as a significant artefact of the Photoshop application’s early years, because it’s an example of one of the earliest photo-modified memes.<sup>7</sup> Moreover, it claims that this image is all the more valuable as an artefact because it had all but disappeared from circulation.

When Dullaart tried to trace the original photo of Jennifer online, all he could find was a low-resolution version of the original, which amounts to saying that it—as image or as meme—was no longer in circulation. But he had seen this image in at least one place: a video of Knoll recreating his early demonstrations of how the first versions of Photoshop worked. This video was released by Adobe on their Youtube channel in 2010 as a marketing ploy, giving Photoshop’s fans some insight in to their history. As a document, though, it’s also a vernacular record of software history. When Knoll demonstrates some of the early features of the software application, we can recognise the precursors to some of the features that we use today. In this video, Knoll introduces the application’s features by opening a file—the Jennifer image—that’s clearly labeled “Jennifer in Paradise.”<sup>8</sup> In the video, Knoll is working on an old machine connected to a boxy Cathode Ray Tube monitor. The Jennifer image that *does* appear is filmed from the output of this screen. This is the

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<sup>6</sup> Constant Dullaart and Jeff Knoll. “*Jennifer in Paradise*: The Correspondence.” (2016): Accessed 1 November, 2016. <http://carrollfletcheronscreen.com/2016/03/01/jennifer-in-paradise-the-correspondence/>.

<sup>7</sup> Futura Gallery. “*Jennifer in Paradise* Exhibition Documentation.” (2013): Accessed 1 November, 2016. <http://www.futuraproject.cz/en/futura/event/77-jennifer-in-paradise>.

<sup>8</sup> Adobe Photoshop. “*Photoshop*: The First Demo [With John Knoll].” (2010). Accessed 3 November, 2016. <https://www.youtube.com/watch?v=Tda7jCwvSzg>

source of Dullaart's low-resolution image.<sup>9</sup> Dullaart may have extracted this image by screen-shotting a still of this video directly, through a browser interface on his computer, or he may have transcoded the video to extract a clean raster. Either way, the quality would have been very poor. To reconstruct the image, he used a contemporary version of Photoshop. This gesture closes the loop: it situates this program, both at its inception and now, at the heart of contemporary online culture.

His installation is an homage and a history, but it's also an example of applied media archaeology.<sup>10</sup> In his thorough overview of this approach, Jussi Parikka introduces media archaeology as "a way to investigate the new media cultures through insights from past new media" that emphasises "the forgotten, the quirky, the non-obvious apparatuses, practices, and inventions."<sup>11</sup> We can see Dullaart's artwork as adopting the media-archaeological strategy, as Parikka puts it, of "challeng[ing] the strategic amnesia of digital culture."<sup>12</sup> In a media situation that values the recurrent forgetting of the old with each advent of the new, Dullaart's artwork accords value to the acts of remembering and its aesthetic re-presentation. Dullaart used digital techniques to reconstitute an image from its residue. But Dullaart's method is also speculative, drawing on a strand of media archaeology that emphasises that "the past is only a lost present."<sup>13</sup> What's of interest to Dullaart is how a we might use a dated vernacular digital culture's aesthetic products to explore how that culture was produced—or in this case, *processed*—by its software. Extrapolating from this engagement to the present, *Jennifer in Paradise's* implication is that the widespread access to digital modification that Photoshop provided is one of the causal drivers of contemporary online culture. By claiming that the Jennifer image became a meme, Dullaart also extends this implication to *meme culture*.

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<sup>9</sup> Dullaart and Knoll. "The Correspondence"

<sup>10</sup> Futura Gallery. *Jennifer in Paradise*.

<sup>11</sup> Jussi Parikka. *What is Media Archaeology?* London: Polity, 2012. 2.

<sup>12</sup> Parikka. *What is Media Archaeology?* 13.

<sup>13</sup> Parikka. *What is Media Archaeology?* 12.

Its conceit is that an artwork can restore a lost moment in the development of contemporary online culture by wresting one of its artefacts from oblivion.

Or this is how the work is presented. Its story isn't actually as straightforward as its accompanying documentation would suggest.

## 2.2 PARADISE LOST

Some of the claims that frame *Jennifer in Paradise* are apocryphal at best or disingenuous at worst. Knoll, prompted by a request for clarification by a journalist from the *Wall Street Journal* and after the installation had already been exhibited twice, entered into correspondence with Dullaart to correct some of the claims made in and around his installation. In this correspondence, Knoll contested some of the claims that Dullaart had made about the Jennifer image, including some that could only be considered foundational for the installation's historical framing. According to Knoll, the reason why the Jennifer image was hard to find is that it was never actually distributed with the Photoshop software, nor made available in the public domain.<sup>14</sup> It had made an appearance in the video that Dullaart had seen, but not as what we would recognise as a digital image, in the technical sense of a raster graphic stored in a common file format. Whilst the image was made available for peers to experiment on with very early embargoed copies of the *Photoshop* program, it was never circulated widely. If the Jennifer image wasn't in circulation, then it likely wasn't, couldn't, have been a meme. We might wonder, then, why Dullaart was moved to claim that the Jennifer image had been a meme—or even how this particular image came to be used to demonstrate early versions of the Photoshop software application at all.

The story of the Jennifer image's digitisation can help us to explain why Knoll used this photograph in particular. In his correspondence with Dullaart, Knoll relates that this image was the "first good colour photograph" that he had on

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<sup>14</sup> Dullaart and Knoll. "The Correspondence"

file and that he could use to demonstrate Photoshop's capabilities.<sup>15</sup> Knoll took the original photograph whilst holidaying with the eponymous Jennifer, who he is now married to, in August, 1988. About a month later, he used a new image scanner in Apple's Advanced Technology Group—a "Sharp JX-450 flatbed scanner", he notes—to digitise a "4x6 [inch] print" of the photograph. This file was so large that he had to transport it home on multiple floppy disks and reassemble it into a high-quality 24-bit colour image. The kind of high-quality image that Knoll *could* use for demonstrations was actually quite rare. This image was one that Knoll considered to be personal, but the technical difficulties involved in producing a high-quality digital image in 1988 account for his use of this otherwise-personal photograph in his demonstrations. In a time before the high-bandwidth internet that we know it today, a file large enough to require multiple 1.44mb floppy disks to transport would hardly have been mobile. Why, then, did Dullaart claim that this image must have been a meme? We can probably trace this claim back to Knoll's 2010 video demonstrating how the first version of Photoshop worked. Right at the start of the video, just as he's opening the Jennifer image, Knoll says that this image "got around."<sup>16</sup> There's something slightly strange to this claim, given the intimate nature of this photograph. Regardless, it does imply that at one point, this image circulated. Dullaart's installation does wrest the Jennifer image from oblivion—only, it's not the kind of oblivion he imagined.

If the Jennifer image isn't a meme, what's the point of analysing *Jennifer in Paradise*? Some of Dullaart's claims are apocryphal, but it is for this very reason that they can also tell us something meaningful about the internet meme today. I claimed above that the image and the meme aren't the same. Not only can the meme be types of media other than the image; unlike the image, which can be an instance, the meme is defined, in part, by constituting a plurality. As the Jennifer image's provenance is contested by Dullaart and Knoll, it vacillates between the categories of meme and image. This vacillation can be expressed

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<sup>15</sup> All information about the photograph taken from: Dullaart and Knoll. "The Correspondence"

otherwise: between meme and not meme, circulation and non-circulation, oblivion and existence, and so on. In other words, it's a vacillation between the concreteness and non-concreteness of circulation. Knoll does admit, at one point, that the Jennifer image was "ONE [sic] of the first images to be "photoshopped".<sup>17</sup> Dullaart also extracted the Jennifer image from a video that had 703,177 views at the time that this section was written. Do either of these kinds of circulations constitute a meme? As frustrated viral marketers will attest, it's really hard to say what it is that makes something circulate, whether this something is a meme or any other kind of media. But this vacillation can be approached in another way.

As an argument over a specific history and the cultural significance of a digital object, this disagreement has a lot to tell us about the role of causality and the status of genetic origins in the constitution of the internet meme. Dullaart's speculative gesture operates through a peculiar temporal dynamic, the "as though", that can be analysed to understand why historicising memes is beside the point. It can also be used to analyse how a meme constitutes its own mediating present. To engage with it in this way, we have to return to the claim it makes about the significance of Photoshop.

### 2.3 "PROGRAM"

If the intent behind Dullaart's speculative restoration of the Jennifer image is apocryphal, we can no longer accept it as a vernacular 'net history. But we can still understand it as a form of applied media archeology. Its a-historicity simply reroutes its effect. If one of the aims of media archeology is to interpret the past through the lens of the present, Dullaart's restorative gesture turns the Jennifer image into an object of historical-archaeological desire. This desire can be coded as a desire for an origin, or the desire for an explanatory frame, or even the desire for a digital artefact that's more than merely ephemeral. It's

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<sup>16</sup> Adobe *Photoshop*. "Photoshop: The First Demo"

<sup>17</sup> Dullaart and Knoll. "The Correspondence"

also, in this case, a desire to discover the origin of the internet meme in its offline, but nevertheless computational, pre-history. Whilst Dullaart's attempt to disindividuate the Jennifer image might fail, it nevertheless reframes the conditions from which our contemporary online culture has emerged.

Dullaart's desire for origins is channeled through the desire for the Jennifer image to be an exemplary instance. Dullaart continuously refers to the Jennifer image in near reverential tones throughout his brief correspondence with Knoll. It's clear that he thinks that this image might have been something altogether unique for digital culture. As he confesses:

Due to its rarity it became a digital artifact [sic] to me, or even relic from a revolution in photography to only be found in traces left in a re-enacted demonstration video.<sup>18</sup>

When Dullaart refers to this image as a relic, he construes it as the valuable residue of a past state of affairs. This claim positions his work as what he calls an "anthropological history on a global change in photography and aesthetics in general."<sup>19</sup> But he also talks in his correspondence about the "beauty" of this residuary image, lending it an almost sacred undertone. Given that this image depicts a mostly-naked woman in a bikini on a beach, this claim is rather suspect. Dullaart's desire has to be read, in gendered tones, as appropriative. We might be inclined to consider this aspect of Dullaart's desiring as a performative complement to the installation proper. I would argue that if it is, it's badly performed. Nevertheless, this desire for the origin merging with a desire for the female form is only one of the strands of desiring operative in *Jennifer in Paradise*. When Knoll writes in his final email to Dullaart that he not only "holds the copyright" for this image and that it is "special" to him as a token of a cherished holiday, we can understand why he might have found Dullaart's whole project to be questionable. We can also read this exchange in

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<sup>18</sup> Dullaart and Knoll. "The Correspondence"

<sup>19</sup> Dullaart and Knoll. "The Correspondence"



another way: by thinking about the competing significance of the image for Dullaart and the photograph for Knoll, respectively.

It's tempting to frame this image's significance and its purported status as an origin by according the Jennifer image what Walter Benjamin calls an "aura." As an attempt to wrest this image from the double oblivion of time and poor resolution, Dullaart's correspondence seems to accord it what Benjamin calls a "unique phenomenon of distance."<sup>20</sup> In this analysis, this image would be doubly limned by an auratic quality as both something that is rare in itself — as residue or as Knoll's photograph—and as a *digital* image that might be reproducible, but that *became* rare with the passage of time. It makes more sense, however, to think of it in terms of what Vilém Flusser calls the image's "magic." For Benjamin, mechanical reproduction destroys the image's aura. For Flusser, technical reproduction simply works in a different way to auratic pre-technical media: by "ritualis[ing] models known as programs."<sup>21</sup> Flusser uses this word, program, to quite literally refer to the software that guides what the hardware of media does. He also extends this term beyond the literal program to encompass other kinds of programs, including the choices that inform how an image is originally captured as well as, in more general terms, the context(s) in which it will be used. If we read Dullaart's reverence for the Jennifer image through Flusser, his obsession with origins takes on a different character: as a residuary artefact, it comes to exemplify the "program" of the early days of pioneering software.

We can infer from his reverence for this particular image that he'd like to think that these early days were much more personal and much less commercial. This reverence reduces the program of the early days of software to a much more human scale. But *Jennifer in Paradise's* historical-archaeological approach uses the Jennifer image to make another claim. By pinpointing the debut of the

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<sup>20</sup> Walter Benjamin. *Illuminations*. Translated by Harry Zohn. New York: Schocken Books, 1968. 222.

<sup>21</sup> Vilém Flusser. *Towards a Philosophy of Photography*. Translated by Martin Chalmers. London: Reaktion Books, 2013. 16.

Photoshop software application and by excavating its history, the gesture of restoring the Jennifer image isolates the program—understood in all of its polyvalence—mobilised by the technique of digital image manipulation. This program is technical and mediatic, because it's set in train by software like Photoshop. It's also cultural. Through the Jennifer image, Dullaart highlights the programs and the attendant digital image manipulation techniques that underlie our banal, circulating contemporary online culture.

The Jennifer image's stock-photograph aesthetic and idealised setting convey a whole world. This world is at once desirable and recondite; or, both affective and, because of this kind of image's circulation-in-excess, rather unremarkable. It's slick: it belongs to what we might call a Photoshop aesthetic. If Photoshop is associated with slickness, Dullaart's bluntly-applied filters betoken a wholly different, much more low-brow aesthetic: one that is often associated with the internet meme. Dullaart's exhibition included printed and mounted versions of the Jennifer image installed on top of a barely recognisable, warped, 80's style graffiti mural version of the same. Only, none of the prints show the original image. What we see displayed in *Jennifer in Paradise* is Jennifer's paradise subjected to different manipulation techniques from the original Photoshop software suite: its colours inverted and displayed in negative; the image overlaid with a water drop effect; its raster grid spun in to a vortex; and so on. With *Jennifer in Paradise*, what Dullaart presents us with is a mash-up Photoshop and MS Paint's respective hi- and lo-brow aesthetics.

## 2.4 MANIPULABILITY

The funny thing about the verb, "to photoshop", is that it betokens a set of image-manipulation techniques that produce both the slick aesthetic of the hi-brow image and the "shit" aesthetic of the lo-brow image. Most internet memes participate in an aesthetic that Nick Douglas calls "internet ugly." They are typically created in a style, as he pithily puts it, that's "supposed to look like

shit."<sup>22</sup> A google search for "internet meme" will quickly demonstrate what Douglas means by this. Internet ugly's major tenet is a garishness produced by using outdated image manipulation programs, in particular MS Paint. This program came bundled with previous editions of Microsoft's Windows operating system. Its rudimentary tools, like a blocky, default paintbrush and a 256-colour palette produce instantly-recognisable modifications that are garish, amateurish, or—for want of a better phrase—just a bit "shit." The aesthetics of the slick and the shit could not be more different. By colliding basic manipulation techniques with a history of the Photoshop program, *Jennifer in Paradise* places these aesthetics on a continuum. This gesture is central to its attempt to establish the Jennifer image as a meme.

To return to Flusser, the Jennifer image's "program", as presented in *Jennifer in Paradise* and in the correspondence between Dullaart and Knoll, is exemplary in a number of ways. The circulation of slick and shit images online relies on digital images' easy reproducibility. But the aesthetics that they betoken also rely on digital images' easy *manipulability*. We can use Steyerl's concept of the "poor image" to expand upon this claim. Dullaart's extracted and reconstructed Jennifer image began as a poor image. A poor image is just that—one that's bootlegged, lo-res, unoriginal, pixelated, fragmented, recuperated, and so on. This concept is interesting because it doesn't exactly make an ontological claim about what images have become today. Rather, it provides us with a way of thinking through the status of the image in what I call our indeterminate postdigital media situation. As Steyerl argues, one of the characteristics that defines the poor image is its constitutive decoupling from any possible "originary original"—<sup>23</sup>or genetic precursor—rendering its content, including its meaning or its aesthetic qualities, *epiphenomenal*. Its phenomenal features are no longer what it's literally "about." What the poor image is about, instead, is its "own real conditions of existence."<sup>24</sup> The poor image is an index of its own

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<sup>22</sup> Nick Douglas. "It's Supposed to Look Like Shit: The Internet Ugly Aesthetic." *Journal of Visual Culture* 13, no. 3 (2014): 314–39.

<sup>23</sup> Steyerl, Hito. "In Defense of the Poor Image." 44.

<sup>24</sup> Steyerl, Hito. "In Defense of the Poor Image." 44.

reality as media that is in circulation. It de-tautologises the relationship between circulation and thing circulated, making the concept of circulation conceptually tractable.

The convoluted nature of the Jennifer image's backstory is a product of a number of competing claims about what this image is and where it comes from. *Jennifer in Paradise* ostensibly fails to *present* a meme. Or: it's true that Dullaart's installation has been exhibited in numerous places and has, therefore, circulated in the art world and in publications online. Or: we might even consider the installation's serial presentation of variations of an image manipulated using a dated program to be proto-memetic. Or: we could interpret Knoll's claim that this image was one of the first to be "photoshopped" as a confirmation that it was, in fact, a meme. In the end, though, it doesn't really matter. Manipulability might be one of the internet meme's contributory technical conditions, but it's not its cause—the manipulation of images has a long prehistory that precludes it being posited as the internet meme's novel precondition. The isolation of a particular meme's origin might provide its context, but it can't be considered its cause either. In this installation, the internet meme's origin in a particular image—the real Jennifer on the real beach in Bora Bora—is the *efficient* and *material* cause of the Jennifer image but is not, crucially, not the *final* cause of the purported internet meme. *Jennifer in Paradise's* convolutions invite us to read the installation against the impulse to look for origins. As a failed, speculative attempt at vernacular history, it strips the meme of its essential quality: a present.

## 2.5 POVERTY OF PRESENCE

The Jennifer image is a meme that never was, either in fact or in history. Any putative before or after that gets ascribed to the internet meme must necessarily describe a time in which the meme is not yet or is no longer. Out of circulation, the Jennifer image is not legible as a meme's residue: it is just an

image. The before of an internet meme can describe its preconditions; the after is never quite after, because it's always open to restitution. *Jennifer in Paradise* shows us that the meme's essential quality is synchronicity. This description might recall the idea of the "originary non-origin" of Jacques Derrida's deconstructive approach to language. Derrida argues that the play of differences that constitutes language inscribes its origin with the "trace" of an "originary non-origin",<sup>25</sup> foreclosing its capacity to identify its determinate origin. I don't mean to insert the internet meme into the discourse of the deconstruction of presence, however. The internet meme emerges with the massive distribution of material media systems. It isn't differed and deferred in the margin between this couple. Rather, it's what I'm calling its synchronous quality makes a claim about what makes the internet meme a concrete—i.e., present—entity. This quality introduces a distinction between its history, on the one hand, and the final cause and condition of its present, on the other. This distinction is analogous to that between how something is made and what it does. *Jennifer in Paradise* shows us that the Jennifer image is lacking the quality of synchronicity that makes a meme a meme. Or: the internet meme's final cause and the condition of its present are its concrete circulations.

The convergence of circulation and the present of the meme might seem tautological. This claim relies on a recursive moment in which one tautology—circulation is the circulation of content—is substituted for another: the circulating internet meme is an internet meme because it circulates. As an empty concept, circulation's reference point becomes the thing circulated; it succumbs to tautology. This is precisely why we need to conceptualise circulation differently. We need to start, however, by disaggregating the concept of circulation from the thing circulated.

In her discussion of the poor image, Steyerl says that what the poor image indexes, amongst other things, are a set of "fractured and flexible

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<sup>25</sup> Derrida. *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: John Hopkins University Press, 1998. 66 and *passim*.

temporalities."<sup>26</sup> We can understand these temporalities as constituting a disjunction mediated by the contingent circulation of an image in and through disparate contexts. We encounter all sorts of images from all sorts of times and places all over the 'net; some of these are legible and can be contextualised, but some strike us with their utter contingency. The Jennifer image's failure to have been or to become an internet meme specifies these temporal dynamics of circulation both positively and in the negative. As a poor image, it specifies them positively: Dullaart encountered the Jennifer image in the contingent circumstances of a re-staging of a demonstration of an early version of Photoshop on Youtube. Manipulability doesn't make the meme. A poor image can be a fragment or residue. An internet meme, however, cannot. As a failed meme, *Jennifer in Paradise* also specifies the temporal dynamics of the emergence of an internet meme in the negative, rendering these temporal dynamics tractable to conceptualisation.

Whist *Jennifer in Paradise's* failed attempt to recover the Jennifer image from oblivion may index an concrete reality and a set of conditions, or a whole "program", Dullaart's restoration of the Jennifer image ends up positing a different temporal regime to the one in which an internet meme circulates and in which, therefore, it is. The poor image Dullaart resuscitates doesn't have the same relationship to oblivion as the internet meme. The internet meme operates within a different temporal dynamic. We can use Dullaart's failed, speculative positing of an internet meme to think the "present" of successful memes—and to posit a present of theory in which circulation becomes conceptualisable.

## 2.6 PASTS REFUTURED

The circulating image traces a loop. *In* circulation, it necessarily returns to itself: as it travels between pages, feeds, platforms and apps, the image is deconstructed and reconstructed with little enough entropy to retain its

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<sup>26</sup> Steyerl. "In Defense of the Poor Image." 44.

consistency; but, this is more of a reconstitution. Its capacity to be copied and its circulating movement in and out of context generates the “flexible and fractured” times that Steyerl refers to. The Jennifer image works in this way: it conjoins the residue of a history that is in part true and that indexes its own manipulability with a speculative, posited history that is false. With little to ground it, the “poor” image accrues time and secretes its own provisional present. In *Jennifer in Paradise*, this recursive indexing operates as something like an archaeology of the future. This particular future is one in which the past it tried to posit wouldn’t be false. Here, it fails to constitute the Jennifer image as meme—in the past or in the future. This failed dynamic is nevertheless how the internet meme creates its present.

The emergence of the internet meme from circulating media relies on some media—like an image—forming a plurality. Before this plurality exists, there is no meme. For this plurality to exist, there might have to be an intentional moment; but this intention doesn’t ensure that an internet meme will exist. Once this plurality does exist, other images that similarly instantiate the meme exist *as though they were always a part of it*. The meme emerges in circulation and through a moment in which it returns to itself, which is to say, in which it indexes not *only* its own circulation, but its plurality.

This recurrent casualty explains the problem of the instance-plurality: to conceptualise the meme, we have to be able to think it, non-tautologically, in relation to itself. We also need to be able to understand the temporality of the “as though.” The internet meme’s recurrent causality short-circuits its determinate relation to its own history. We can distinguish, finally, between the *efficient* and *material* causes of the meme—a particular image, a moment in time, a gesture of creativity—and its *final* cause: entering circulation. This final cause accounts for the limit of the participatory model of the internet meme. The user’s participation in the meme is at the centre of its cultural significance. But this participation is an epiphenomenon of its emergence as a plurality. Were the Jennifer image to be a meme, its determinate history is the

“program” that it would evoke: the development of Photoshop; the story of its restoration and the convergence of this software application’s prior form with its present form; its circulation as art; its invocation of an entire “slick” contemporary aesthetic. Its present, however, would be something else; it would be in circulation.

This present *of* circulation is a condition of the internet meme’s emergence. Here, though, our speculations on the present open on to what it means to posit a present, in theory. In the end, this is what Dullaart does: in claiming that the Jennifer image is a meme, he claims that it occupies a present that’s (re)constituted using epistemological means—by positing that the manipulability of images brings them into compresence. The epistemological themes I broached when I characterised our postdigital media situation as indeterminate converge in this gesture. Manipulability is just one of the techniques that are partially automated and made easier to apply by applications like Photoshop. But it’s also a concept that’s mediated by the computational technologies that Photoshop represents. Invoking manipulability posits another kind of present: the present we ascribe to theoretical practice, a present that treats concepts as though they don’t have their own histories. Whilst *Jennifer in Paradise* produces a vernacular media archaeology of manipulability, it doesn’t reflect on what it means for the technique of manipulability to travel over time. To be able to think circulation in order to be able to think media in circulation, we arguably need to posit a concept of circulation—and to develop a media-theoretical practice—that avoids shearing theory from its concrete, mediated contexts.

## 2.7 CONTEMPORANEITY AND MEDIA THEORY

Media theory is something that is practiced. Minimally, it’s a set of techniques that we use to produce knowledge about media objects. However, the standard mode of practicing theory tacitly accords it its own temporal register—its own “present.” What does it mean for a concept—like



manipulability or, more to the point, like circulation—to be *in* the present? One of the premises of this thesis is that in order to think media in our postdigital media situation, in order to be able to think in and think through its characterising indeterminacy, we need to develop a mode of practicing theory that's able to account for the influence that media have on our theories of them. Such a practice would operate in media's "present", rather than its own.

In his engagement with "theory" as practice penned in the wake of the "high theory" moment, Peter Osborne proposes a critique of a mode of theoretical practice that takes the "contemporary", construed as a temporality and also as a concrete situation, to be its field. As Osborne puts it, theory that is addressed to the "contemporary" employs a "mode of address" that joins "the times of the spaces it addresses"—that is, its theoretical material, construed as having its own histories, as well as the objects it addresses with this material—together in a present.<sup>27</sup> This is facilitated by the standard way in which we practice theory by adopting a theoretical framework—materialism, say—and using this framework to bring its objects into productive relation. This present isn't just defined in distinction to what comes before. That is, it doesn't operate in what Osborne identifies as a "modernist" mode, which would produce the present of theory as "a negation of the past."<sup>28</sup> Rather, it's instituted by the way in which we treat theory as a trans-disciplinary project that can travel between domains of knowledge.<sup>29</sup> Theoretical practice flattens its own temporal field, constituting what Osborne calls an "illusory present of the space of the contemporary."<sup>30</sup>

In media theory, this "contemporary" mode of practice informs circulation. We overlook circulation because we take it for granted that media circulate; that is, we take it for granted that media are put in to circulation by media

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<sup>27</sup> Peter Osborne. "Philosophy After Theory: Transdisciplinarity and the New," In *Theory After Theory*, edited by Jane Elliott and Derek Attridge. London and New York: Routledge, 2011. 29.

<sup>28</sup> Osborne. "Philosophy After Theory." 29.

<sup>29</sup> See also Ian Hunter. "The History of Theory." *Critical Inquiry* 33, no. 1 (2006): 78–112.

<sup>30</sup> Osborne. "Philosophy After Theory." 29.

technologies. The concept of circulation isn't just a concept of media. When we examine the idea of the "present" that this approach evokes, we can begin to see how the concept of circulation emerges out of a practice of theorisation that is also *of* media. Extending Osborne's claim, my argument that theoretical practice is informed by the media that it takes as its objects of theorisation. The present in which concepts circulate has informed circulation's tautological character; but this concept's mediation is simultaneously occluded by the act of positing a present that certain modes of theorisation demand. Our concept of circulation is without content because it fails to reflect on the influence that media have on the practice of theory.

In cascade, the internet meme's ambiguous double status as instance and plurality opens out on to media theory's insufficient concept of circulation; in circulation, the problem posed by the internet meme implicates the epistemological question of how media might thought in our postdigital media situation; in its indeterminacy, this situation necessitates the development of media-theoretical approaches that are able to apprehend the influence that media themselves exercise on our media-theoretical practices. Or, it enjoins us to make theory present rather than treating it as contemporary. This requires a method that we can use to apprehend the concrete relationship between media theory and the media it takes as its objects of theorisation. As I want to outline in the next chapter, this method necessitates shifting the focus of our theoretical practices from positing theoretical frameworks to working with and analysing *concepts*. Treated both as determinate, concrete thing and as epistemological object, the concept provides us with a focus that we can use to do theory after media—or, to do what I'm calling "meme theory."

### 3. THE CONCEPT IN ITSELF

#### 3.0 THEORY MADE CONCRETE

Conceiving of the internet meme as a problem to be worked through rather than an object to be theorised anew implicates it in multiple domains. As I've outlined it thus far, this problem implicates circulation, which is necessary for thinking the internet meme; our postdigital media situation, whose indeterminacy is at once a product of circulating media—like the internet meme—and a condition of its theorisation; and theoretical practice itself. But to posit a problem is to imply that it has a solution. Each of these co-implicated domains hold this solution's rudiments.

This chapter will turn the propositions that I've made about the internet meme, circulation, and our indeterminate postdigital media situation in to a coherent method that we can use to think through our problem. This method will be derived from historical epistemology, a field that straddles science and technology studies and the history and philosophy of science—and in particular, its concept of the concept. Whereas we typically organise our theoretical practices around theoretical frameworks, like materialism or vitalism, philosophers including Georges Canguilhem, Gaston Bachelard, and—more recently—Hans-Jörg Rheinberger posit the concept as a key site of theoretical practice and epistemological analysis. This approach historicises concepts whilst, simultaneously, arguing that they are concrete things, allowing us to apprehend how concepts develop as they're applied and how their applications shape them in turn. More than this, it renders the influences that concepts carry out of such concrete contexts available for further epistemological enquiry. Historical epistemology gives us the means to practice theory as a form of analysis: by engaging with its concrete contexts and by situating theoretical practice differently, we can produce *new* concepts, which is to say, new forms of concrete knowledge.

Using historical epistemology to study of media allows us to focus on circulation *as* concept rather than as a derivative of one theoretical framework or another. Because this approach has been developed mostly by historians and philosophers of science, though, we would be going against its defining precepts if we were to bring it to bear on to media theory without adapting it to the discipline's epistemological specificities. This chapter will frame and modify this approach to fit concepts of media and media studies' disciplinary concerns. Media are, arguably, exceptional epistemological objects: they don't just take on concepts, like circulation, but actively mediate them. In the case of a concept like circulation, media play a double role: they inform this concept as it's being formulated; but, they must also be taken as an object by this concept when it's put to use. This role—which I'll refer to as media's anterior-posterior relation to circulation—will inform what I'll call a *media-historical epistemological* approach to concepts.

Adopting a media-historical epistemological method shifts our key questions. Rather than asking how circulation might be thought, it enjoins us to consider two issues. First, how was circulation conceptualised under previous media-theoretical regimes—thought, broadly, not just as a disciplinary practice, but as the practice of theorising media? Second, how do we think the concept of circulation today, when we apply it to our indeterminate postdigital media situation, and how should it be conceptualised to better suit online cultural production? I want to respond to these framing questions with a seemingly-contradictory double assertion: circulation has always been *underdetermined* as a concept of media; and, because it has always been *underdetermined*, the concept of circulation is often used to do unacknowledged conceptual work. Using Lorraine Daston's concept of the “commonplace”, my claim is that this double assertion can be treated as the basis of a method, rather than a contradiction, because it apprehends those components of theory that do epistemological work but that aren't formalised in our theoretical frameworks. In brief, a commonplace is an epistemological component that's faded in to

self-evidence. The method I want to posit in this chapter will use this concept as the basis for an enquiry into circulation.

When concepts shade into self-evidence, the practice of theorising the new is susceptible to producing knowledge in forms that are no longer compatible with the present. Perhaps paradoxically, the tacit practice of treating theory as though concepts and frameworks are all contemporary with one another elides the persistence of its influences whilst, unwittingly, sanctioning their continuing influence on the production of knowledge. Historical epistemology gives us the concepts and the methods to do theory differently. Crucially, this approach expands the remit of media theory beyond what we would normally think of as the discipline proper. As our concepts cross disciplines and take different objects, their determinants change; conversely, for our concepts to be introduced to different domains of knowledge, we have to recognise the impact that the change in their objects has on the knowledge that they produce. If we treat the concept of circulation as a trans-disciplinary concept, to recall Osborne's language, its prior influences don't go away. They get elided, retained, and continue to work in what are, often, tacit ways. If media are to retain any specificity, I want to suggest, they need a media-specific epistemology. This doesn't mean that media or circulation shouldn't be thought of as disciplinary-specific concepts; rather, reordering our theoretical practices to take concepts as the objects of theorisation compels us to do what we might call interdisciplinary work at the level of epistemology itself.

This chapter introduces a method. In the approach I want to develop here, theory neither precedes nor antecedes analysis, but is of it, is informed by it, and provides material that might be used to better understand media themselves and the cultures in which they operate. In passing through circulation, what I hope to assemble is not just a re-capitulated understanding of how we do media theory, but an epistemology that can be put to work in the analysis of online culture. My claim is that this approach constitutes both an alternate way of practicing theory and a mode of theorisation that are made

necessary by, and responds to, the indeterminacy of our postdigital media situation.

### 3.1 THE CONCEPT IN ITSELF

*The history of emergences abounds with the pleasures of the new and the counterintuitive. But we still lack a history of how novae fade into commonplaces: a history of self-evidence.*<sup>1</sup>

“Concept” is a standard word in theoretical work in the humanities and social sciences. Concepts are, typically, concepts-of: they describe objects or processes. Concepts are also often thought of as components of theoretical frameworks. So, how we think media follows not only from media themselves, but also from the ontological presuppositions we hold about the world, its constituents, and our capacity to know things in it. We’re likely to try to posit new concepts when either their objects or our theoretical frameworks change. The narrative of the practice of theory in a given discipline, like media theory, tends to be punctuated by those moments in which new concepts are posited in response to concrete or theoretical developments: new media being an example of the former, new media materialisms of the latter. Just as interesting and just as crucial, though, are those aspects of theoretical practice that persist through these changes. Often, what persists isn’t as easy to discern as what’s novel. We retain some concepts even as their objects and the theoretical frameworks to which they’re subordinated shift. In Daston’s language, they become theoretical knowledge production’s “commonplaces”, sliding, through familiarity and through currency, into seeming self-evidence. We could say that this state of affairs is “natural”, but such a statement gives us no purchase on its mechanics. I want to posit a concept of the concept that we can use to

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<sup>1</sup> Lorraine Daston. “The History of Emergences’. Essay Review of Ian Hacking: *The Emergence of Probability: A Philosophical Study of Early Ideas About Probability, Induction, and Statistical Inference*. New York: Cambridge University Press 2006.” *Isis* 98, no. 4 (2007): 808.

identify, analyse, and critique the self-evidence of our concepts. My argument is that this self-evidence can act as a vector for prior influences; that is, that this self-evidence allows concepts to recapitulate prior theoretical frameworks or to perpetuate prior conceptions of their objects. This argument relies on the contention that theory is not an abstract, a-historical mode of knowledge production, but that it's always concrete and historicisable. To posit this concept of the concept, I want to draw on methods developed in the field of historical epistemology.

Historical epistemology studies the development of ideas by situating them in their concrete contexts. In conventional philosophical terms, epistemology refers to the science of knowledge. Historical epistemology is premised on a markedly different conception of what knowledge is and how it can be studied. Historical epistemology was originally coined by Dominique Lecourt to describe Gaston Bachelard's idiosyncratic approach to the philosophy of science.<sup>2</sup> It has since become associated with a French lineage in the history and philosophy of science centred on the work of Bachelard and Canguilhem and, later on, with the work Michel Foucault—Canguilhem's student—and some of the work of Louis Althusser.<sup>3</sup> As Pierré-Olivier Méthot succinctly explains, the term:

...captures a certain style or method in philosophy of science where philosophical problems are inseparable from their historical milieu and the distinction between context of discovery and context of justification is at best illusory.<sup>4</sup>

If epistemology can be described as the project of theorising knowledge, historical epistemology can be best described as the project of analysing the

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<sup>2</sup> Dominique Lecourt. *Marxism and Epistemology: Bachelard, Canguilhem and Foucault*. Translated by Ben Brewster. London: New Left Books, 1975.

<sup>3</sup> For an overview, see: Anastasios Brenner. "Epistemology Historicized: The French Tradition," In *New Directions in the Philosophy of Science*, edited by Maria Carla Galavotti, Dennis Dieks, Wenceslao J. Gonzalez, Stephen Hartmann, Thomas Uebel, and Marcel Weber, 727–36. Cham: Springer, 2014.

<sup>4</sup> Pierre-Olivier Méthot. "On the Genealogy of Concepts and Experimental Practices: Rethinking Georges Canguilhem's Historical Epistemology." *Studies in History and Philosophy of Science Part A* 44, no. 1 (2013): 112.

conditions in which scientific knowledge is produced: it connects the means by which science is validated to the situated processes—the governing theoretical frameworks and the applied techniques—by which scientific discoveries emerge. As Methot’s ambiguous locution — “style or method” — suggests, however, the term doesn’t describe a single, coherent project. As it’s practiced today, historical epistemology is best described as a fractured field held in frame by its key term, epistemology, and the modifier, historical.<sup>5</sup> For some critics, this diversity shatters the coherency and the utility of the term itself.<sup>6</sup> Nor is historical epistemology the only theoretical approach to emerge from the related fields of history and philosophy of science and science and technology studies to offer powerful methods for engaging with knowledge as a product of its contexts, instruments, and institutions.<sup>7</sup> What makes it so useful for my project, though, is that it offers us a means of reconceptualising theoretical practice itself. We can adopt one of the methodological strands of historical epistemology to substantiate, and so to engage with, the concept of circulation and the problems it generates. But we can only do so if we adapt the approach to media and their epistemological specificities.

The particular version of historical epistemology that I want to adopt specifically focuses on the role that concepts play in knowledge production. The field of historical epistemology offers a number of rich methodologies centred on concepts, most notably in the work of one of the field’s key figures, Daston, as particularly developed through her analyses of the concept of

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<sup>5</sup> For a partisan but nevertheless useful introduction to the field, its precursors, and its contemporary factions, see: Uljana Feest and Thomas Sturm. “What (Good) is Historical Epistemology? Editors’ Introduction.” *Erkenntnis* 75, no. 3 (2011): 285–302.

<sup>6</sup> For a scathing critique of the contemporary field that reduces its claims to a kind of institutional-strategic positioning employed by its main contemporary hub, the Max Planck institute for the History of Science, and its directors, Lorraine Daston, Jürgen Renn, and Hans-Jörg Rheinberger, see: Yves Gingras. *Naming Without Necessity: On the Genealogy and Uses of the Label “Historical Epistemology.”* Centre Interuniversitaire de Recherche sur la Science et la Technologie, 2010.

<sup>7</sup> Other hugely influential figures include Bruno Latour and Isabelle Stengers. See, for instance: Latour. *The Pasteurization of France*. Translated by Alan Sheridan and John Law. Harvard: Harvard University Press, 1988; Stengers. *Cosmopolitics I*. Translated by Robert Bononno. Minneapolis: University of Minnesota, 2010.



objectivity formulated with Peter Galison.<sup>8</sup> The version of historical epistemology that is, arguably, best suited to the concept of circulation and to media theory is that developed by Canguilhem and elaborated by Daston's contemporaries and colleagues, Hans-Jörg Rheinberger. As Methot puts it, an historical epistemology derived from Canguilhem "consists primarily in tracking scientific concepts over space and time, and across disciplinary boundaries, in order to locate significant shifts regarding meaning, reference, and domains of application."<sup>9</sup> Whilst Canguilhem certainly puts this methodological precept into practice in his work, his approach nevertheless confronts us with a problem: he arguably never clearly articulates his concept of the concept.<sup>10</sup> The approach I want to adopt is informed by Canguilhem, but draws heavily on Rheinberger's reconstruction of Canguilhem's theory of concepts and his consequent articulation of an historical epistemological methodology. Rheinberger supplements Canguilhem's—tacit—conceptualisation of concepts with a set of methodological precepts that we can use to study the concept of circulation. In the Anglophone world, however, Canguilhem's work has found more purchase in the humanities and social sciences than in the history and philosophy of science. Christina Chimisso argues that this is because Canguilhem tends to be retroactively read by humanists and social scientists through the work of Michel Foucault,<sup>11</sup> whom he supervised and who provided the forward to the English translation of Canguilhem's best-known

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<sup>8</sup> Lorraine Daston and Peter Galison. *Objectivity*. New York: Zone Books, 2007.

<sup>9</sup> Methot. "On the Genealogy of Concepts and Experimental Practices." 114.  
It's worth noting that Canguilhem preferred to use the term "epistemological history" to describe his own approach, in part to distinguish his work from Gaston Bachelard's, which he thought of as historical epistemology. The distinction is functionally minor, but important to illustrate the distinctions that define the field. I'm taking a more inclusive approach in this chapter; through Rheinberger's idiosyncratic take on historical epistemology, Canguilhem and Bachelard become commensurable. For a discussion of this, see: Jean Gayon. "The Concept of Individuality in Canguilhem's Philosophy of Biology." *Journal of the History of Biology* 31, no. 3 (1998): 307, f.n. 8.

<sup>10</sup> Henning Schmidgen. "The Life of Concepts." *History and Philosophy of the Life Sciences* 36, no. 2 (2014): 234.

<sup>11</sup> Christina Chimisso. "Aspects of Current History of Philosophy of Science in the French Tradition," In *The Present Situation in the Philosophy of Science*. Dordrecht: Springer, 2010. 53-54, esp. f.n. 44.

work in English.<sup>12</sup> The prevalent, Foucauldian Canguilhem is concerned with norms. The Canguilhem I want to use is the Canguilhem developed by Rheinberger, and others, to study the history and philosophy of science. I want to translate this Canguilhem into the disciplinary domain of media and its concepts; but to do this, we must disentangle his work from its Foucauldian reception in the humanities and social sciences.

The most prevalent forms of the historical epistemological approach in Anglophone humanities and social sciences are those derived from Foucault's work. One influential example is Arnold I. Davidson's study of sexuality, which conceives of "the task of epistemology", through a retroactive reading of Canguilhem through Foucault, "as that of finding the internal conditions of possibility for the production of a given domain of scientific statements."<sup>13</sup> Another is Nikolas Rose's adoption of Canguilhem, which reads his conception of the historicity of science as a contribution to the Foucauldian project of historicising the sciences with the aim of "making possible other presents and other futures."<sup>14</sup> Indeed, such is Foucault's influence on our conceptions of the history of epistemological practice in the Anglophone world that my riff on Daston's notion of "commonplaces" above no doubt evoked Foucault's double emphasis on historical change and historical continuity.<sup>15</sup> The approach I want to adopt belongs to the particular lineage of French epistemology with which Foucault identifies,<sup>16</sup> but it doesn't share his precepts about the contexts concepts inhabit or the methods that we ought to use to study them. We can identify Davidson's and Rose's versions of Canguilhem as retroactive re-

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<sup>12</sup> Michel Foucault. "Introduction." In Canguilhem. *On the Normal and the Pathological*. Translated by Carolyn R. Fawcett in collaboration with Robert S. Cohen. New York: Zone Books, 1989. 7-24.

<sup>13</sup> Arnold I. Davidson. *The Emergence of Sexuality: Historical Epistemology and the Formation of Concepts*. Harvard: Harvard University Press, 2004. 198.

<sup>14</sup> Nikolas Rose. "Life, Reason and History: Reading Georges Canguilhem Today." *Economy and Society* 27, no. 2-3 (1998): 165-6.

<sup>15</sup> Foucault. *The Archaeology of Knowledge and the Discourse on Language*. Translated by A. M. Sheridan Smith. New York: Pantheon Books, 1972. 8-9.

<sup>16</sup> Famously, Foucault identifies his work with an epistemological tradition of French philosophy that includes Bachelard, Canguilhem, and Jean Cavaillès, in contradistinction to the phenomenological and existentialist work of Jean-Paul Sartre and Maurice Merleau-Ponty. See Foucault. "Introduction." In Canguilhem. *The Normal and the Pathological*. 8.

readings of him as a proponent, respectively, of Foucault's archeological or genealogical methods. For Davidson, Canguilhem contributes to the archaeological study of the discursive practices that structure science and that constitute epistemic orders.<sup>17</sup> For Rose, he contributes to a genealogical history of the present that demonstrates the continuing influence of the past so as to think the present otherwise.<sup>18</sup> In Rheinberger, we find an alternate Canguilhem: one focused on concepts, rather than norms and conditions. This Canguilhem is invested with normativity, but not the normativity that might be attributed to him via Foucault. His normativity pertains to concepts and our methods of studying them; the concept itself becomes capable of harbouring normative conceptions that masquerade as commonplace claims about what the objects they conceptualise are and what they do. It also opens alternate methodological possibilities that we can use to study of circulation.

Despite the name, then, applying an historical epistemological approach to circulation would not amount to producing history of the concept or a history of media. The "historical" part of the appellation, historical epistemology, is somewhat misleading: it doesn't present a history of concepts, but rather historicises concepts themselves by reentering them into history. The historical epistemological approach I want to adopt is not wholly commensurable with other—theoretically-astute and undeniably rich—engagements with media's histories, such as media archaeology and its variants; genealogies of media; or histories that actively draw on media's conceptualisations.<sup>19</sup> In the field of media studies, the most influential contemporary variants of theoretically-inflected media history tend to be influenced by Foucault. Instead, I want to

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<sup>17</sup> On archaeology: Foucault. *The Archaeology of Knowledge* and *The Discourse on Language*. Translated by A. M. Sheridan Smith. New York: Pantheon Books, 1972. 191-5.

<sup>18</sup> On genealogy, see: Foucault. "Nietzsche, Genealogy, History," translated by Donald F. Bouchard and Sherry Simon, In *The Foucault Reader*, edited by Paul Rabinow, New York: Pantheon Books, 1984. 76-100; David Garland. "What is a "History of the Present"? On Foucault's Genealogies and Their Critical Preconditions." *Punishment & Society* 16, no. 4 (2014): 371-2.

<sup>19</sup> For instance: Eriki Huhtamo and Jussi Parikka. *Media Archaeology: Approaches, Applications, and Implications*. California: University of California Press, 2011; Wolfgang Ernst. "From Media History to Zeitkritik." *Theory, Culture & Society* (2013): 132-146; Jonathan Crary.

align the approach I want to adopt here with two other applied social sciences example of historical epistemology: Mary Poovey's study of the epistemological unit of the fact and Ian Hacking's "historical ontology" approach.

For Poovey, Foucault-inspired analyses are often restricted to one domain of knowledge, such as politics, and one regime of epistemological organisation: discourse.<sup>20</sup> In focusing on the unit of the fact, her study analyses what she describes as the "categories by which knowledge can be organised", adopting historical epistemology to study such categories' "determinations and effects."<sup>21</sup> Poovey's claim echoes another that Ian Hacking makes in his influential articulation of his own approach to the history and philosophy of science. Early on, Hacking used the appellation "historical epistemology", but he would go on to define his own work—in proximity to and in subtle opposition with historical epistemology—as "historical ontology."<sup>22</sup> Commenting on historical epistemology, Hacking notes that, "[t]he ideas examined by historical epistemology are the ones we use to organize the field of knowledge and inquiry. They are, often despite appearances, historical and "situated."<sup>23</sup> I mention these approaches as touchstones. Whilst rich, Poovey's work is more historical than theoretical and doesn't engage with historical epistemology itself in as much depth as I'd like to develop here. The methods I'm developing in this chapter depart from her work and its alternative example of how we might do things with concepts and how we might historicise

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*Techniques of the Observer: On Vision and Modernity in the Nineteenth Century.* Cambridge, MA: The MIT press, 1992.

<sup>20</sup> Mary Poovey. *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society.* Chicago: University of Chicago Press, 1998. 17-18.

<sup>21</sup> Poovey. *A History of the Modern Fact.* 7.

<sup>22</sup> The similarities and distinctions between these two fields are beyond the scope of the present discussion. Daston, for instance, is heavily indebted to Hacking's work; Hacking himself was instrumental in the term historical epistemology's uptake in the early 1990's. See: Hacking. "Historical Ontology [Revised Version]," In *Historical Ontology*, 1-26. London: Harvard University Press, 2002; Daston. "The History of Emergences'. Essay Review of Ian Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas About Probability, Induction, and Statistical Inference.*" New York: Cambridge University Press 2006. *Isis* 98, no. 4 (2007): 801-8.

<sup>23</sup> Hacking. "Historical Ontology." 8.

epistemology. Whilst Hacking's work remains heavily indebted to Foucault, I nevertheless want to draw on his compelling concept of the "organising concept." For Hacking, some concepts exercise an outsize influence on disciplinary knowledge production. For the social sciences, according to Poovey, these include the fact. For the sciences, according to Hacking, these include concepts like probability.<sup>24</sup> For media studies, I want to assert, these concepts include *circulation*. What I want to demonstrate is how circulation—despite operating as a commonplace—tacitly organises the knowledge we produce about media. To turn this in to a method, I want to turn now to Canguilhem's concept of the concept as interpreted by Rheinberger.

### 3.2 HOW TO DO THINGS WITH CONCEPTS

Rheinberger's version of historical epistemology is premised on two foundational methodological claims derived from the non-Foucauldian Canguilhem. First, it encourages us to enquire into "the historical conditions *under* which, and the means *with* which, things are made into objects of knowledge."<sup>25</sup> That is, its focus is not on our knowledge of a thing, but on how a thing comes to be known. Second, it posits that epistemology is "historically variable": rather than treating epistemology as though it were "based in some transcendental presupposition or *a priori* norm"—<sup>26</sup>or on its conditions of possibility—it treats it as both historically contingent and mutable. In Rheinberger's work, these precepts form the basis for a powerful series of studies of scientific objects, particularly in the field of molecular biology. What makes it so useful for my project, though, is that it offers us a powerful conceptualisation of the concept that we can use to inform our analyses of circulation: it treats concepts as determinate, *historicisable* things that can be analysed apart from their theoretical frameworks—or, indeed, apart from what Foucault calls, at different stages, *episteme* or discourse. For Rheinberger,

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<sup>24</sup> See: Daston. "The History of Emergences." 801–8.

<sup>25</sup> Hans-Jörg Rheinberger *On Historicizing Epistemology: An Essay*. Stanford: Stanford University Press, 2010. 2. Emphasis original.

<sup>26</sup> Rheinberger. *On Historicising Epistemology*. 3.

concepts can both inform and be informed by the contexts in which they're used. He treats this characteristic as a defining property of concepts themselves, arguing, after Canguilhem, that the "[a]pplication" of a concept to an object of knowledge "is not extrinsic to modern knowledge" but, rather, "produces effects at the level of concept formation itself."<sup>27</sup> Put otherwise, we might say that in using concepts, we can modify them; but because concepts are modifiable, we have to remain cognisant of the fact that they might retain determinations and that these determinations have effects on the knowledge we produce. Because concepts have a mediate role, they can be studied in and through their concrete applications.

Earlier, I used the word "overdetermination" to capture the range of connotations associated with the concept of circulation and to begin to suggest that these determinations generate effects that we might not always anticipate. This claim might suggest that we should be studying *concepts* of circulation—in the plural—and that we should orient our analysis around a study of this plurality. Or, it suggests an approach that differentiates between these concepts, plural, by assuming that each must supervene on a theoretical framework and that each of these theoretical frameworks can and should be taken as the objects of epistemological analysis and critique. If we're to take concepts seriously as historicisable things, however, we need think these determinations as a property of concepts rather than always conceiving of the concept as a derivative of a particular theoretical framework. Returning to Canguilhem's reflections on concepts provides us with the epistemological means of doing this. For Canguilhem, one of concepts' defining traits is that they're "theoretically polyvalent."<sup>28</sup> Rather than thinking of a concept as a multiplicity of different versions derived from different theories, Canguilhem inverts this relation: he argues that concepts themselves take on relations to different theoretical frameworks. The concept is neither unchangeable nor

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<sup>27</sup> Rheinberger. *An Epistemology of the Concrete: Twentieth-Century Histories of Life*. Durham, N.C.: Duke University Press, 2010. 34.

<sup>28</sup> Georges Canguilhem. *A Vital Rationalist: Selected Writings From Georges Canguilhem*. New York: Zone Books, 2000. 181.

simply discrete: its relations are also concrete things that inform it and that can be analysed. Canguilhem refers to these relations as a concept's "filiations."<sup>29</sup>

We might think of filiations as epistemic components, in the archaic sense of elements that actively put other elements together. As an epistemic component, a filiation is not just the impression left by the influence of a theory on a concept; it's also, itself, a determinate and historicisable thing. As abstractions, our epistemic objects need not be conceived of as "contemporary" with one another to forge relations that cut across time. Rather, as abstractions, our concepts create peculiar relations in and to time. Problems arise not simply because we treat theoretical practice as though it's all "contemporary", but because we're neither cognisant of nor able to articulate the situatedness of concepts' filiations in particular contexts, in relation to theoretical frameworks, or, finally, as a part of a history of theoretical practices. The notion of the filiation points to the *untimeliness* of theoretical practice and its consequences. Positing a concept as a determinate and historicisable thing allows it to become the focus of an historical epistemological analysis. When a concept becomes the focus, we don't need to think it through the theories that define it. Rather, we can think it as a nexus of relations; relations that may or may not be salient, but that might continue to inform knowledge production by retaining—untimely or incongruent—filiations.

We're now in a position to posit a concept of the concept after Canguilhem—and to distinguish it from other compelling conceptions posited by other theorists and philosophers. Henning Schmidgen suggests that Canguilhem conceptualises concepts as "dynamic and complex entities comprising three components: a phenomenon, a word, and a definition."<sup>30</sup> This conceptualisation is perhaps a little too basic, merely reiterating a conventional definition of the concept as an abstraction of a thing. Canguilhem's concept of

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<sup>29</sup> Canguilhem. *A Vital Rationalist*. 181.

<sup>30</sup> Schmidgen. "The Life of Concepts." 245.

filiations complicates this basic definition. A concept is an abstraction that articulates the relationship between theoretical frameworks—or ontologies—and things, objects, or processes. Its capacity to take on filiations lends it a capaciousness that exceeds phenomenon plus word plus definition: through it, definitions multiply, confuse, blur. This notion of filiations perhaps recalls the work of Bruno Latour, who conceives of relations as real things.<sup>31</sup> It differs from Latour's work, however, in that it doesn't reduce something like a concept to the sum of its relations. The concept is not its network, but an epistemic object; its relations are apprehensible, but nevertheless separable from it. It exceeds Latour's formula—that what is real is what "resists."<sup>32</sup> In Canguilhem's conceptualisation, concepts are determinate and historicisable because we can study this capaciousness.

Here, Canguilhem perhaps prefigures Reinhart Koselleck's "history of concepts" approach, which conceives of concepts from within language by arguing that concepts are "the concentrate of several substantial meanings."<sup>33</sup> It exceeds Koselleck's linguistic concept however, in that it thinks these epistemic objects beyond language alone and in their situated, concrete production. It also prefigures Gilles Deleuze and Felix Guattari's powerful reflections on the concept in their late work.<sup>34</sup> For Deleuze and Guattari, the concept is "absolutely deterritorialised", or immanent to itself and not pre-structured; as they put it, to create a concept is to "connect internal, inseparable components to the point of closure or saturation."<sup>35</sup> For them, this closure means that the concept "abandons all reference so as to retain only the conjugations and connections that constitute its consistency" whilst nevertheless—here strongly echoing Canguilhem—remaining "plurivocal" in its

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<sup>31</sup> E.g. in: Bruno Latour. *We Have Never Been Modern*. Harvard: Harvard University Press, 1993.

<sup>32</sup> Latour. "Irreductions," In *The Pasteurization of France*, Cambridge, Mass.: Harvard University Press, 1988. 158.

<sup>33</sup> Reinhart Koselleck. *Futures Past: On the Semantics of Historical Time*. Translated by Keith Tribe. New York: Columbia University Press, 2004. 85.

<sup>34</sup> Gilles Deleuze and Félix Guattari. *What is Philosophy?* Translated by Hugh Tomlinson, and Graham Burchell. New York: Columbia University Press, 1994.

<sup>35</sup> Deleuze and Guattari. *What is Philosophy?* 88; 90.



capacity to link to what they describe as other “neighbourhoods.”<sup>36</sup> But Deleuze and Guattari’s conceptualisation of concepts is embedded in a radically different philosophical approach. Their distinction between philosophy, which creates concepts, and science, which creates functions, attributes to philosophical concepts the role of mapping “becomings” and “affects” and to science the role of articulating the concrete functions of things.<sup>37</sup> For Canguilhem, philosophy and science aren’t so separable. Each produces concepts; they differ in that their practices of producing knowledge differ. Canguilhem’s conceptualisation of concepts may need to be reconstructed before it can be used, but it informs a powerful and distinctive approach to their study.<sup>38</sup> It allows us to analyse their filiations, their effects, and their misappropriations. It also gestures towards a powerful mode of doing theoretical work, because we can also use its methods of analysing concepts to conceive of them otherwise.

Rheinberger neatly articulates how we can use Canguilhem’s concept of the concept as the basis for theoretical practice when he reflects on another key concept in historical epistemology: the notion of the problem. This term captures the complexity of the set of relations between concept, context, and theoretical framework. Rheinberger demonstrates how when he notes that, “Canguilhem represented a form of conceptual history that can also be understood as a history of the displacement of problems which must be reconstructed in their historic context.”<sup>39</sup> Filiation leads us to problems, some of which concepts resolve and some of which they displace, mobilise, and carry with them. A filiation *is* a problem, where the latter is understood in and as the relations that it inhabits. We can use this term to formalise what I’ve been calling circulation’s persistent epistemological influences with more epistemological rigour. The filiation substantiates the continuing influence that

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<sup>36</sup> Deleuze and Guattari. *What is Philosophy?* 90-91.

<sup>37</sup> Deleuze and Guattari. *What is Philosophy?* 117.

<sup>38</sup> As exemplified in his work, for instance, by his analysis of the concept of “milieu” in biology: Canguilhem. “The Living and Its Milieu,” In *Knowledge of Life*, edited by Paola Marrati, and Todd Meyers, 98–120. Fordham University Press, 2008.

<sup>39</sup> Rheinberger. *On Historicising Epistemology*. 66.

seemingly-past—or, at least, seeming-absent—theoretical frameworks exercise in, or through, our present concepts.<sup>40</sup> What I want to analyse is neither the theoretical frameworks from which circulation is derived, nor the concept itself in isolation, but the web of relations—between concept, context, framework, and, crucially, media—in which it is imbricated, as apprehended *through the problems that it carries into media theory's present*.

To recall the phrase of Daston's that I used as an epigraph to this chapter—and to recast this opposition in terms that are perhaps more palatable to our post-post-structuralist theoretical present—those components of theory that are “commonplace” are just as crucial to media theoretical practice as those that are strikingly “counterintuitive.” Rheinberger's two precepts—that we need to focus on the objects that knowledge takes and that epistemology is historically variable—provide us with a foundation that we can use to organise the project of this series of chapters. We can study the concept of circulation by identifying and analysing the contexts in which it's produced or used. These contexts include situations; but, they also include the very objects, processes, places that circulation is enlisted to think. The media-theoretical manoeuvre typically consists of thinking media and their contexts through concepts. I want to use historical epistemology to rearrange the hierarchy of these terms: I want to think the concept of circulation through the media and the contexts in which it's produced and reproduced. If we treat circulation as what Hacking calls an organising concept, this mode of analysis becomes even more incisive: it provides us with the means to articulate why circulation is crucial, how it operates, and how it might be thought otherwise. What makes historical epistemology so useful to this project is that it opens up the concept to mediation by media themselves. Media are commonplace. However, they're

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<sup>40</sup> We can hear Canguilhem's claim echoed, in different ways, in Paul Feyerabend's statement that “observation languages may become tied to older layers of speculation which effect... even the most progressive methodology” or in Edmund Husserl's notion that mathematical and scientific languages are “sedimented” when they're formalised, only to be reactivated once formal languages are applied to problems. My claim, however, is that Canguilhem differs from these other thinkers of the philosophy of science in that he identifies the relation between concept and theory itself as a determinate thing that we might study. See: Feyerabend. *Against Method*. London: Verso, 1993. 51.

also exceptional objects of conceptualisation: they make epistemologies commonplace by putting them in to operation. If we're to apply historical epistemology to media theory, we need to adapt its precepts to these exceptional objects.

### 3.3 MEDIA-HISTORICAL EPISTEMOLOGY

It's not at all clear that media, their concepts, or their contexts fall within the remit of historical epistemology for the simple reason that the modes of knowledge production that define the sciences are not necessarily commensurate with those that define media theory. The work of Rheinberger, for instance, focuses on the "epistemic thing": that is, the object of scientific research whose materiality is always in excess of the knowledge that can be produced about it and which actively delimits the knowledge that might be claimed of it.<sup>41</sup> I want to ground a conceptualisation of concepts drawn from Canguilhem via Rheinberger, and their capacity to circulate, be determined, and to mediate, in one further claim: that media have distinct and exceptional epistemological effects. To substantiate this claim and to develop what I want to call a *media*-historical epistemology, I want to focus on some of the recent media-theoretical work that has emerged out of the German media studies tradition.<sup>42</sup> Some of this work is particularly theoretically astute. Crucially, some of this work also evinces curious homologies with historical epistemology that indicate how a media-historical epistemology might draw upon, but also diverge from, historical epistemology proper. If we pick bower-bird like through the disparate strands that constitute German media theory, we can find work that echoes each of Rheinberger's two historical epistemological

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<sup>41</sup> Rheinberger. *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*. Stanford: Stanford University Press, 1997.

<sup>42</sup> Noting the qualifier that this tradition is an Anglophone "observer construct", this tradition is nevertheless useful as a signifier of a particular theoretical ethos and sensibility. See: Geoffrey Winthrop-Young. "Krautrock, Heidegger, Bogeyman: Kittler in the Anglosphere." *Thesis Eleven* 107, no. 1 (2011): 6–20; esp. 11; Scott Wark. "Media After the "Medial a Priori."" *Cultural Politics* 13, no. 2 (2017): 259–62.

precepts. I want to use this material as catalytic agents to synthesise media theory and historical epistemology.

In an essay on the integrity of the field of German media theory, Claus Pias notes that media theory has always exceeded its own disciplinary boundaries for a quite simple historical reason: media theory is a modern discipline, which makes it relatively young, yet we've been theorising about media before naming them as such for millennia.<sup>43</sup> By its very nature, historically-engaged media theory is interdisciplinary. The implication Pias draws from his historically-oriented media-theoretical perspective is that media studies must draw upon a range of material from a range of different disciplinary domains to think its objects, not only historically but also in the present. We might add two more. First, our media concepts are constitutively exposed to overdetermination by dint of the discipline's own inescapably-interdisciplinary heritage. This suggests that even if we don't adopt an historical approach to media theory, the theories of media that we inherit are likely to retain filiations from different disciplinary domains and theoretical frameworks. Second and conversely, once media theory *is* historicised, media can only be theorised if we first ask how media themselves become objects of theoretical knowledge across disciplines, in different domains of knowledge, and over time. Media change along with our theories of them. Given media theory's lineage, it is even more likely to have retained filiations. Pias's version of German media theory evinces an homology with historical epistemology's first precept, which analyses how objects become objects of knowledge in particular contexts.

We can find the second precept echoed in an essay by Joseph Vogl on Galileo's telescope. This essay exemplifies one strain of German media theory in which historical analysis forms the basis for reflecting upon and reconceptualising the media concept. For Vogl, Galileo's telescope is an example of how something that we might otherwise treat as a technology or as

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<sup>43</sup> Pias. "What's German About German Media Theory?," In *Media Transatlantic: Developments in Media and Communications Studies Between North American and German-Speaking Europe*, edited by Norm Friesen. Zurich: Springer, 2016. 21.

a scientific instrument might be productively conceived of as media. Galileo's telescope makes more of the heavens visible; but, it can only throw more of the stars into relief by intensifying the absence that surrounds them. This instrument produces knowledge by making visible both particular objects—stars—and by suggesting, through the limits it places on perception, that there is even more to be known. It mediates knowledge, in one of mediation's fundamental senses: by emphasising some aspects of sense at the expense of others. For Vogl, these reflections form the basis of his argument that we ought not to specify things as media based on particular technical qualities, instead identifying what he calls the "emergence of a medial function" from a "confluence of various factors", like the use of the telescope's mediation of perception to produce knowledge.<sup>44</sup> The implication Vogl draws from these reflections is that the wide array of things, objects, and processes that media theory analyses as media undermines the idea that we could posit "generally valid concept of media."<sup>45</sup> Here, we find a claim that's homologous with historical epistemology's second precept: the converse of the claim that we ought not to posit a generally valid concept of media is that our epistemologies of media are historically variable.

As both Pias's and Vogl's work demonstrates, some strains of contemporary media theory put historical epistemological precepts in to practice, even if they don't articulate their approaches as such. I'd like to suggest that they demonstrate that historical epistemology could be compatible with media theory. However, I also want to argue that we can only apply historical epistemology to media theory if we modify it. Elsewhere, Pias actually notes that his version of media theory, which interrogates media's relationship to knowledge by historicising this relationship, could be considered to be "a kind of historical epistemology."<sup>46</sup> The hesitancy of this "kind of" is crucial, because it indexes the inherent difficulty of applying historical epistemology to media.

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<sup>44</sup> Vogl. "Becoming-Media." 23.

<sup>45</sup> Joseph Vogl. "Becoming-Media: Galileo's Telescope." *Grey room* 29 (2007): 23.

<sup>46</sup> Claus Pias. "On the Epistemology of Computer Simulation." *Zeitschrift für Medien-und Kulturforschung* 2011, no. 1 (2011): 29.

Media play a distinct role in epistemology that's not wholly commensurate with the role that historical epistemology accords to scientific instruments. Historical epistemology treats scientific instruments as technology.<sup>47</sup> Media aren't reducible to technology: we distinguish them from other types of technology because they mediate. Analogously, I want to argue that media are exceptional epistemological objects. They don't just inform the production of knowledge; they also mediate it. We need to account for this quality if we're to posit what I'm calling a media-historical epistemology. There's also a challenge in thinking of media in this way. By asserting that media mediate knowledge production, we risk re-instituting either a version of the medial *a priori*, which we encountered in Kittler; or, a version of the Foucauldian *episteme*, whereby media would be posited as thought's conditions. We risk, that is, reducing media theory to the media it takes as its objects.

Pias makes this mistake in his work on the development of simulation when he defines the role and scope of media theory as investigating "the media-historical conditions pertaining to knowledge and cognition."<sup>48</sup> This claim echoes an insight of Kittler's that has acted as a touchstone in the introduction. As Sybille Krämer perceptively notes, the gesture of establishing media as *a priori* conditions can be read as the apotheosis and the "breakdown" of an earlier, poststructuralist explanation for the shaping of thought by its conditions: the "linguistic *a priori*."<sup>49</sup> My aim is not to reestablish media as *the* "phenomenal domain", in Krämer's formulation, that would act as "the prior matrix of our being-in-the-world."<sup>50</sup> Positing media as an *a priori* would defeat

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<sup>47</sup> This claim can be compared to Bachelard's influential concept of "phenomenotechniques", which understands scientific phenomena as being co-produced by the instruments that are used to observe them. Media mediate perceptions, but they also mediate conceptions. See: Bachelard. *The New Scientific Spirit*. Translated by Arthur Goldhammer. Boston: Beacon Press, 1984. 13-14. See also: Teresa Castelao-Lawless. "Phénoménotechnique in Historical Perspective: Its Origins and Implications for Philosophy of Science." *Philosophy of Science* 62, no. 1 (1995): 44-59; Rheinberger. "Gaston Bachelard and the Notion of "Phenomenotechnique."" *Perspectives on Science* 13, no. 3 (2005): 313-28.

<sup>48</sup> Claus Pias. "On the Epistemology of Computer Simulation." *Zeitschrift für Medien-und Kulturforschung* 2011, no. 1 (2011): 29.

<sup>49</sup> Sybille Krämer. *Medium, Messenger, Transmission: An Approach to Media Philosophy*. Amsterdam University Press, 2015. 29.

<sup>50</sup> Krämer. *Medium, Messenger, Transmission*. 29.

the purpose of an historical epistemological analysis. One consequence of this positing might be something like Kittler's version of the critique of the subject, as templated by his oft-repeated phrase, "so-called man."<sup>51</sup> Another is a kind of epistemological paralysis: if knowledge is posited as a "direct function of technological thresholds", as Kittler claims in another early essay,<sup>52</sup> there's no need for historical epistemological analysis, because the answer to the question of how knowledge is constituted would always redound to media. However, Kittler's claim that media mediate thought is still a necessary component of a media-historical epistemology—if treated not as thought's *a priori*, but as a concrete condition.

In our postdigital media situation, the conditioning of knowledge production by media is evident everywhere. This postdigital media situation has arisen because media have become commonplace. To echo Daston again, this must also mean that media become commonplace influences on epistemology. Though we might be cognisant of media's effects on knowledge production, we lack an epistemology that we might use to analyse media's effects *on our concepts*. This is the role that a media-historical epistemology must play. We can rescue the observation that media mediate knowledge from *a priori* postulation, whilst also making it the basis of a media-historical epistemology, if we formalise the concrete role that media play the production of our concepts.

If concepts are historically variable and they're informed by their contexts, as historical epistemology suggests, media occupy a double relationship to concepts: they are both *anterior* and *posterior* to our concepts of them. That is, media are part of the conditions of the practices of theorisation through which contexts are produced; but, they also play the role of the objects that these concepts are concepts-of. Circulation is always the circulation-of; that is, it always takes an object. For instance, we talk about the circulation of internet memes. The objects it takes—in the case that interests us, kinds of media or

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<sup>51</sup> Thomas Sutherland and Elliot Patsoura. "Michel Foucault, Friedrich Kittler, and the Interminable Half-Life of "So-Called Man."" *Angelaki* 22, no. 4 (2017): 49–68.

what we call content; but also, as we'll see, objects like bodies, railways, environments, alchemical practices—actively inform this concept in as many different ways as it has been applied to different contexts. For historical epistemology, the concept is informed by its objects because these objects create filiations. In Canguilhem's study of the inner milieu in biology, the confluence of particular scientific practices, techniques, and anatomical knowledge allows us to conceive of our bodies as possessing an interior space.<sup>53</sup> In the language media studies, we might rearticulate this claim. Media also mediate our concepts of them. They do this in part as objects whose development and change initiates changes in our concepts; but, they also do this because they produce and operationalise epistemology itself. This, I want to argue in more detail in the next chapter, is why circulation can be taken for the circulation of content: because the platforms that enable cultural production generate an epistemological category, content, that media theory then takes for circulation's object. The claim that media mediate our concepts of them is neither recursive nor reductive. Rather, it describes a concrete situation in which media invest our concepts of them with filiations.

It's commonplace to claim that media recede in the act of mediating,<sup>54</sup> but we rarely acknowledge that media also recede from epistemology. What Michel Serres calls the "third man", or the noise in the channel that communication must exclude for it to be possible,<sup>55</sup> has an media-epistemic parallel. In analogy to media, we could say that the filiation is the *media concept's* missing middle. The filiation allows us to claim that media play an anterior-posterior role in knowledge production without reducing media theory to its conditions. It allows us to understand how media's conditions, its contexts, and our theoretical frameworks inform our media concepts. Without any conception of

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<sup>52</sup> Kittler. "A Discourse on Discourse." *Stanford Literature Review* 3, no. 1 (1986): 159.

<sup>53</sup> Canguilhem. "The Living and Its Milieu," In *Knowledge of Life*, 98–120.

<sup>54</sup> Florian Sprenger. "The Metaphysics of Media: Descartes' Sticks, Naked Communication, and Immediacy." *Cultural Studies* 30, no. 4 (2016): 630–49; Krämer. *Medium, Messenger, Transmission*.

<sup>55</sup> Michel Serres. *Hermes: Literature, Science, Philosophy*. Baltimore and London: The Johns Hopkins University Press, 1982. 69.



the historicisable nature of our practices of theorisation, the claim that media mediate knowledge doesn't mean much. With it, we can propose a media-historical epistemological method.

### 3.4 A METHOD

The epistemological claims outlined in this chapter were originally formulated to study the development of science: both how knowledge of the world advances with the techniques that we use to know it, and how these techniques and the objects they're applied to inform knowledge's advance. Extrapolated from the domain of science to the domain of media, these claims help us to apprehend media theory as a concrete practice and as epistemological material for novel propositions about media. With a little modification, historical epistemology allows us to better articulate the indeterminacy that characterises our postdigital media situation—whilst also providing us with a method that we can use to resolve our problem and to formulate a theory of the internet meme.

In Rheinberger's formulation, historical epistemology is underpinned by two core precepts: it studies the conditions under which objects become objects of knowledge, and it acknowledges that epistemology is historically variable. These precepts can be applied to media—with a caveat. Media are exceptional epistemological objects. The anterior-posterior role they play in epistemology changes their epistemological status, because media are at once *a part of* the conditions which *they themselves* become object of knowledge; and the historical variability of epistemology is *informed by media themselves*, insofar as they mediate its production. Media intercede in each of these processes. So, I want to propose a third precept to take account of this exceptional epistemological status and to adapt historical epistemology to the study of media: that media are *implicated in the production of knowledge about media*. This claim extends those that I made about media's relationship to thought in the introduction to this thesis. It allows us to refine my proposition that our

postdigital media situation is indeterminate. This indeterminacy is *epistemological* inasmuch as the concrete ubiquity and massive distribution of media constitute the conditions in which we practice theory, in which media must be theorised, and in which media inform our concepts of them. This constitutes what I want to call *media-historical epistemology*.

This claim perhaps flirts with a paralysing recursivity. After all, to claim that media inform our concepts of them risks positing that media think themselves. Here, it resonates with another recent approach to historicising media posited by Geoffrey Winthrop-Young, by way of Kittler's late work, which explicitly thematises recursions over vast historical distances.<sup>56</sup> Kittler derives the term "recursion" from computation, where it denotes a process that "involve[s] repetitive instances of self-processing that nonetheless result in something different".<sup>57</sup> Following Kittler, Winthrop-Young argues that particular media also recur across time. Rather than focusing on media artefacts, though, this approach studies the recursion of mediatic processes and techniques, analysing how their repetitions link distinct historical periods even as their recursions in these distinct periods changes their nature.<sup>58</sup> Yet in its focus on "recursions through time and analogies through time and space", this approach is essentially concerned with producing histories that cut across superficial "temporal and conceptual distance".<sup>59</sup> In contrast, what I'm calling media-historical epistemology is concerned not with recurrences that act as "short circuits that are outside the provenance of time",<sup>60</sup> but with much more modest persistences that are carried to us in our epistemologies. Moreover, it takes concepts as its objects rather than mediatic processes. In the applications I want to use it for in this thesis, media-historical epistemology doesn't treat the con-fusion of temporal registers as a condition of practice, as Winthrop-Young does, but conceives of it as constituted by epistemology's concrete

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<sup>56</sup> Winthrop-Young. "Siren Recursions," In *Kittler Now: Current Perspectives in Kittler Studies*, edited by Stephen Sale and Laura Salisbury, 71–94. London: Polity, 2015.

<sup>57</sup> Winthrop-Young. "Siren Recursions." 75.

<sup>58</sup> Winthrop-Young. "Siren Recursions." 91.

<sup>59</sup> Winthrop-Young. "Siren Recursions." 88.

operations. By making epistemology concrete, this approach transforms such conditions from determining abstractions into thought's constituent materials. This gesture makes them available to be studied and to be reworked—using a method also derived from historical epistemology and repurposed to study media by analysing our concepts of them.

Following Canguilhem and Rheinberger, this method takes the relationship between media and our concepts of them as its field. Positing concepts as determinate, historicisable things changes not only their epistemological status, but the kinds of epistemological work we can do with them. Concepts aren't just derivatives of particular theoretical frameworks; they circulate, carrying filiations with them. These filiations realise the shaping influence that particular contexts, theoretical frameworks, or objects can have on concepts and that concepts *can* carry with them as they're taken up in new contexts, adapted to alternate theoretical frameworks, or applied to different objects. This concept of the concepts re-inserts them in to history and makes them available for a form of analysis that unpacks their epistemological implications and that, in doing so, necessarily produces new epistemological knowledge. The method I want to adopt works on and through concepts by reconstructing their filiations to understand more precisely what kind of epistemological work they do.

Filiations are relations, but they're also determinate things. They're informed and inform in turn. They constrain concepts: they suggest that the act of positing concepts can't be conceived in separation from the context in which such a gesture is made, drastically reducing theory's capacity to be practiced in a "contemporary" mode. They introduce an element of risk into the act of positing concepts: we *can* posit concepts whilst remaining wholly or partially unaware of the concrete influence that theoretical frameworks, contexts, or objects exercise over this act, but doing so risks reproducing the filiations that prevail in a particular concrete-historical conjuncture. They also allow epistemological enquiry to make different kinds of propositions about the

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<sup>60</sup> Winthrop-Young. "Siren Recursions." 77.

world—or, to conduct a different kind of theoretical practice. Filiations suggest that to posit a concept, we need to be able to reflexively incorporate an understanding of a concept's concrete conditions and its associated filiations into our conceptualisations. They allow us to both identify tacit forms of epistemological work carried out by concepts and to make concepts adequate to their contexts, theoretical frameworks, and objects by filiating them differently. Guided by the problem that structures this thesis, I want to apply this method to circulation and to its seemingly-contradictory status as *underdetermined* concept that is, nevertheless, both commonplace and essential to our understanding of media.

To posit a concept of circulation that we can use to theorise the internet meme, we need to avoid asking what it means for the internet meme to circulate. Rather, we need to ask questions that predicate theorisation's concrete, mediated conditions: What is the circulation *of* the internet meme? What is circulation *for* media theory? What is circulation, finally, *after* the excess of circulating media that constitutes our postdigital media situation? Our concepts of circulation are caught up in the concrete circulations of media. Why, we must ask, is circulation under-conceptualised in media theory? This is the starting point for the method I want to apply to this concept. This method is "inventive", in the sense outlined by Celia Lury and Nina Wakefield: it addresses a method—media-historical epistemology—to a problem—in our case, the concept of circulation and the question of how we might think media in excess of themselves—and allows "the capacity of what emerges in the use of that method to change the problem."<sup>61</sup> Only, the object of this method is both concrete *and* epistemological. Sifting through what emerges allows us to posit a concept, circulation, that's adequate to this problem. The three chapters that follow this one will use the notion of the filiation to identify some of the epistemological ramifications that the polyvalent concept of circulation has for media theory.

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<sup>61</sup> Celia Lury, and Nina Wakeford. *Inventive Methods: The Happening of the Social*. London and New York: Routledge, 2012. 7.

Part of what media-historical epistemology argues is that we never come to the practice of theorising media from a standing start. We use circulation, as a commonplace; media circulate; their circulation informs the epistemological indeterminacy that is the—concrete—condition of thinking media in the present. As a commonplace, circulation burgeons with connotations, overspilling disciplinary domains and theoretical frameworks. As a concept, circulation takes multiple objects. It transects multiple domains of knowledge, regularly recurring across the humanities and social sciences. It's informed, then, by numerous theoretical filiations, both in media theory and beyond. As a result, media theory acts as something like a tributary: a moving body into which all of the filiations attached to circulation and its objects—or drawn from other domains of knowledge or theoretical frameworks—flow. The method I want to use to think through this thesis's problem assumes that *in circulation*, we find many conceptual answers to the problem of how we ought to think media in excess of themselves—often without even posing the questions they entail. Put more schematically, this method works on the disjuncture between epistemological solutions and the problems they entail to identify both what conceptual work circulation does for media theory in its role as a commonplace *and* whether this conceptual work it helps or hinders our attempts to theorise media in the present. Some of this tacit work is crucial to how we conceptualise media. Some betrays the persistence of prior filiations that actively hamper our capacity to apprehend media. Working in this disjuncture will allow us to posit a concept that reflects the foundational role it plays in media theory; that's filiated to our indeterminate postdigital media situation; and, crucially, that we can use to formulate a theory of the internet meme.

Adopting this method immediately confronts us with another kind of problem: circulation is in common currency across the humanities and social sciences, which means that it takes innumerable filiations. Positing it as a commonplace and suggesting that it also does tacit conceptual work multiplies these filiations again. Identifying, cataloguing, and analysing each of the filiations that inform

circulation is beyond the scope of this thesis—or, to hazard a guess, an entire thesis or book. But not all of these filiations are necessarily relevant to our aim. For all that circulation's media-theoretical usages are informed by multiple objects, filiations, and historical contexts, the particular filiations we're interested in respond to and are shaped by a particular, recurrent problem: how we might think media when the media concept is no longer adequate to this task; or, *how we might theorise media in excess of themselves*. This problem makes circulation tractable to media-historical epistemological methods by narrowing the scope of our enquiry. The following three chapters will each focus on one filiation in particular: the platform, which I'll present as the key media-technical *context* in which internet memes are circulated; the anatomical body, which continues to inform circulation as one of its key early *objects*; and the ontological category of materiality, as perhaps the most important contemporary *theoretical framework* that—oftentimes tacitly and at the level of the discipline of media theory itself—shapes how circulation is conceived.

Before proceeding to these analyses, it has to be noted that the concept of the filiation is potentially problematic. This concept and the attendant method I'm proposing risk reducing media theory to a set of historical determinants, because they risk inflating the filiation to the status of yet another *a priori*. This *a priori* would function by positing particular historical precursors as particular concepts' explanatory keys. We can imagine a concept of media, for example, so relativised by its reflexive relation to the media it takes as its objects that it ceases to give us any analytical purchase. My contention is that we can avoid this inflation and its concomitant reductive effects by insisting that though concepts are concrete, their status as abstractions both invests them with a particular kind of epistemological agency and allows them to carry out particular kinds of epistemological work. What I mean to produce using this method is not a history, *per se*. That is, I don't mean to use history to explain theory. Nor do I mean to posit this concept as an alternative to other historical approaches to media, like media archaeology, Foucauldian genealogy, Winthrop-Young's recursion, or more conventional media histories. The

method I'm proposing suits our particular problem, the concept we're interested in, and our contemporary context. These demand an epistemological approach to practicing media theory that I have not found elsewhere. I've tried to head off this risk by situating this method within a number of constraints; whilst also acknowledging that constraint can often encourage thought.

It also has to be noted that adopting this method and its attendant theoretical practice enables some forms of producing theory whilst heavily constraining others. Circulation's unlike the concepts studied by historical epistemology, which usually refer to a specific—usually scientific—object. For Rheinberger, historical epistemology studies “epistemic things”, like test tubes, that “embody concepts” in science and so shift as concepts shift.<sup>62</sup> This concept operates in a field as broad as our media situation itself, introducing the risk that our propositions might lose coherence. Nor does it fit the model of the “trans-disciplinary concept” posited by Peter Osborne. Such concepts, like “the text”, are able to transect disciplines and addresses variable ranges of objects: the text is of language language; language lends the text this capacity, whilst the text renders ever-drifting language apprehensible.<sup>63</sup> Circulation is a commonplace, but what concerns us is how this concept can be made to fit the demands of thinking media in excess of themselves. So, our approach to conceptualising it differently has to avoid the temptation to elevate circulation to the status of a concept like the text, even as this concept leads our analyses into fields far beyond media theory proper. Following the problem posed by the internet meme and analysing it using this method will take us far afield of the domain of knowledge circumscribed by “media theory.” The method I'm proposing requires us to do forms of interdisciplinary work that weighs what's

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<sup>62</sup> Hans-Jörg Rheinberger. *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*. Stanford: Stanford University Press, 1997. 8.

Interestingly, Sybille Krämer also applies the concept of the “epistemic thing” in her discussion of maps as media. In this appropriation of the concept, though, she refers to what maps depict as “epistemic things”: that is, as objects that shift with techniques of mapping. See: Krämer, *Medium, Messenger, Transmission: An Approach to Media Philosophy*. Amsterdam University Press, 2015. 200-201.

common across disciplines with what's not. We can think of it as conducting media theory in an expanded field—which requires us to acknowledge that expanding media theory's field expands the risk of leaving our problem far behind.

The indeterminacy of our postdigital media situation is more profound than its concrete conditions—the massive distribution of the internet and the ubiquity of media—might already suggest. What's driving this series of chapters'—and this thesis's—obsession with circulation is the question not only of what, but *where* media are after the internet meme. When we take a media concept and analyse its filiations, the contexts, conditions, and theoretical frameworks it emerges from, what objects it takes, and, additionally, how media inform it, we might also ask whether media's occluded role in theorisation occludes something else. What gets accorded the role of media, under what conditions, and at what particular historical junctures? What mediates? Where is mediation located? How do we think mediation when media, in their ubiquity and through the internet's massive distribution, seem to break down—when, that is, our postdigital present is also seemingly one in which we are “after” media?<sup>64</sup> We might dismiss what I'm calling indeterminacy as the product of the proliferation of clickbait and social media posts and memes and cat gifs, as though it's only its content that makes this media situation overwhelm our capacity to think it. But media theory adds its own dose of indeterminacy to this mix. If we conceive of the problem posed by the concept of circulation in media-historical epistemological terms, it ramifies, taking us from the internet meme right through to the question of how one might think media when media inform our concepts of them. The gambit of this thesis is this: in the admonitory internet meme, we can find the resources for a media theory that is adequate to the present—in *indeterminacy*.

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<sup>63</sup> Roland Barthes articulates this quality most clearly in this essay: “Theory of the Text,” In *Untying the Text: A Post-Structuralist Reader*, edited by Robert Young, Routledge & Kegan Paul Boston, 1981.

<sup>64</sup> Bernhard Siegert. “Media After Media,” In *Media After Kittler*, edited by Eleni Ikoniadou, and Scott Wilson, 79–89. 2015.



## II. — IN CIRCULATION

## 4. MEDIA IN EXCESS OF THEMSELVES

### 4.0 CIRCULATION, TODAY

Circulation is a standard term in media theory's lexicon. We use it to describe how print moves from hand-to-hand or from eye-to-eye; how information is transmitted through wires, cables, circuits, or even waves and/or particles; how mass-media broadcasts broach the space-times of populations and territories; or how data is downloaded, stored, manipulated, uploaded, and shared via the internet's constitutive apps, platforms, services, and infrastructures. The term itself connotes processes as varied as sending, receiving, returning, circuiting, encircling, producing, reproducing, sustaining, creating, iterating, or even transforming. Circulation is deeply embedded in the theoretical language we use to conceptualise media. From the media-historical epistemological approach introduced in the previous chapter, we can identify it as a commonplace. Each time it's invoked to describe how media move, or to substantiate the mediatic processes by which media generate effects, circulation does a kind of conceptual work. These movements and processes contribute to our understanding of what media are and what they do. They are particularly essential to our conception of how media constitute pluralities, and how these pluralities produce effects. And yet despite the contributions that circulation makes to our conceptual understanding of media, it's a term that's typically taken for granted.

Media theory arguably lacks a concept of circulation that is specific to media. What we mean by "circulation" varies each time it's invoked, both denotatively and epistemologically. This term occurs in so many distinct domains of knowledge across the humanities and social sciences that it is *overdetermined* with meaning. Because it's *underdetermined* as a media-theoretical concept, its uses in discussions of media run the risk of reproducing filiations from other domains of knowledge and introducing them to our conceptions of what media are and what they do. Circulation's status as a commonplace that bristles with non-media-theoretical filiations adds an extra layer of epistemological

complexity to the problem that this thesis is attempting to resolve. That media circulate today is all too obvious. The indeterminacy that characterises our postdigital media situation is generated, in no small part, by an excess of circulating media. But what media are *in circulation* remains a pressing question. This question is essential to our task of formulating a theory of the internet meme. It's arguably essential to media theory itself. What circulation is—in the present, for media, and for the internet meme—has yet to be articulated.

This chapter is the first in a series that will respond to this question using media-historical epistemological methods. Circulation is a particularly apt epistemological object for a media-historical epistemological analysis. Its status as a term that is at once an *underdetermined* media-theoretical commonplace and an *overdetermined* concept in the humanities and social sciences confronts us with something of a media-theoretical paradox. Given this overdeterminacy and the media-historical epistemological propositions introduced in the previous chapter, the act of positing a *new* concept of circulation as part of a theoretical practice that treats this concept as though it's "contemporary" risks reproducing filiations from other domains of knowledge. This concept's epistemological history weighs too heavily. As the litany used to introduce this chapter shows us, circulation shelters epistemological multitudes. The risk is that this purportedly-"new" concept of circulation would reproduce conceptualisations of media from incongruous contexts, or tacitly re-introduce other, conflicting theoretical assumptions in to our theoretical practices, or freight our understanding of media's circulations with those of another object entirely. Media-historical epistemology helps us to avoid this possibility by providing us with epistemological tools we can use to identify, analyse, and sort these filiations, turning this paradox into a point of departure for a productive theoretical engagement.

Yet this method presents us with a different kind of paradox. If circulation is as *overdetermined* as I've claimed, where does this theoretical practice even

begin? Positing the history of concepts as conditions of their reconceptualisation in the present introduces the entire, overwhelming inventory of their prior applications into theoretical practice. Media-historical epistemology also provides us with the means of narrowing this inventory enough to make it workable. The “historical” moniker aside, media-historical epistemology also provides us with alternate ways of apprehending and engaging with concepts in *their* present. What’s at stake in circulation’s commonplace status today is our capacity to think media in the present. We can parse this statement further using the language of the problem: what’s at stake is our capacity to think *media in excess of themselves*. What the concept of the problem provides us with is an epistemological heuristic that we can use to reduce circulation’s inventory of prior uses to the few that particularly concern us. In this chapter and the two that follow, I want to examine precisely *how* circulation has been used to conceptualise media in excess of themselves. This chapter will begin this analysis in the present and with the internet meme’s specific context: the technical ensembles that make the circulation of online media possible.

In brief, my argument is this: when we invoke circulation to describe what online media are and what they do, its commonplace status tacitly allow circulation to supervene on the technical ensembles that put media in to circulation. That is, because we treat circulation as a self-evident process, we allow these technical ensembles to dictate what circulation is—and, so, to exercise an epistemological influence on media theory itself. Per the media-historical epistemological approach I’ve outlined, the analysis that I want to present in this chapter isn’t concerned with a general epistemology of the internet itself, conceived of as a technical ensemble. The internet’s too complex to subject it to this kind of analysis. Rather, it’s concerned with the specific and concrete mechanisms that allow circulation to be informed by—or filiated to—particular technical ensembles. With this in mind, it will focus on the platform.

Over the past half-decade or so, platforms have emerged as the main sites of contemporary online cultural production. Platforms include the media-technical ensembles that most define online culture, like Facebook, Twitter, Instagram, many of Google's services, and so on. Platforms are not the only ensembles where culture is produced—bulletin boards are also key—but they're significant enough for its circulation to be the subject of the analysis I want to conduct in this chapter. Importantly, the platform has also become a central concept in media-theoretical analyses of both online and the internet more broadly. I want to argue that we invoke circulation as a commonplace in our discussions of online media, we assume that media are in circulation because they have been put in to circulation by platforms. As we'll see, our extant concept of the platform can help us to understand how they make the circulation of media possible. But they also overlook the epistemological influence that concrete platforms exercise over our media theoretical practices. Using media-historical epistemological methods to identify and analyse this influence, this chapter will argue that our commonplace usages of circulation in discussions of online media tacitly posit media as derivative products of platforms. They do this by construing media as "content."

This tacit conceptual work provides us with one response to the question of how circulation is used to think media in excess of themselves: by reducing media to content, it empties circulation of its conceptual content. But it also provides us with two insights that I want to carry forward in to later chapters. First, this analysis demonstrates the key role that media-technical ensembles play in for both media's concrete circulations and for the conceptual work that we enlist circulation to do. This suggests that a concept of circulation that's adequate to the internet meme will need to account for and to articulate this role overtly. Second, this analysis also demonstrates precisely how circulation operates as an organising concept. When we allow circulation to supervene on platforms, we allow platforms to inform the conceptual work that circulation does. More fundamentally, though, we also allow platforms to inform *the media concept itself*. In circulation, this particular commonplace usage construes

media as “content.” This conceptualisation of media is only thinkable because we accept that media *are in* circulation. The conclusion that I want to draw from this claim is that circulation is as foundational to media theory as its two basic concepts: the media concept and the concept of mediation. Expanding upon this claim will become increasingly important as this thesis progresses.

Adopting a method derived from media-historical epistemology provides us with an alternative path for the positing of new concepts. When concepts are weighed down by a sprawling epistemological history that proliferates filiations, the gesture of positing a new concept becomes fraught. But by working through a concept’s commonplace usages, we can separate the filiation—and whatever detrimental effects it might have—from the conceptual work that we invoke it to do. This work constitutes the core of a concept that would be adequate to a given object and its attendant problem. Rather than positing concepts anew, media-historical epistemology provides us with the means to *reconstruct* these concepts out of this work. The trick lies in reconciling this work with their context—for the internet meme, our indeterminate postdigital media situation—and with the specificities of the objects we want to use a particular concept to think. The aim of adopting this approach is to produce a concept of circulation that’s flexible enough to think with the new; not to think what’s novel, as indicated by concepts like “new media”, but to think with our changing media situation as it institutes new commonplaces, new banalities, and subtly different variations on what we think of as everyday.

In perhaps a more far-reaching sense than I’ve previously intimated, this is why the concept of circulation is so necessary for thinking our indeterminate postdigital media situation. I’ve claimed that circulation is a key, yet under articulated, media-theoretical concept. I’ve claimed that its usages are defined, reciprocally, by the problems to which they respond. Placed in the context of the present and phrased in the interrogative, our problem is this: How are we to think media in excess of themselves, when media’s concrete circulations

outstrip our capacity to think them? To set this analysis in motion, we might ask another question in response: Where else would we find a way to resolve the epistemological problems posed by each but in the concrete circulations of media themselves?

#### 4.1 CIRCULATION AND MEDIA

I want to begin this analysis by identifying a few of the more notable, commonplace usages of circulation in recent media-theoretical scholarship. In each of these instances, we'll see that circulation isn't posited as a discrete concept, or overtly accorded what I would call an organising, media-theoretical role. Instead, it's often introduced to subordinate our conception of circulating media to other processes. These fall in to four main categories: political-economic; infrastructural; linguistic; and cultural. In each of these instances, circulation is taken to be self-evident. In the absence of a clearly-articulated conceptualisation of what the circulation of media is, each of these instances defaults to filiating this term to epistemologies drawn from theoretical frameworks, contexts, or objects outside of media theory. My argument is that none addresses the circulation of media, *per se*. They provide us with the outlines of an epistemological in which circulation ends up supervening on platforms.

We can find exemplary instances of the influence of political-economic conceptions of circulation in Jodi Dean's seminal concept of "communicative capitalism" and in David B. Nieborg and Thomas Poell's recent work on cultural production. The core of Dean's argument is that the dynamics of online cultural production revalue the contributions that individual users might make to a "pool" of already-circulating "content."<sup>1</sup> Dean posits circulation as something more than a process: for her, it constitutes "the context, the

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<sup>1</sup> Jodi Dean. "Communicative Capitalism: Circulation and the Foreclosure of Politics." *Cultural Politics* 1, no. 1 (2005): 58.

condition for the acceptance or rejection of a contribution”—<sup>2</sup>or, in the language I’m using, of a media-instance. She draws this distinction to comment on how the act of putting “content” into circulation can be used as a tactic to distract political constituencies from pressing political issues. For Nieborg and Poell, the increasing “platformatization”—which I’ll substitute for “platformisation”, to remain consistent with other scholarship—of the ‘net, or, the increasing emergence of programmable, platform-based computational architectures, enacts a “reorganisation of cultural production and circulation.”<sup>3</sup> They make an argument that resonates with the one I’ll expand upon below. For them, platformisation has the effect of making media “contingent”,<sup>4</sup> transforming them from discrete objects into iterable constructs. But their focus, like Dean’s, is not on media themselves. The work of Dean and of Nieborg and Poell exemplifies the media-theoretical tendency to pattern media’s circulations after political-economic phenomena: capital and the commodity form.

Dean’s use of the term circulation is drawn from Karl Marx’s conception of the role that circulation plays for capital. For Marx, capital is accumulated through ongoing processes that translate money in to capital and capital back in to a larger amount of money. Its accumulation is predicated exploiting a surplus-value from the labour that produces commodities.<sup>5</sup> In *Capital Vol. II*, Marx argues that “capital... does not just comprise class relations... it is a movement, a circulatory process through different stages.”<sup>6</sup> He goes on to observe that “industrial capital in the continuity of its circuit is simultaneously in all of its stages.”<sup>7</sup> What Dean calls circulation replicates the epistemological claim that underpins this observation. Online, “content” is as capital: it can be grasped as

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<sup>2</sup> Dean. “Communicative Capitalism.” 59.

<sup>3</sup> David B. Nieborg, and Thomas Poell. “The Platformization of Cultural Production.” *new media & society* Pre-print (2018): 15.

<sup>4</sup> Nieborg and Poell, “The Platformization of Cultural Production”, 15.

<sup>5</sup> Karl Marx. *Capital Vol. 1*. Translated by Ben Fowkes and David Fernbach. London: Penguin, 1990.

<sup>6</sup> Marx. *Capital Vol. 2*. Translated by David Fernbach. London: Penguin, 1992. 185.

<sup>7</sup> Marx. *Capital Vol. 2*. Translated by David Fernbach. London: Penguin, 1992. 182.



a whole; it generates effects as a whole; but, it subsumes media instances to this whole. Nieborg and Poell draw a much more overt line between online cultural production and Marxian political economy. They conceive of contingent media as “cultural commodities.” What’s interesting about platformisation for them is not what it means for media, nor what it says about how media circulate, but what it tells us about “the structure and nature of the commodity form.”<sup>8</sup> This claim blurs media’s circulations with those of commodities. Platformisation might transform the former, but their emphasis on media’s role as commodity subordinates the operations of media to its consumption. In each case, the concrete circulations of media are subordinated to non-mediatic processes. In each case, circulation remains *underdetermined* as a concept of media.

Other, recent media-theoretical attempts to conceptualise the circulation of media unintentionally perpetrate a different epistemological bait-and-switch: they try to explain media’s circulations by invoking its infrastructures, only to end up valorising these infrastructures at circulation’s epistemological expense. In his recent book-length study of the constitutive role that circulation plays for media and popular culture, David Beer argues that we need to think media’s circulations through their enabling infrastructures and the algorithms that process them.<sup>9</sup> His argument, that “in order to understand culture we need to understand the circulations of data that are now central to it”,<sup>10</sup> is particularly compelling. Somewhat surprisingly, however, Beer’s extended study of how media circulates never actually specifies what circulation is. Throughout, he treats it as a commonplace. The editor’s introduction to a recent special issue on “digital circulation” written by Gabriele Balbi,

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<sup>8</sup> David B. Nieborg, and Thomas Poell. “The Platformization of Cultural Production.” *new media & society* Pre-print (2018): 15.

<sup>9</sup> David Beer. *Popular Culture and New Media: The Politics of Circulation*. London: Palgrave Macmillan, 2013. See esp.

<sup>10</sup> Beer. *Popular Culture*. 170.

Alessandro Delfanti, and Paolo Magaudda evinces a similar problem.<sup>11</sup> This short introduction is, ostensibly, about how media circulate online. Balbi, Delfanti, and Magaudda identify the central role played by circulation in the constitution of online cultural production. They also identify the need to connect the circulation of media to the infrastructures that make it possible. Yet in trying to discuss the circulation of what they call “media content”, they end up reaching beyond media itself to talk about the conditions it inhabits: not only its infrastructures, but the global circulations of culture or the constitution of cultures in circulation.<sup>12</sup> In each of these studies, the circulation of media merges with its infrastructural conditions. Each produces a picture of a whole constituted by the concrete circulations of media, but each is remarkable for the absence of a concept of what media are in circulation. Their tendency to draw on multiple theoretical and analytical resources to try to think circulation is symptomatic of the term’s conceptual *underdeterminacy* in media theory: as theoretical frameworks multiply around it, its commonplace status is brought further into relief.

An older media-theoretical usage of circulation that has fallen out of favour, but that nevertheless persists in some strains of contemporary media theory, recuperates the concrete circulations of media to language. One of the most influential examples of this in media theory’s *ad hoc* canon can be found in Stuart Hall’s essay, “Encoding/Decoding.” Following Marx, Hall argues that we can best apprehend media by analysing the “circuits” they constitute in and through their circulation.<sup>13</sup> This “structure” of “connected practices” includes the “linked but distinctive moments” of the “production, circulation, distribution/consumption, [and] reproduction” of media.<sup>14</sup> For our purposes,

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<sup>11</sup> Gabriele Balbi, Alessandro Delfanti, and Paolo Magaudda. “Digital Circulation: Media, Materiality, Infrastructures. An Introduction.” *TECNOSCIENZA: Italian Journal of Science & Technology Studies* 7, no. 1 (2016): 7–16.

<sup>12</sup> Balbi, Delfanti, and Magaudda, “Digital Circulation”, 8-9.

<sup>13</sup> Stuart Hall. “Encoding/Decoding,” In *Culture, Media, Language: Working Papers in Cultural Studies, 1972-79*, edited by Stuart Hall, Dorothy Hobson, Andrew Lowe, and Paul Willis,. London and New York: Routledge in association with The Centre for Contemporary Cultural Studies, University of Birmingham, 1980. 117.

<sup>14</sup> Hall. “Encoding/Decoding,” 117.

what's noteworthy about Hall's model is that he uses it to recast media as "discursive form[s]": he argues that the "apparatuses, relations and practices" constitutive of media's circuits produce "symbolic vehicles constituted within the rules of "language".<sup>15</sup> Hall uses this model to propose a subtle and useful methodology for analysing media. But his adoption of Marx's insistence on thinking processes in all of the stages of their circulation substitutes capital for another distributed form, language, which becomes the medium of media's concrete circulations. So, he argues that, "it is in the discursive form that the circulation of the product takes place as well as its distribution to different audiences."<sup>16</sup>

We might periodise this piece by arguing that it betrays the influence of then-prevalent linguistic epistemologies; or, that it pre-dates media theory's contemporary emphasis on the material differences that distinguish media types. This recuperation of circulation to language persists today in concepts like the "remix", which treat the media productions of online culture as "texts."<sup>17</sup> It's also indicative of another kind of persistent influence—one that's more occluded and that surfaces in our media-theoretical practices, rather than our media-theoretical claims. We may no longer posit media as "texts" or reach for discourse to explain the medium of media's concrete circulations. Our commonplace invocations of circulation are, nonetheless, still often patterned after language. This influence becomes most evident when we equate media's capacity to circulate with their capacity to transform. At these moments, there's a risk that we might inadvertently recapitulate linguistic epistemologies by assuming that media are "iterable", like language;<sup>18</sup> or, that they're transformed when we iterate them in new contexts. In these moments, we risk treating media like text—and overlooking the occluded computational processes that make their circulations possible.

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<sup>15</sup> Hall. "Encoding/Decoding," 117.

<sup>16</sup> Hall. "Encoding/Decoding," 117.

<sup>17</sup> E.g. in Graham Meikle. *Social Media: Communication, Sharing and Visibility*. New York and London: Routledge, 2016. 50.

<sup>18</sup> Jacques Derrida. *Limited Inc.* Translated by Samuel Weber and Jeffrey Mehlman. Evanston, Ill.: Northwestern University Press, 1988.

The final filiation I want to identify invokes circulation to subordinate the concrete circulations of media to the cultures that enact them. This filiation is most visible in media theory's less-theoretically-inflected sibling, what I'm calling "media studies." Admittedly, these two disciplines are animated by disparate and, at times, antagonistic values and epistemological assumptions. They nevertheless share two key features: perhaps obviously, both disciplines discuss media; and, both disciplines tend to treat circulation as a commonplace. Crucially, most of the extant research on internet memes has been produced by scholars working in media studies. I want to briefly look at this work to illustrate how circulation is most often enlisted in studies of internet memes. As we'll see, this term is usually invoked to valorise the users who produce internet memes at the expense of the technical processes that afford their production. Curiously, media studies' commonplace usages of circulation betray one further similarity between it and media theory: both tacitly accord it an organising role in their respective epistemologies.

This tendency is most clear in Limor Shifman's influential work on the internet meme. Shifman's work is a border case: it clearly falls within media studies' disciplinary boundaries, yet it offers the earliest and most influential working theory of the internet meme. In practice, it theorises. Her theory has three key components: in summary, it defines the internet meme as a type of media that is collectively produced; that mutates as it's shared or spread; and that circulates.<sup>19</sup> What's noteworthy about this definition is that the first two characteristics are underwritten by the third—just not overtly. The internet meme can only be produced by more than one user if it's able to circulate between them. It can only mutate as it's interacted with, copied, reiterated, and shared if it's able to be circulated. Yet Shifman never substantiates how circulation ought to be understood.

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<sup>19</sup> Limor Shifman. *Memes in Digital Culture*. The MIT Press, 2013, 41.

Shifman's commonplace usage of circulation is symptomatic of how the term is treated in media studies. It's clearly influenced by the work of Henry Jenkins. In Jenkins' more recent, collaboratively-written work, he and his co-writers, Sam Ford and Joshua Green, posit the concept of "spreadability" to explain how media circulate online.<sup>20</sup> What's noteworthy about this concept for us is that Jenkins, Ford and Green differentiate between what they call "circulation"—or how media is spread by users—and what they call "distribution"—or the institutional and infrastructural supports for the circulation of media.<sup>21</sup> Spreadability—which can be read as a rearticulation of the concept Jenkins' earlier concept of "participatory media"—<sup>22</sup>accords the capacity to produce and circulate media to users. Insofar as memes circulate for Shifman, we can say—after Jenkins—that they're not distributed, but that they spread. Shifman's invocatory recourse to circulation echoes Jenkins and is echoed, in turn, by numerous other influential media studies analyses of online cultural production in general and internet memes in particular. The work of Ryan Milner—whose research on internet memes is almost as influential as Shifman's—adopts Jenkins' concepts to argue that internet memes are exemplary participatory media forms. As he puts it, "the participatory world is made—brought into existence and sustained—through messy memetic relationships."<sup>23</sup> This "world", moreover, is fashioned by what users do, or "through the proliferation of individual decisions."<sup>24</sup> In media studies, people make media circulate; in circulation, media mediate emergent cultures; and, cultures are constituted by the decisions of people. What's curiously absent from this circuit is a clear sense of how media are made to be able to circulate—and what media are, *in circulation*.

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<sup>20</sup> Henry Jenkins, Sam Ford, and Joshua Green. *Spreadable Media: Creating Value and Meaning in a Networked Culture*. NYU press, 2013.

<sup>21</sup> Jenkins, Ford and Green. *Spreadable Media*. 5-10.

<sup>22</sup> Henry Jenkins. *Convergence Culture: Where Old and New Media Collide*. NYU press, 2006

<sup>23</sup> Ryan M. Milner. *The World Made Meme: Public Conversations and Participatory Media*. Cambridge, Mass.: The MIT Press, 2016. 2.

<sup>24</sup> Milner, *The World Made Meme*, 38.

I don't mean to introduce these studies, or their governing concepts, to critique them—other media theorists have already critiqued Jenkins and his key concepts at length.<sup>25</sup> What concerns us here is how circulation is enlisted to think media in general and the internet meme in particular. In valorising participatory communities and media's capacity to be spread, Shifman, Milner, and Jenkins, alongside other media studies scholars working under these epistemological premises, delegate the capacity for media to circulate to users. In the process, they take the technical processes that enable media's circulations for granted. Yet what's most striking about their commonplace usages of circulation is that they reproduce an epistemological tendency evident in the media-theoretical works I've just surveyed. In each instance, circulation is *underdetermined* as a concept of media. Yet in each instance, circulation is enlisted to play an organising media-theoretical role. In these media-theoretical and media studies examples alike, media's concrete circulations are enlisted to recast circulation as a political-economic, infrastructural, linguistic, or cultural process. We might think of each of these as crucial aspects or effects of circulating media. In the next chapter, I'll contextualise these epistemological filiations and discuss one of them in more detail; they are crucial material for the reconstructed concept of circulation I want to introduce later. But none of these usages conceptualises *the circulation of media*. Each takes the circulation of media for granted. Each can because each takes media's concrete circulations as already given.

Is the role of media theory to theorise media? After media-historical epistemology, it might be more accurate to say that media theory theorises media *as it's given*. In our postdigital media situation, media circulates in excess. It's easy to recognise these concrete circulations and to use them as material for media theory. But as I argued in the previous chapter, it's less easy to recognise the role these media play in establishing the epistemological conditions in which we apprehend them as objects of theorisation.

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<sup>25</sup> See this special issue on the topic in particular: James Hay and Nick Couldry, eds. "Rethinking Convergence/culture." *Cultural Studies* 25, no. 4-5 (2011).

Circulation's *underdeterminacy* as media-theoretical concept means that it gets taken up as a commonplace, or else filiated to other theoretical frameworks, contexts, or objects—here, political-economic; infrastructural; linguistic; and cultural. These usages and these filiations overlook how media are given as objects of theorisation. Whether it's invoked as a commonplace or whether it's deliberately subordinated to other processes, circulation doubles. Circulation is both as it's invoked—a term we use to describe or to subordinate media's concrete circulations—and something else. In taking media's concrete circulations as already given, the usages of circulation surveyed here outline the conditions in which it supervenes on platforms.

In specifying the platform as the key epistemological influence on our media-theoretical engagements with media's concrete online circulations, I don't mean to elevate it to the status of an epistemological condition of possibility for thinking circulating online media in the present. Nor do I mean to identify the platform as the only computational architecture that puts media in to circulation. The platform is crucial to this discussion because it plays a major shaping role for contemporary online culture; because it's crucial to thinking the internet meme in circulation; and, most of all, because it captures the stakes of thinking media in circulation in our postdigital media situation. Whilst focusing on the platform at the expense of other computational architectures or processes risks reifying it as online media's explanatory key, it also articulates the broader mediatic context in which media circulate online today. I mean this in both concrete and epistemological senses: the platform foregrounds the concrete processes by which online media are made available as objects of theorisation. It's important to note that if we were positing a concept of circulation that's supposed to be adequate to another kind of media, we might tie it to another kind of process, infrastructure, or even institution. My focus on the platform responds to the concrete-epistemological specificity of the internet meme and its problem, how we might think media in excess of themselves.

The question, What are media in circulation?, has to be accompanied by another: *What are media that can be circulated?* Online, the media that we're given in circulating excess are not only technically-produced, they're processed and put in to circulation by computational infrastructures—for the internet meme, this means the platform. Platforms' capacity to put media in to circulation is not without agency or mediation. In putting media in to circulation, platforms process them; in processing media, they also process media theory. By holding media's concrete circulations to be self-evident, these examples of circulation's usages treat media as media that can be circulated; or, after platforms, as "content." "Content" acts as what I want to call an epistemological form that influences media theory in circulation's *underdeterminacy*.

#### 4.2 CONTENT, EPISTEMOLOGICAL FORM

Content has accrued a series of meanings in discussions of media, but it's not commonly invoked as a formalised media-theoretical concept. Media studies scholars often distinguish between "media content" and particular media types. Some key media studies methods take "media content" as their object(s) of analysis.<sup>26</sup> For other media studies scholars, most famously Dallas Smythe, the role that the discipline accords to media content is misleading: he argues, rather, that media content is offered to audiences to capture their attention, because they're the commodity being bought and sold.<sup>27</sup> In broader discussions of online cultural production, content takes on another series of meanings again. In contemporary academic, technology industry, and popular-cultural discussions of the internet, digital media, and online culture,<sup>28</sup> content

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<sup>26</sup> For an overview of the term that extends it to analyses of webpage content, see: Susan C. Herring "Web Content Analysis: Expanding the Paradigm," In *International Handbook of Internet Research*, 233–49. Springer, 2009.

<sup>27</sup> Dallas W. Smythe. "Communications: Blindspot of Western Marxism." *Canadian Journal of Political and Social Theory* 1, no. 3 (1977): 1–27.

<sup>28</sup> See, for instance: Bharat Anand. *The Content Trap: A Strategist's Guide to Digital Change*. Gurgaon, India: Random House Group, 2016.



has come to refer to that which is contained by media platforms. Content might be digital media: images, text, videos, or advertisements. It could be “contingent” products, to recall Poell and Nieborg: streaming TV shows, music, clickbait. Digital creative industries are populated by people who labour with content: content producers, content moderators, content managers, content curators, and so on. Content’s what we purportedly download, interact with, edit, share, and, ultimately, consume online. What I want to call content is derived from these discussions. In popular parlance and—as we saw earlier—in some scholarly analyses, content has become a substitute for media. This substitution might seem minor, but it arguably has significant epistemological implications for media theory.

Content operates as what I want to call an epistemological form. It’s an example of what media-historical epistemology allows us to identify as media informing the conditions in which they become objects of theorisation. Online, the media that do this are platforms. What we call content is media that’s been processed by platforms so that it can be put in to circulation. Like content, the platform has a lot of commonplace currency in academic and non-academic discussions of digital media and contemporary online culture.<sup>29</sup> Like content, the platform is also, originally, a tech-industry term.<sup>30</sup> Unlike content, it’s a well-developed media-theoretical concept that’s become indispensable for media-theoretical analyses of the internet and online cultural production. Platforms are also, arguably, one of the key constituents of the contemporary internet. They organise the relations between the constitutive components of online culture, like users, media, data, advertisers, or capital.<sup>31</sup> Moreover, they structure how these components interact, making them material for the creation of social relations, the production of labour, the capture of data, and

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<sup>29</sup> The best overview of the platform’s semantic richness and its use across multiple domains of knowledge is Tarleton Gillespie’s seminal early essay on the term. See: “The Politics of ‘~platforms’.” *New Media & Society* 12, no. 3 (2010): 347–64.

<sup>30</sup> For a seminal early technology-industry outline of the term, see: Tim O’Reilly. “What is Web 2.0?” *O’Reilly Media* (2005): <http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>.

<sup>31</sup> Paul Langley and Andrew Leyshon. “Platform Capitalism: The Intermediation and Capitalisation of Digital Economic Circulation.” *Finance and Society* 3, no. 1 (2017): 11–31.

the expropriation of value.<sup>32</sup> Platforms are able to do this because they put media into circulation.<sup>33</sup> When we take media's concrete circulations as already given, though, we risk allowing platforms to process media theory; or, to reproduce the epistemologies that platforms themselves produce in their handling of media. That is, we risk tacitly or overtly adopting content's epistemological form.

To understand how platforms exercise this influence over media theory, we need to understand how they put media in to circulation in more detail. Anne Helmond accords this capacity to what she calls their "programmability."<sup>34</sup> Platforms are designed to exploit the asymmetrical distribution of the means of producing and aggregating data.<sup>35</sup> To generalise, platforms provide users with the means of producing and accessing certain forms of data by providing them with the means of inputting information, interacting with other users, uploading, editing, creating and/or sharing media media, or responding to other users' posts—amongst numerous other actions. In Helmond's terminology, platforms "decentralise" the means of data production.<sup>36</sup> At the same time, they "recentralise" the means of collecting, aggregating, and processing the data produced by users.<sup>37</sup> They then make some of this data available to other parties who want to process it further through Application Programming Interfaces, which provide varying levels of access to platform data for use in

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<sup>32</sup> Jean-Christophe Plantin, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. "Infrastructure Studies Meet Platform Studies in the Age of Google and Facebook." *New Media and Society* 20, no. 1 (2018): 293–310.

<sup>33</sup> On this point and on the role of platforms in making labour available to expropriation, see: Scott Wark and McKenzie Wark. "Circulation and Its Discontents," In *Post Memes: Seizing the Memes of Production*, edited by Alfie Brown and Francis Russell, Forthcoming. Santa Barbara: punctum books, 2019.

<sup>34</sup> Anne Helmond. "The Platformization of the Web: Making Web Data Platform Ready." *Social Media + Society* 1, no. 2 (2015).

<sup>35</sup> Langley and Leyshon, "Platform Capitalism." See also: Hector Postigo. "The Socio-Technical Architecture of Digital Labor: Converting Play Into Youtube Money." *New Media & Society* 18, no. 2 (2016): 332–49.

<sup>36</sup> Helmond. "The Platformization of the Web." 5. See also: Carolin Gerlitz and Anne Helmond. "The Like Economy: Social Buttons and the Data-Intensive Web." *New Media & Society* 15, no. 8 (2013): 1348–65.

<sup>37</sup> Helmond. "The Platformization of the Web." 5.

the production of other applications or services.<sup>38</sup> To mediate the production and circulation of media, platforms are constituted by what Helmond refers to as “modular elements.”<sup>39</sup> We would recognise these elements as the constituents of the interfaces we use to access platforms: as, for instance, their “feeds” or as the other compartments that platforms fill with data. These compartments are dynamic and they’re populated by what we call content.

For users, the modular elements that constitute platforms’ interfaces are where media are accessed online. But platforms process media differently. The function of modular elements can be traced to the use of markup languages—like CSS or Ajax—to split media content from the parameters of their presentation in coded environments, like webpages.<sup>40</sup> These elements institute a distinction between what media are and how they’re supposed to be presented in order to facilitate machine-to-machine communication and, so, to ease and automate the circulation of media between distinct computational environments: as, for instance, when a webpage allows you to share media content to social media. As Alan Liu argues, this feature has made online media “*autonomously mobile*”, helping to create the platform-based internet we know today.<sup>41</sup> But it also has the effect of introducing a specific, intermediary layer between media and users.

We could parse this feature by saying that platforms institute these parameters to make media circulatable. However, to do so would be to mistake media for what platforms present, because the means they use to put media into circulation invite the obverse claim: to make media presentable, platforms fit media to the parameters of the modular compartments that they occupy.<sup>42</sup> This process of intermediation allows us to draw an epistemological distinction

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<sup>38</sup> Plantin et. al., “Infrastructure Studies Meet Platform Studies.” 303.

<sup>39</sup> Anne Helmond. “The Platformization of the Web.” 6.

<sup>40</sup> Jack Jamieson. “Many (to Platform) to Many: Web 2.0 Application Infrastructures.” *First Monday* 21(6) (2016): <http://firstmonday.org/ojs/index.php/fm/article/view/6792/5522>

<sup>41</sup> Alan Liu. “Transcendental Data: Toward a Cultural History and Aesthetics of the New Encoded Discourse.” *Critical inquiry* 31, no. 1 (2004): 57. Emphasis original.

<sup>42</sup> Liu. “Transcendental Data.” 59.

between what users access as media and what I'm calling content. As Aden Evens puts it, the modular compartments that constitute platforms are "neutral with respect to content."<sup>43</sup> Content can be anything that fits the parameters of a given platform. Content is apprehensible, then, neither as thing—media—nor as concept. Content can only enter circulation because it's subject to the parameters of a given platform. What we indicate when we invoke "content" is not the content of these compartments, but the parameters that allow these compartments to be filled. Marshall McLuhan infamously said that "the "content" of any medium is always another medium",<sup>44</sup> but the discourse surrounding platforms and online cultural production might invite us to rephrase this claim: the media of content, it would seem, is simply "content"—an epistemological form.

Platforms imbricate the technical and the epistemological. Platforms put media into circulation by facilitating their presentation. In the process, they enact a particular epistemology: the content of content is secondary to the actions and relations that can be produced from its production and its circulation. Apprehended individually, the reconstitution of particular media instances as content by platforms is of little epistemological significance; in the aggregate and in circulation, though, it has epistemological consequences for our capacity to theorise media in circulation.

#### 4.3 MEDIA IN CIRCULATION

We can identify the epistemological form of content as another filiation. Canguilhem conceived of filiations as determinate, historicisable components of concepts that explain how they can be "theoretically polyvalent",<sup>45</sup> or how they can be informed by different theoretical frameworks, contexts, and

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<sup>43</sup> Aden Evens. "Dreams of a New Medium." *Fibreculture Journal* 14 (2009): online.

<sup>44</sup> Marshall McLuhan. *Understanding Media: The Extensions of Man*. Cambridge, Mass.: The MIT Press, 1994. 8.

<sup>45</sup> Georges Canguilhem. *A Vital Rationalist: Selected Writings From Georges Canguilhem*. New York: Zone Books, 2000. 181.

objects. The “historical” part of historical epistemology notwithstanding, we have to recognise that our contemporary concepts have their filiations, too. With the epistemological form of content, I mean to specify a filiation that’s produced by platforms and that, in turn, exercises an organising influence on media theory: by informing both our concepts of circulation and of media themselves. To depart from Canguilhem, this filiation isn’t a historicisable residue; it’s reproduced as it’s produced because it’s instituted by a computational process *that runs*. It’s the means by which platforms process media theory, transforming the media concept into something that’s perpetually updated and refreshed, and so perpetually “contemporary.”

Online and after the platform, media circulate in excess. Because circulation is *underdetermined* as a media-theoretical concept, this circulation goes under-conceptualised. Circulation’s *underdeterminacy* means that the concept must supervene on the platform, the computational architecture that puts media in to circulation, because this is the only way that media’s concrete circulations could be taken as already given. Platforms are able to exercise an epistemological influence over media theory because in taking the concrete circulations of media as already given, we take the computational-infrastructural role in putting media in to circulation for granted. Whether or not we identify media as content explicitly, our lack of a media-theoretical concept of content generates the same result. Circulation is tacitly accorded an organising role in media theory: online and after the platform, media circulate in excess—insofar as they’re enacted as content. The problem with the epistemological form of content is that it produces a media-theoretical tautology. Its conflation of media with content conflates media with the parameters which put them in to circulation, effectively assuming that media are able to circulate because they’re media that can be circulated. In practice, this means that our commonplace invocations of circulation both respond to, and yet defer, the problem of how we might think media in excess of themselves.

The epistemological form of content provides us with a means of further substantiating this problem. In the work surveyed above, what links the processes invoked to try to think circulation—or, as I argued, to subordinate media’s circulations—is that each grasps for an abstraction that might explain how media are able to enter circulation at all. Political economy offers the analogue of the universal equivalent, money;<sup>46</sup> infrastructures lend materiality to processes that threaten to recede into stubborn abstraction; linguistic epistemologies are predicated on topological relations that smooth over intermediations;<sup>47</sup> media are melted into the totality of users’ decisions by the solvent of participatory culture. What each ends up producing, arguably, is an analogue of the media-theoretical concept of convergence. In Friedrich Kittler’s phrasing, and as numerous other scholars similarly argue, the advent of digitalisation allowed “any medium to be translated into any other.”<sup>48</sup> Media can converge once they can be digitised. By bringing media—that is, the motley array of technical apparatuses that constitute the category—together, convergence provides the epistemological validation for the gesture that would apprehend media *in* their circulations, because it provides a condition—the digital—on which they’re able to supervene. The platform offers a similar abstraction. It would even seem to represent the apotheosis of media’s convergence: after all, the platform’s parameters are designed to put many kinds of media in to circulation. Neither are fit for purpose, because neither offers us the epistemological means to think media *in* circulation. The mutating, collectively produced, circulating internet meme isn’t converged; in circulation, as I’ve claimed, the internet meme is in perpetual divergence. They circulate; more importantly, they are *in* circulation. The epistemological form of content

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<sup>46</sup> See also Shaviro, 2002: 284, which uses Kittler’s essay on Dracula from *Literature, Media, Information Systems* to describe “information systems” as universal equivalents.

<sup>47</sup> This is particularly evident in Roland Barthes’ concept of the text. See: Barthes. “Theory of the Text,” In *Untying the Text: A Post-Structuralist Reader*, edited by Robert Young, Routledge & Kegan Paul Boston, 1981;

<sup>48</sup> Friedrich Kittler. *Gramophone, Film, Typewriter*. Translated by Geoffrey Winthrop-Young and Michael Wutz. Stanford University Press, 1999. 2. Convergence is also a key theme in Lev Manovich’s seminal work of media theory: *The Language of New Media*. Cambridge, Mass.: MIT press, 2001. For a more recent take on the concept, see: Graham Meikle and Sherman Young. *Media Convergence: Networked Digital Media in Everyday Life*. Basingstoke and New York: Palgrave Macmillan, 2011.

doesn't offer us the theoretical means to credit the distinction between media that circulate in excess and media that circulate in excess of themselves.

These reflections allow us to lend a deeper significance to what Helmond calls "platformization." For Helmond, platformisation names a process by which sociality is increasingly organised by platforms' programmability. Plantin and his co-authors take up this concept to name a process whereby infrastructures become platforms and platforms are rendered as globally-significant infrastructures. But we can also use this term to identify the influence platforms exercise over media theory. Platforms don't reorganise and reprocess an increasingly large number of our cultural, social, economic, political, or technical relations without also influencing how we're able to conceptualise them and the processes they make possible. Media theory has been platformised, too. Platforms institute the *epistemological* conditions of possibility for media-theoretical discussions of online cultural production. In its *underdeterminacy*, these conditions generate a filiation that informs how we think circulation; how we think media that are able to circulate; and, in the end, how we think media themselves.

Drawing on media-historical epistemology, these conditions aren't metaphysical or abstract. They're concrete. In a recent article extending Helmond's concept of platformisation, Adrian Mackenzie argues that this concept has to be understood beyond the limits of API-based programmability. Because of the scales at which platforms operate, they encounter what Mackenzie calls "the problem of the opacity of what takes place on or around the platform."<sup>49</sup> This opacity is not a part of platforms' business models, but a product of their technical complexity. In response, engineers use artificial intelligence and machine learning techniques to try to automate the management of platforms' opacity. For Mackenzie, the increasing use of artificial intelligence and forms of machine learning turns the platform into

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<sup>49</sup> Adrian Mackenzie. "From API to AI: Platforms and Their Opacities." *Information, Communication & Society* (2018): 2.

“experimental system for observing the world and testing how the world responds to changes in the platform on many different scales.”<sup>50</sup> The perpetual, semi-automated, and recursive self-refashioning undergone by platforms finesses what it means for them to institute the epistemological conditions of possibility for our discussions of online cultural production. In perpetually refashioning themselves, they remain contemporary; in acting as a filiation for the concepts we use to think online cultural production, they fashion media theory as “contemporary”, too. This is the other side of the contemporaneity I accorded to media-theoretical practices that ignore the role that media play in constituting the conditions by which they’re taken as objects of theory: online and after platforms, to be contemporary is to risk reproducing the epistemologies produced by media themselves—and to ignore the capriciousness that characterises their organising opacities, allowing them to become blind spots that organise the problems that shape our concepts.

Online and after the platform, then, media have to be thought *in circulation*. I mean this in a more profound sense than I’ve perhaps intimated until this point. This chapter has demonstrated how circulation acts as an organising concept in media theory by demonstrating the constitutive role it plays in our conceptualisations of media themselves. I want to extend this argument further. Circulation isn’t a secondary quality of media. Circulation is, arguably, fundamental to media theory itself. Media’s concrete circulations validate this statement in the present, but I want to extend it beyond our historical-epistemological juncture. The concrete circulations of media—abetted, in our postdigital media situation, by platforms—inform our conceptualisations of media. But media-historical epistemology teaches us that this problem is not new. It’s an iteration of a recurrent problem: the problem of how we might think media in excess of themselves. We not only need to reconstruct the concept of circulation; we need to reconstruct it differently and anew.

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<sup>50</sup> Mackenzie. “From API to AI.” 15.



The work analysed above provides a clue as to how this reconstruction might proceed. Each process—political-economic; infrastructural; linguistic; cultural—attempted to provide a means of accounting for how it is that media circulate. Though each example ended up deferring the problem of how we might think media in excess of themselves, they nevertheless play an indicative role. They identify those aspects of media that can't be encompassed by the media concept; or, they identify moments in which media exceed themselves, but in which circulation seems to provide the conceptual means for escaping the theoretical impasse that media produce. These examples indicate what circulation is invoked to think. So, they indicate what we need to focus on in order to reconstruct this concept. The next two chapters will extend the analyses presented here by engaging with two of circulation's recurrent, key filiations. They will investigate their continuing influence on media theory by probing their governing theoretical frameworks, the historical contexts they emerge from, and the influence that the objects they original took continue to exercise over their contemporary usages. Separately, each filiation operates in markedly different ways. But treated as aspects of a recurrent problem, they help us to identify how else we invoke circulation to think media in excess of themselves—and why these invocations fall short.

## 5. OF BODIES, OF BLOOD

### 5.0 DOING THEORY

A key component of what I'm calling media-historical epistemology is its concept of the concept. The method I've derived from this framework presents concepts as a key site of knowledge production. So far, we've used it to apprehend concepts as determinate, historicisable things and to treat theory as a concrete practice that can be studied. Through circulation, this thesis's theoretical propositions revolve around the concept. Yet whilst concepts are essential components of theory, it's unusual to accord them such a central role in theoretical practice.

Contemporary theoretical practice favours the theoretical framework. In the wake of the high theory moment—and<sup>1</sup> its poststructuralist epistemologies, which were united in their variance by the privilege they accorded to language—we've<sup>2</sup> seen the flowering of a number of distinct theoretical frameworks across the humanities and social sciences. In lieu of language, these frameworks privilege alternate categories: materiality, cognition, the posthuman, speculation, objects, affect, and so on.<sup>3</sup> But whilst the epistemological content of our theoretical frameworks might have changed, our theoretical practices have remained more or less the same. To conceptualise the objects of our theoretical practices differently, we tend to change the theoretical frameworks that govern them: if one doesn't offer

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<sup>1</sup> Jane Elliott and Derek Attridge. "Introduction: Theory's Nine Lives," In *Theory After 'Theory'*, edited by Jane Elliott, and Derek Attridge London and New York: Routledge, 2011. 1–16.

<sup>2</sup> For accounts of this shift from theoretical frameworks emphasising language to those emphasising other categories, see: Ian James. *The New French Philosophy*. London: Polity, 2012; Richard Grusin. "Introduction," In *The Nonhuman Turn*, edited by Richard Grusin, Minneapolis: University of Minnesota Press, 2015. vii–xxix.

<sup>3</sup> See, respectively: Diana Coole and Samantha Frost, eds. *New Materialisms: Ontology, Agency, and Politics* Durham, N.C.: Duke University Press, 2010; N. Katherine Hayles. "The Cognitive Nonconscious: Enlarging the Mind of the Humanities." *Critical Inquiry* 42 (2016): 783–808; Stefan Herbrechter. *Posthumanism: A Critical Analysis*. London: Bloomsbury, 2013; Levi Bryant, Nick Srnicek, and Graham Harman, eds. *The Speculative Turn: Continental Materialism and Realism* Melbourne: re. Press, 2011; Melissa Gregg and Gregory J. Siegworth, eds. *The Affect Theory Reader* Durham: Duke University Press, 2010.

enough purchase on the present, it can be substituted for another—and a given concept will be reformulated accordingly. This theoretical conjuncture reflects the contemporary prominence accorded to “ontology.” Contemporary theory’s less likely to traffic in the proper names of—mostly dead—French or German philosophers, as it did at capital-tee theory’s height, than basic categories<sup>4</sup>: matter, the real, the object, the thing, the relation, etcetera. Theoretical practice typically treats concepts as hooks on which to hang basic ontological categories that, as their basic status suggests, are granted explanatory purchase over a wide range of things.

This traffic in theoretical frameworks and basic categories contribute to the “contemporary” nature of contemporary theoretical practice, to recall Peter Osborne’s term. The alternative I’ve adopted in this thesis uses the concept as the fulcrum for a way of doing theory, eschewing “contemporaneity” in favour of a concrete mode of epistemology. It changes the relative status of the theoretical framework. If we posit the concept at the point of contact between theory, context, and object, theoretical frameworks aren’t components that can be switched out or discarded, as though to purify concepts of that which subordinates and, so, determines them. Concepts can’t be treated as hooks on which to hang basic ontological categories. This approach treats concepts as subordinate to is their attendant problems. If their problems remain the same, what changes over time is not concepts, but the theoretical frameworks that concepts *take*. That is, what changes over time are theoretical frameworks themselves. Positing the concept as the focus of our analysis recapitulates the theoretical framework *as a filiation*.

Outside of media theory, circulation is particularly polyvalent: it is overdetermined as a general concept. It operates in numerous of disciplinary domains across the humanities and social sciences, and beyond; it’s associated

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<sup>4</sup> Peter Osborne makes this point in “Philosophy After Theory.” See also Bryant, Harman, and Srnicek’s proclamation that, post-“theory”, “[n]o dominant hero now strides along the beach, as the phase of subservient commentary on the history of philosophy seems to have ended.” “Towards a Speculative Philosophy,” In *The Speculative Turn*. 1.

with a broad range of theoretical frameworks, contexts, and objects; and, crucially, it articulates a number of different complementary problems. Because circulation is *underdetermined* as a concept of media, its uses in media-theoretical practice are often informed by filiations drawn from these other disciplinary domains, recapitulating epistemologies that originate elsewhere—from theoretical frameworks. In this chapter and the one to follow, I want to focus on the influence that two key theoretical frameworks continue to exercise over our media-theoretical usages of circulation. These filiations broadly map on to vitalist or biological and materialist theoretical frameworks, respectively: what I want to call the anatomical filiation in this chapter and the infrastructural filiation in the next. As with the platform, the influence exercised by these filiations doesn't need to be overt. What I want to establish is how these filiations carry the influence of particular theoretical frameworks into the present, shaping what it means for media to be in circulation—what it means to think media in excess of themselves—today.

This chapter focuses on what might seem to be an incongruous theoretical lineage: anatomy. Its argument is that we can trace our present-day concepts of circuits and networks to the discovery of the circulation of blood by the seventeenth century anatomist William Harvey and the persistent influence of anatomical epistemologies. This claim might imply a form of epistemological determinacy. But what I want to establish is how the theoretical framework that once shaped these concepts persists in some of their epistemological mechanisms. We can then trace this particular epistemology from early anatomical practices, through concepts of the body politic, money's currency, and the circulation of print media, to concepts—like the network, viral media, or the internet meme itself—in use in media theory today. This influence operates by tying circulation to a particular epistemological claim. In early anatomy, circulation was posited as operating for the sake of the anatomical body. Using a media-historical epistemological method, I want to establish how this epistemology and the theoretical framework it's derived from continue to operate in the present, through our *underdetermined* usages of circulation. The

net effect of this persistent influence is that usages of circulation that remain filiated to the anatomical body end up subordinating media to that in which they circulate, as the blood is subordinated to the body in Harvey, inflecting media theory with a residual, epistemological form of vitalism. I want to call this circulation's tendency to *body* media.

This analysis of the anatomical filiation concerns circulation, but it also opens up on to another foundational media-theoretical concept: mediation.

Mediation accounts, in the most basic terms, for what media do. I want to use this analysis of the anatomical filiation to show that the question of how media in circulation mediate often supervenes on ontological categories: in particular, *vitality* and *materiality*. When mediation is conceived of as an ontological property of the biological or the material, it loses its specificity as a media-theoretical concept, subordinating the concept of circulation, once more, to its theoretical filiations. But this analysis also presents us with another quality of media that our reconstructed concept must address. The discovery of the circulation of the blood marks the emergence of an epistemology that lets us think circuits. We can think these circuits because this filiation posits a—sometimes tacit, sometimes overt—interchangeability between the vital and the mechanical. This interchangeability is problematic; but if we strip the anatomical filiation of the residual influence of the anatomical body, we can use it as epistemological material. After the anatomical filiation, as we'll see, we might ask, If media don't circulate for the sake of a body or its epistemological substitute, what do they circulate for? This question concerns how we think circulation both as mediatic process and in its capacity to institute circuits—or apprehensible, concrete circulations—that seem to have the capacity to overwhelm and envelop us. Later chapters will use this insight as the basis for a proposition about circulation: that it can be used to articulate plural media's capacity to generate *place*.

Media-historical epistemology might seem to introduce another risk in to theoretical practice: if epistemology is subject to a recursive relation to its

concrete objects, is it not reduced *to* these objects? We can undo this recursion if we treat theoretical frameworks as one kind of epistemological material amongst others. The media-historical epistemological approach doesn't circumscribe our capacity to posit new theoretical frameworks, or to use alternate theoretical frameworks to think our concepts differently. By insisting that media constitute the conditions in which they can be taken as objects of theorisation, rather, it insists that the practice of positing theories or concepts is also concrete and conditioned. It strips away theoretical practices' contemporaneity, transforming the reconceptualisation of concepts into concrete-epistemological acts of reconstruction that posit concepts anew by filiating them, differently. Media-historical epistemology helps us to find operative components of prevailing media-theoretical epistemologies *in* and *at work through* the concrete objects, processes, and relations in which the circulation of media is enacted. Concepts can only be filiated to different theoretical frameworks if we understand how their extant filiations inform our theoretical practices. Moreover, new theoretical filiations can only be introduced to concepts if they're reconciled with its contexts and objects. In practice, this recursion unspools into a concept that's either adequate to its problem—or, it doesn't. Media-historical epistemology renders the recursive relation between concepts and their concrete conditions itself into a concrete condition of theoretical practice.

## 5.1 THE ANATOMICAL FILIATION

In a short section on the concept of circulation in his wide-ranging study of the development of the concept of communication, Armand Mattelart notes that,

“...we owe to the discovery of blood circulation the paradigm of bodily mechanics, with its law of functional physiological necessity from which discourses on communication and society would never cease to draw metaphors.”<sup>5</sup>

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<sup>5</sup> Armand Mattelart. *The Invention of Communication*. Minneapolis: University of Minnesota Press, 1996. 17.

For Matterlart, anatomical practice offers up an analogy—between body and what media circulates within—that consistently informs the language we use to discuss circulation. As I want to argue, the circulation of the blood operates as more than an analogy. It institutes a filiation that continues to inform media-theoretical practice by patterning what circulates after this filiation’s object: the body. We can trace what I’m calling the anatomical filiation to 1628, when the English anatomist and physician, William Harvey, published a short book detailing the circulation of the blood through the human body.<sup>6</sup> The under-appreciated significance of Harvey’s discovery is too broad and too complex to detail in this short treatment.<sup>7</sup> To outline the persistent influence of this filiation, I will briefly reconstruct the intellectual context for its emergence out of anatomical practices.

From roughly the third century up until the turn of the eighteenth, our understanding of human anatomy in the west was heavily informed by the writings of the Greek physician and philosopher, Galen.<sup>8</sup> The historical peculiarities of Galen’s long influence are complex; in part, they can be explained by the fact that his writings survived—and then, only partially—when the documented or inferred writings of other physicians and anatomists did not.<sup>9</sup> What’s crucial to note is that Galen developed his insights into human physiognomy by performing dissections on human bodies and vivisections, or live experiments, on animals, whilst new anatomical experiments after Galen were hampered by Christian prohibitions on dissecting—or, defiling—the bodies

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<sup>6</sup> William Harvey. *On the Motion of the Heart and Blood in Animals: A New Edition of William Harvey’s Exercitatio Anatomica De Motu Cordis Et Sanguinis in Animalibus*. Translated by Robert Willis. Eugene, OR: Resource Publications, 2016.

<sup>7</sup> For a popular-scientific overview that’s accessible, if over-dramatised, see: Thomas Wright. *Circulation: William Harvey’s Revolutionary Idea*. London: Chatto & Windus, 2012.

<sup>8</sup> The historical peculiarities of Galen’s long influence are too detailed to go in to here. They include the Christian church’s prohibition on dissecting live bodies and the fact that his writings survived — and only partially — when the presumed writings of other physicians and anatomists did not. See: Andrew Cunningham. *The Anatomical Renaissance: The Resurrection of the Anatomical Projects of the Ancients*. Aldershot: Scholar Press, 1997. esp. 25-32

For an influential study of Harvey’s context and precursors, see: Walter Pagel. *New Light on William Harvey*. Basel: S. Karger, 1976.

<sup>9</sup> Nancy G. Siraisi. *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice*. Chicago: University of Chicago Press, 2009. 3-5.

of the dead.<sup>10</sup> In 1315, Mondino de Liuzzi—or Mundinus—inaugurated the return of the practice in the western world by performing the first church-sanctioned public dissection of a human body in Bologna.<sup>11</sup> These dissections did little to advance anatomical knowledge; the dissections themselves would be performed by a surgeon, the body's features would be indicated by an "ostensor", whilst a professor—Mundinus himself—would narrate them from a chair situated above, reading from a text containing ancient, often incorrect material.<sup>12</sup> The field of modern anatomy properly emerged with the development of anatomical practices of dissection by the Flemish anatomist, Andries van Wesel—or Vesalius—at the University of Padua in the sixteenth century.<sup>13</sup> Vesalius published a seminal text in 1543, *De Humani Corporis Fabrica*, which successfully made what Benjamin Goldberg describes as a "powerful exhortation" for physicians to "begin performing actual anatomies."<sup>14</sup> Harvey's own anatomical practices emerged in this context: under Galen's continuing influence; after Vesalius's call for physicians to return to dissection; and at a moment when the human body was still being assembled, as an abstraction that could generate further knowledge, by anatomy.

Harvey was moved to conduct the dissections and vivisections that would lead to the discovery of circulation by first becoming interested in the heart. The heart was the one key organ that his teacher at the university at Padua, Girolamo Fabrizi d'Acquapendente—or Fabricius, who was himself a student of Vesalius—failed to address in his expansive work of anatomy, *A Theatre of the Whole Animal Fabric*.<sup>15</sup> Before Harvey, physicians and anatomists didn't conceive of the blood as a substance that circulated through the body. In the Galenic conception of the body, the veins and arteries were believed to

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<sup>10</sup> Cunningham. *The Anatomical Renaissance*. 42-3.

<sup>11</sup> Luke Wilson. "William Harvey's Prelectiones: The Performance of the Body in the Renaissance Theater of Anatomy." *Representations* 17 (1987): 63-4. Wilson also notes that this was likely to have been performed on the body of a female criminal.

<sup>12</sup> Cunningham. *The Anatomical Renaissance*. 44.

<sup>13</sup> Siraisi. *Medieval and Early Renaissance Medicine*. 191-3.

<sup>14</sup> Benjamin Goldberg. "William Harvey on Anatomy and Experience." *Perspectives on Science* 24, no. 3 (2016): 307.

<sup>15</sup> Harvey, *On the Motion*, 18; Cunningham. *The Anatomical Renaissance*. 183.



contain two substances: both blood and air, which were conceived of as carriers of the “vital spirits” and “animal spirits”, respectively.<sup>16</sup> Harvey’s first innovation was to demonstrate that the arteries and veins were filled by “[b]lood and blood alone.”<sup>17</sup> His second was to overturn the contemporaneous misconception that the heart’s diastole—or the moment it becomes distended—corresponds to it being empty, whilst its systole—the moment it contracts—corresponds to it being full. Some anatomists thought the heart’s contraction corresponded to it being full of blood, because it could be felt beating against the breast. He argued, rather, that the diastole corresponds to the moment that the heart is full of blood, and its contraction, or systole, corresponds to the moment that it contracts and forces blood through the left ventricle.<sup>18</sup> His most crucial innovation was to realise, after observing the motions of the heart and arteries, that the contemporaneous belief—that blood was produced by the body and expended as it was pumped outward—had to be false.

At the time, anatomists believed that the blood was replenished each time the body ingested food.<sup>19</sup> In a crucial passage, Harvey argued that this couldn’t be the case, “unless the blood somehow finds its way from the arteries into the veins and returns to the right side of the heart.”<sup>20</sup> In response, he notes, “I began to think whether there might not be a sort of motion in a circle.”<sup>21</sup> This led him to describe its path:

“...the blood, forced by the action of the left ventricle into the arteries, was distributed to the whole body and its many parts, just as it is sent through the lungs: impelled by the right ventricle into the pulmonary artery, it then passes through the veins and along the

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<sup>16</sup> Harvey, *On the Motion*, .

<sup>17</sup> Harvey, *On the Motion*, 9.

<sup>18</sup> Harvey, *On the Motion*, 20-21.

<sup>19</sup> For context, see: Wright. *William Harvey*. 32; Pagel. *New Light*. 3.

<sup>20</sup> Harvey, *On the Motion*, 48.

<sup>21</sup> Harvey, *On the Motion*, 48.

vena cava, and back to the left ventricle in the way already indicated."<sup>22</sup>

This passage outlines Harvey's discovery of the circulation of the blood. To explicate both Harvey's experiments themselves and their media-historical epistemological significance for media theory, however, it's crucial to note that his method doesn't resemble what we'd think of as modern scientific practice. Its practitioners described themselves as "natural philosophers", and this practice was guided as much by the eponymous practices of philosophy as it was by newly-developed anatomical techniques.

In following Vesalius's call to perform anatomies, Harvey performed "ocular experiments" on bodies by observing the structures and functions of the dead bodies of humans and the live bodies of animals.<sup>23</sup> But he did so in line with the Aristotelian project, inherited from Fabricius, of explicating the "final cause"—the purpose—of the organ under investigation.<sup>24</sup> After Fabricius, this approach would begin with an *historia*, or a description of the structure of an organ gleaned from conducting multiple anatomies, which would provide material for a process of inductive inference whose aim was to discover an organ's final cause:<sup>25</sup> neither just what it does or what its use is, but to answer the question—"For the sake of what?"—within the body considered as a whole.<sup>26</sup> However, Harvey never established a satisfactory answer to this question. The closest he comes to doing so is when he describes the action of circulation as renewing the blood's "natural heat", turning it into a "kind of

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<sup>22</sup> Harvey, *On the Motion*, 48.

<sup>23</sup> Marjorie Grene and David Depew. *The Philosophy of Biology: An Episodic History*. Cambridge: Cambridge University Press, 2004. 58.

<sup>24</sup> There's some disagreement in the literature on this point. Roger French, for instance, argues that Harvey posits a novel epistemology based on evidence observed with the senses. Goldberg argues, contra French, that Harvey should be understood as an Aristotelian philosopher who employed sensory techniques. Cunningham, meanwhile, places Harvey in an Aristotelian tradition after Fabricius. I'm inclined to agree with Goldberg and Cunningham's interpretation.

See: French. *William Harvey's Natural Philosophy*. Cambridge: Cambridge University Press, 2006; Goldberg. "William Harvey." 319; Cunningham. *The Anatomical Renaissance*. 183.

<sup>25</sup> Goldberg. "William Harvey." 314-6.

<sup>26</sup> Cunningham. *The Anatomical Renaissance*. 40.

treasury of life."<sup>27</sup> The circulation of the blood can only be understood through the action of "its sovereign, the heart", which Harvey posits as "the foundation of life and the source of all action."<sup>28</sup> One lesson we might draw from Harvey's Aristotelianism—one that, seemingly, runs counter to the project of this analysis—is that concepts developed through historically-distinct epistemological frameworks, like his form of natural philosophy, can't be transposed into contemporary epistemological terms. Harvey's practice contributed to modern science, but not in the epistemological terms that modern science itself establishes. But it's precisely this point that's salient for our media-historical epistemological purposes.

Harvey helps us to think circuits. When we think circulation in the way that Harvey establishes—or, by tying what circulates to that which it circulates for the sake of—we replicate the Aristotelian, vitalist epistemology that informed his particular anatomical practice. That is, we replicate an epistemology that remains filiated to an anatomical body. It's *this* particular epistemology that I want to trace through to contemporary media theory. The body animated by the circulation of the blood acts as one of the key epistemological templates for the circuits articulated by circulating media. Harvey's natural philosophy is also a forerunner to what we'd now refer to as vitalism. Though perhaps not aware of the concept's media-historical epistemological filiations, some media theorists explicitly use circulation to accord media in circulation with a vital, animating force. After Harvey, this epistemological constellation constitutes one of circulation's major filiations; and, it begins with an anatomical object, the body.

To trace this filiation and its effects, though, we have to establish how it's able to jump from taking bodies as its objects to taking media—and, more generally, technology—as its objects. Harvey made this discovery on the cusp of the emergence of an antagonistic epistemological approach to anatomy:

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<sup>27</sup> Harvey, *On the Motion*, 49.

<sup>28</sup> Harvey, *On the Motion*, 49.

mechanism. For mechanists, anatomy isn't guided by a vital purpose. It's best explained by analogy to machines. Ironically, the concept of circulation gained wider acceptance in mechanistic conceptualisations of biology, beginning with the work of Harvey's contemporary and interlocutor, René Descartes.

Contemporaneous debates between vitalists and mechanists in the wake of Harvey's discovery of circulation established an epistemological antagonism that dissolves, over time, into a persistent epistemological interchangeability between concepts of the body and concepts of technology that continues to influence contemporary media theory. As I want to argue, this interchangeability comes with an often-occluded epistemological cost.

## 5.2 HARVEY IN CIRCULATION

Beyond its scientific significance, the discovery of circulation has epistemological implications for our conception of the body. As Andrew Cunningham notes, the discoveries enabled by the practice of *anatomia*, or cutting up in to parts, gradually allowed the body to "persist in existence as a whole."<sup>29</sup> Cunningham argues that each anatomical study constitutes a "project" that makes "different bodies visible."<sup>30</sup> In his cultural study of torture and anatomy, Jonathan Sawday articulates this point in terms that more clearly posit anatomy as a concrete-epistemological practice: "as the physical body is fragmented", he argues, "so the body of understanding is held to be shaped and formed."<sup>31</sup> Each of these analyses of anatomy and Harvey's discovery treat the body as what Rheinberger calls an "epistemic thing"; or an object whose concept emerges in and through the material practices that make it apprehensible. Beyond anatomy, the decomposition of the body effects the recomposition of epistemology. Sawday argues that it is through anatomy that we discovered a sense of our own physiological interiority—and, more

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<sup>29</sup> Cunningham. *The Anatomical Renaissance*. x.

<sup>30</sup> Cunningham. *The Anatomical Renaissance*. 7-8.

<sup>31</sup> Jonathan Sawday. *The Body Emblazoned. Dissection and the Human Body in Renaissance Culture*. London: Routledge, 1995. 2.

generally, of interiority as a property of other things and other systems.<sup>32</sup> Canguilhem articulates the general epistemological import of Harvey's discovery more forcefully again. With it, he claims, "the idea of a closed circuit is born."<sup>33</sup>

After Harvey, circulation entails a circuit, that for the sake of which circulation is. For anatomy, this circuit is the vital, active body. Canguilhem notes that Harvey's vital concept of the circulation of the blood displaced an already-extant concept that had been "imported into biology from the domain of human technique", which conceived of the blood in analogy to agricultural "irrigation."<sup>34</sup> Circulation had the benefit of allowing each of the anatomical processes Harvey observed to "cohere", as Canguilhem puts it,<sup>35</sup> in an organism driven by a purpose—to live. But just as circulation displaced one technical concept in aid of thinking it through its purpose, it quickly came to be absorbed into an altogether different theoretical framework: a mechanistic epistemology that posited the body as machine. Ironically, the general uptake of Harvey's concept of the circulation of the blood was made possible by the mechanist concept of the body developed by René Descartes in *A Discourse on Method*, published 9 years later.<sup>36</sup> For Descartes, circulation becomes a mechanical "driving belt" and a system of "regulatory feedback" that is "explicable on a purely physical level."<sup>37</sup> After Descartes, Harvey's circulation of the blood was understood not in Aristotelian terms—or for the sake of the organism as a whole—but in mechanistic terms, as machine. In the context of the philosophy of biology, Grene and Depew note that the filtering of circulation through mechanism is indicative of a "paradox" in which,

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<sup>32</sup> Sawday. *The Body Emblazoned*. 6.

<sup>33</sup> Canguilhem, "Experimentation in Animal Biology," In *Knowledge of Life*, 3–22. Fordham University Press, 2008. 8.

<sup>34</sup> Canguilhem. "Experimentation in Animal Biology." 8–9.

<sup>35</sup> Canguilhem. "Experimentation in Animal Biology." 8.

<sup>36</sup> Thomas Fuchs. *The Mechanization of the Heart: Harvey and Descartes*. Rochester, NY: University Rochester Press, 2001. 143.

<sup>37</sup> Fuchs. *The Mechanization of the Heart*. 13.

...the reduction of animals to machines clearly facilitated the acceptance of a doctrine that had been first put forward in what was philosophically a much more conservative, fundamentally Aristotelian spirit.<sup>38</sup>

This distinction between antagonistic epistemologies is a recurrent theme in the philosophy of biology, as Grene and Depew map in their work.<sup>39</sup> What's crucial to our understanding of the anatomical filiation is that its uptake beyond the bounds of this historical epistemological—vital or mechanical—body converts what's originally an antagonism into an interchangeability. As we'll see, it also, in some cases, retains its Aristotelian epistemology, construing circulation as a process that is for the sake of something else: a body, *a circuit*.

Canguilhem argues that when Descartes draws upon machines to provide the epistemic material for his conceptions, he becomes "a tributary, intellectually speaking, of the technical forms of his age."<sup>40</sup> For Canguilhem himself, this interplay leads him to conclude that machines can be described "neither without purpose nor without man."<sup>41</sup> That is, it underwrites a vitalism that "inscribe[s] the mechanical within the organic" as a phenomenon that can only be explained, and conceptualised, through human culture.<sup>42</sup> For all that I've drawn upon Canguilhem in this thesis, I don't want to ratify this claim itself or its attendant vitalist ontology. Instead, what we see in his explication of circulation is the emergence of a filiation that allows vital processes to be explicated in mechanist terms, and vice versa. We see this at work in Dalia Judovitz's more recent commentary on Harvey's discovery. Echoing Sawday and Canguilhem, Judovitz argues that the discovery of the circulation of the blood produced the epistemological justification for conceiving of the body as a "system" that, in turn, "defines the self-enclosure of the body."<sup>43</sup> This

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<sup>38</sup> Grene and Depew. *The Philosophy of Biology*. 63.

<sup>39</sup> Grene and Depew. *The Philosophy of Biology*.

<sup>40</sup> Canguilhem. "Machine and Organism," In *Knowledge of Life*. Fordham University Press, 2008. 80.

<sup>41</sup> Canguilhem. "Machine and Organism." 86.

<sup>42</sup> Canguilhem. "Machine and Organism." 96.

<sup>43</sup> Dalia Judovitz. *The Culture of the Body: Genealogies of Modernity*. Ann Arbor: The University of Michigan Press, 2001. 69.

discovery has a double implication: it makes the body a thing that can be apprehended apart from the world; but, it also “autonomises” the “logic” of the body itself, “enabl[ing] its schematic and figurative representation as a virtual ground-plan.”<sup>44</sup> This commentary is, ostensibly, presented in aid of a critique of Descartes’ mechanistic philosophy; Judovitz credits circulation for contributing to a “Cartesian model for the human body.”<sup>45</sup> Yet the terms in which it’s conducted traffic heavily in the interchangeability of the vital and mechanical that Descartes made possible. When she describes the circulation of the blood as having a “network character”,<sup>46</sup> her critique unwittingly reproduces Descartes’ mechanistic gesture of making the body a “tributary” for the technology of her—*our*—age. This gesture is exemplary. In returning to Harvey’s anatomical practices, Judovitz retains the interchangeability between the technical and the biological that Descartes set in train. In the process, this gesture also reproduces this filiation’s Aristotelian purpose: circulation defines the body’s interiority because it construes the body as a “system” for the sake of which it is.

As the concept of circulation develops, the anatomical body that it once implied falls away. But the influence this anatomical body exercises over circulation still persists in the form of a filiation. To substantiate this claim, I want to briefly demonstrate how the anatomical concept of circulation travelled from Harvey’s practices of dissection and vivisection to media theory, via conceptions of the circulation of money, people, goods and, finally, print media. When it gets taken up in contemporary media theory, this filiation patterns media’s concrete circulations after Harvey’s anatomical circulations—not by treating media’s circuits as bodies, but by reproducing the interchangeability of the technical and biological and by articulating circulation within an Aristotelian epistemology. After Harvey, one version of circulation construes it as a motive force that animates the body—rather, the circuit—for the sake of which it is.

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<sup>44</sup> Judovitz. *The Culture of the Body*. 70.

<sup>45</sup> Judovitz. *The Culture of the Body*. 76.

### 5.3 BLOOD MONEY CITY NEWS

If one of Harvey's contemporaries, Descartes, is responsible for making the circulation of the blood palatable by transposing it into a mechanist philosophy, another of his contemporaries is responsible for adopting the concept from natural philosophy and applying it to another field. That other person is Thomas Hobbes, who drew on Harvey's concept of circulation to formulate his political epistemology—setting in train an epistemological journey that we can trace through to contemporary media theory.

Hobbes is best known for his political theory, but he also wrote—unsuccessfully—on anatomy.<sup>47</sup> He was both an admirer of Harvey's work and a mechanist critic of Harvey's natural philosophical epistemology.<sup>48</sup> Despite their philosophical differences, Hobbes adopted Harvey's concept of circulation in his seminal political writings on sovereignty. In his book on circulation, Harvey draws an analogy between the organising role that the heart plays in the organism and the role that the sovereign plays for the nation, describing the heart as "the sovereign" of the body.<sup>49</sup> In the dedicatory *proem* to his book, he extends this analogy to the political realm, declaiming the king as "the heart of the republic, the fountain from which all power and all grace flows."<sup>50</sup> Hobbes translates this analogy into a key epistemological component of his political theory by recasting the state as the "body politic."<sup>51</sup> Like Harvey's human body, this body politic is sustained and nourished by circulations. Only, the role of blood is played by something else: money, which Hobbes refers to as the

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<sup>46</sup> Judovitz. *The Culture of the Body*. 70.

<sup>47</sup> Robert Appelbaum. "Flowing or Pumping? The Blood of the Body Politic in Burton, Harvey, and Hobbes," In *The Cultural Politics of Blood, 1500-1900*, edited by Kimberly Anne Coles, Ralph Bauer, Zita Nunes, and Carla L. Peterson. Basingstoke: Palgrave Macmillan, 2015. 181.

<sup>48</sup> See Applebaum. "Flowing or Pumping?." 172.

<sup>49</sup> Harvey. *On the Motion of the Heart and Blood in Animals*. 49.

<sup>50</sup> Harvey. *On the Motion of the Heart and Blood in Animals*. 1.

<sup>51</sup> Thomas Hobbes. *Leviathan [Revised Student Ed.]*. Edited by Richard Tuck. Cambridge: Cambridge University Press, 1996.



"Bloud of a Commonwealth."<sup>52</sup> This translation is crucial: after Hobbes, this idea would eventually gain a much wider currency, extending beyond its relationship to a body politic to describe the movements of money, *per se*.<sup>53</sup> In a reflection on Harvey's influence on Hobbes in his early, archaeological work, Michel Foucault suggests that this analogy was able to take hold once it became "one of the fundamental categories of analysis" within a burgeoning mercantile episteme.<sup>54</sup> For our purposes, the role that the *body* plays in Hobbes is just as crucial. Leonie Ansems De Vrie and Jorg Spieker make Hobbes' debt to Harvey clear when they argue that his concept of the body politic "can be understood best by looking at the workings of the human body."<sup>55</sup> Despite his mechanism, Hobbes reproduces the Harveian anatomical filiation when he adopts Harvey's concept of circulation, because his body politic retains the role as that for the sake of which money circulates.

Hobbes' use of Harvey demonstrates quite directly how the concept of circulation and its final cause—the body—can inform the conceptualisation of an entirely other domain—here, the nation. With Hobbes, money doesn't just circulate; it circulates for the sake of a body and, in circulation, it animates that body. After Hobbes, this Harveian anatomical filiation would extend beyond the anatomical body and its body-political counterpart to other domains. The Harveian anatomical concept of circulation was also transposed to conceptions of cities. As Richard Sennett notes, Harvey's circulation directly inspired the idea—which persists today—that cities' passages were as a body's "arteries and veins", recasting urban planning as a practice of maintaining the circulation of goods and people through cities in order to maintain theirs, and cities',

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<sup>52</sup> Hobbes. *Leviathan*. 174. See also: Applebaum. "Flowing or Pumping?." 181.

<sup>53</sup> Erik Swyngedouw. "Metabolic Urbanization: The Making of Cyborg Cities," In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, edited by Nik Heynen, Maria Kaika, and Erik Swyngedouw. London: Routledge, 2006. 29.

N.B.: this chapter is an expanded version of Swyngedouw. "Circulations and Metabolisms: (Hybrid) Natures and (Cyborg) Cities." *Science as culture* 15, no. 2 (2006): 105-121.

<sup>54</sup> Michel Foucault. *The Order of Things: An Archaeology of the Human Sciences*. London and New York: Routledge, 2002. 194.

<sup>55</sup> Leonie Ansems De Vrie, and Jorg Spieker. "Hobbes, War, Movement." *Global Society* 23, no. 4 (2009): 465

health.<sup>56</sup> This usage recasts the city as a body for the sake of which goods and people must circulate, constituting it as another kind of interiority. Crucially for us, Hobbes' appropriation of Harvey's concept of circulation and these broader applications cleared the epistemological ground for it to be applied to the movements of media.

Early on, circulation gets applied to media in two key ways. First, print media were said to circulate from hand to hand; later, following on from this usage, newspapers were said to have a circulation. Though these usages are commonplace in media theory, neither these usages themselves nor their media-historical epistemologies have been satisfactorily addressed in any academic studies that I'm aware of. The dictionary definition of circulation draws a line from the idea that money circulates to the idea that media circulate, ascribing this consonance to money's capacity, as "specie", to be passed from hand to hand, which was then taken up to describe how letters, notes, and later newspapers circulated.<sup>57</sup> In his brief discussion of circulation after Harvey, Erik Swyngedouw makes the connection between Harvey's concept and media when he argues that circulation "...becomes a dominant metaphor after the French Revolution: ideas, newspapers, gossip and—after 1880—traffic, air, and power "circulate"."<sup>58</sup> I want to return to "traffic, air, and power" later. For now, I want to note that circulation undergoes a denotative mutation as it passes from explaining the movement of blood to the movement of money to the movements of print media—and conversation and ideas. As with money for Hobbes, this broad adoption of circulation isn't metaphorical. My argument is that it retains an anatomical epistemological filiation to the body across these mutations, displacing Harvey's question—*For the sake of what?*—on to media, transforming circulation's motive subject from heart to

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<sup>56</sup> Richard Sennett. *Flesh and Stone: The Body and the City in Western Civilization*. New York and London: W.W. Norton & Company, 1994. 255-65.

<sup>57</sup> *Oxford English Dictionary Online*, s.v. "Circulate, v."; "Circulation, n."; "Circulatory, n.", accessed August 11, 2018, <http://www.oed.com/>.

<sup>58</sup> Swyngedouw, "Metabolic Urbanization." 29

hand or from heart to mouth. This becomes evident if we trace the development of the anatomical filiation's underlying epistemology.

Despite their respective investments in Aristotelianism and mechanism and despite the different objects they take as the focus of their analysis, Ansems De Vrie and Speiker note that circulation is the "centre of life" for both Harvey and Hobbes: in the heart and in the sovereign, respectively, "circulation becomes ontological."<sup>59</sup> Tim Cresswell explains this ontology through the rubric of "mobility." Harvey's and Hobbes' conceptualisations of bodies and states—and, he adds, Galileo Galilei's studies of the motion of celestial bodies—made it possible to conceive of the world as an "infinite, restless entanglement of persistent movement."<sup>60</sup> We might characterise this ontology by describing it as processual, materialist, or vitalist. But what's noteworthy for us is that this ontology expresses an epistemology; what Cresswell refers to as a "single logic" that's able to "jump scales" and that can be adopted to think diverse objects and processes.<sup>61</sup> If we set the specificities of the imbricated philosophical terms governing this discussion aside, what we see is the emergence of an epistemology that allows circulation to be abstracted from bodies and applied to other processes. The implication of Cresswell's argument is that circulation can be sloughed of its filiation to its original object, the anatomical body. Cresswell's argument is indicative for another reason: it reproduces the assumption—glossed above—that the concept of circulation can be abstracted from its origin in anatomical practice and applied to mechanical—or technological—processes.

My media-historical epistemological argument is that this version of circulation can never fully expunge the body's reciprocal shaping influence. One version of circulation that's invoked to describe media's concrete circulations draws on this Harveian anatomical filiation to animate that for the sake of which media

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<sup>59</sup> De Vrie and Speiker. "Hobbes, War, Movement." 467.

<sup>60</sup> Tim Cresswell. *On the Move: The Politics of Mobility in the Modern West*. London: Routledge, 2006. 14.

<sup>61</sup> Cresswell. *On the Move*. 7.

circulate—media’s circuits, constituted by this invocation as an interiority. As I want to argue, the persistence of this filiation hampers our capacity to think media in excess of themselves.

#### 5.4 MEDIA’S BODIES

We can articulate the impact of the Harveian anatomical filiation on contemporary media theory by transposing it in to the language of the problem. Earlier, I argued that we invoke circulation to think media in excess of themselves. When our commonplace usages of circulation remain filiated to a Harveian anatomical epistemology, this problem is displaced by the latent problem that informs this filiation: the question of what circulation is for the sake of. This filiation invests media theory with a residual biologism. It informs the claim that print media—particularly newspapers—*have* a circulation. It informs overtly vitalist theories of media. But, it also informs a number of correlated media-theoretical concepts that shape, support, and substitute for how we think the circulation of media in practice. These concepts include the network, flow, viral media, and biopolitics, where each is cast in relation to their circuits.

After travelling from Harvey to Hobbes, or from the body to money, circulation ends up being adopted to describe the movements of newspapers. Recent media-theoretical studies of the medium of print emphasise the materiality of media’s concrete circulations. Ted Striphas’s work, for instance, combines bibliographic and book history approaches with media theory to address circulation as a set of concrete “everyday practices” that can be decomposed into constituent techniques, institutions, trades, and production processes.<sup>62</sup> Such usages of circulation correspond to the idea that books are passed from hand to hand, but they are relatively new in media studies. Circulation is much more commonly associated with print media’s—and in particular, the

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<sup>62</sup> Ted Striphas. *The Late Age of Print: Everyday Book Culture From Consumerism to Control*. New York: Columbia University Press, 2009. 12. See also: Leah Price. “From the History of a Book to a “History of the Book.”” *Representations* 108, no. 1 (2009): 120–38.

newspaper's—role as the industrial age's most dominant form of “mass media.”<sup>63</sup> Both older and more recent discussions of the newspaper's role allows us to identify the extension of circulation from money to print media as more than a semantic mutation. It also, tacitly, reproduces the Harveian anatomical filiation. The circulation of print media has long been conceived for the sake of something else: an entity that occupies the epistemological role of the body in Harvey's anatomy.

In Swyngedouw's brief genealogy of circulation, the circulatory movements of newspapers are bookended by those of “ideas” and “gossip.” The implied consonance between these material and immaterial things isn't accidental: newspapers and print media circulate as concrete media, but they also *have* a circulation. This consonance is made most clear in a seminal essay Gabriel Tarde wrote a little over a century ago, at the height of the newspaper's industrial-modern ascendancy as mass media. In this essay, Tarde argues that the newspaper “will”—the future tense is deliberate—“create an immense, abstract, and sovereign crowd, which it will name opinion.”<sup>64</sup> For Tarde, this abstract entity emerges in the newspaper's fusion of “personal opinions in to local opinions, and this into national and *world* opinion, the grandiose unification of the public mind.”<sup>65</sup> He makes the link between conversation and print media explicit when he argues that newspapers will finish “the work that conversation began.”<sup>66</sup> The consonance between ideas, gossip, and print would seem to undermine the media-historical epistemological claim that I'm positing. The theoretical framework that Tarde adopts here is clearly not natural-philosophical, nor does he discuss biological entities. The epistemological influence that I want to trace to discussions of newspapers and print media doesn't displace or overcode the overt, operative epistemologies that govern

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<sup>63</sup> A representative example of this can be found in Eric Louw's monograph-length overview: *The Media and Cultural Production*. London: Sage, 2001. 16.

<sup>64</sup> Gabriel Tarde. “Opinion and Conversation,” In *Gabriel Tarde on Communication and Social Influence: Selected Papers*, edited by Terry N. Clark. Chicago: University of Chicago Press, 2010. 318.

<sup>65</sup> Tarde. “Opinion and Conversation,” 318. Emphasis original.

<sup>66</sup> Tarde. “Opinion and Conversation,” 318. Emphasis original.

particular theoretical engagements. Rather, it informs how they think media in circulation. My argument is that Tarde institutes a cause, “opinion”, for the sake of which print—and its abstract consonants, ideas and gossip—circulates. Sloughed of the concrete anatomical body, this filiation operates by substituting the body for something else.

The effects of this occluded epistemological filiation recur in more recent media-theoretical examples. One seminal example is Benedict Anderson’s concept of “imagined communities.” This concept is premised on the idea that the “mass ceremony” of reading a daily, wide-circulation newspaper creates an “imagined world”—the nation.<sup>67</sup> Anderson argues that circulating newspapers constitute a nation; reciprocally, the circulation of newspapers is defined by the nation, that for the sake of which they are. Similarly, David Crowley and Paul Heyer argue that the circulation of “books, journals, and especially forms of news” allows what they describe as an “information society” to emerge by the end of the eighteenth century.<sup>68</sup> In his recent study of the medium of paper, Luthar Müller articulates the persistent influence of the anatomical filiation on our conceptions of the circulation of newspapers when he notes that the “circulation” of the newspaper allowed “newsprint” to be “fed to the social organism on a daily basis.”<sup>69</sup> This articulation exceeds analogy and it helps us to see how the anatomical filiation tacitly operates in Anderson and Crowley and Heyer. As with Tarde, these uses of circulation are patterned by a filiation that recurs in and through their use of this term. Circulation entails a body; or, if not a body, an *interiority*: a state, a nation, a mass, a city—a *circuit*.

After Harvey, the circulations of blood, money, people, goods, and, eventually, print could now be conceived that for the sake of which they circulate. Yet what I’m presenting here is not a genealogy of Harvey’s natural philosophical

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<sup>67</sup> Benedict Anderson. *Imagined Communities: Reflections on the Origin and Spread of Nationalism [Revised Edition]*. London: Verso Books, 2006. 35.

<sup>68</sup> David Crowley and Paul Heyer, eds. *Communication in History: Technology, Culture, Society*. London: Routledge, 2015. 66.

<sup>69</sup> Lothar Müller. *White Magic: The Age of Paper*. Translated by Jessica Spengler. Cambridge: Polity, 2014. 199.

epistemology. Instead, I'm presenting an analysis of the ways in which a particular filiation can inflect the conceptual work that circulation does. These examples of media-theoretical discussions of the circulation of print don't reproduce Harvey's epistemologies. They don't even posit circulation as a coherent concept, instead treating it as a commonplace. The media-historical epistemological work I've presented has allowed us to identify this filiation and to outline its effects. If we recall that this filiation is a determinate thing, and if we understand that circulation's *underdeterminacy* in media theory means that its commonplace usages can inadvertently reproduce this and other filiations, we can identify its persistent influence on how we think the circulation of online media. In some instances, this influence is overt and deliberate; in others, it's tacit or unintentional. In either case, it subsumes media in circulation to that for the sake of which they circulate—if not a body, then an epistemological substitute.

The most direct example of this influence can be found in Grant Bollmer's recent, explicitly vitalist work. Bollmer shares Cresswell's gesture of identifying Harvey's discovery of the circulation of the blood as a precursor for his own theoretical framework. But where Cresswell's organising concept is "mobility", Bollmer's is the network. In a paradigmatic passage, he succinctly translates the media-historical epistemological filiation that I outlined above into a propositional claim—that networks are as the body's circulatory systems:

"[w]ith Harvey, the management of the body's fluids no longer possesses the goals of stasis and immobility. Instead, the blood must move, flowing and circulating throughout the body. The body must move, flowing and circulating throughout the city. Capital must circulate. On each and every scale, there must be movement through the circulation of flows... Blood, people, and capital do not simply flow. They flow through the relatively closed structures of networks as they appear to describe the veins, arteries, and nerves."<sup>70</sup>

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<sup>70</sup> Grant Bollmer. *Inhuman Networks: Social Media and the Archaeology of Connection*. New York: Bloomsbury Publishing USA, 2016. 40.

This passage overtly reproduces the anatomical filiation: what circulates, *must* circulate—for the sake of a body or an epistemological substitute. Its scaling analogical chains, which shift from blood and body up to capital—and, presumably, the world entire—posits the network as that for the sake of which media circulate. What’s interesting about it this passage is that by instituting a recursion between the body and its “networks” of “veins, arteries, and nerves”, it reproduces the mechanist substitution made by Descartes and Judovitz and critiqued by Canguilhem. This friction between the biological and the technical points to the subsidiary epistemological significance accorded to what actually circulates. Under the sign of the anatomical filiation, media’s concrete circulations animate *a* body; but, we get no closer to understanding what media are in circulation—as media.

Bollmer’s work usefully draws a line between Harvey and contemporary media-theoretical vitalisms. It also clarifies the epistemological influences at work in like studies that deploy different theoretical frameworks and organising concepts, but that nevertheless invoke circulation to do the same kind of conceptual work. This passage from Bollmer draws our attention most immediately to a cognate of circulation’s that’s just as widespread, but much more clearly determined: “flow.” This concept is widespread in contemporary media theory and across the humanities and social sciences more generally. Curiously, circulation and flow are often treated as though they’re interchangeable.<sup>71</sup> Flow is in such common usage that we might speculate that its theoretical primacy has exacerbated circulation’s *underdeterminacy*. But more so even than circulation, flow is bound up in what Thomas Sutherland calls “the metaphysics of flux”, or to variations on the theoretical framework introduced by both Cresswell and Bollmer.<sup>72</sup> As a cognate of circulation, flow’s vagueness reproduces the anatomical filiation in abstract form. This is evident in the passage from Bollmer above; here, flow construes media as circulating

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<sup>71</sup> For an example, see: Sandra Robinson. “The Vital Network: An Algorithmic Milieu of Communication and Control.” *communication +1* 5 Machine Communication (2016): 1–22.

<sup>72</sup> Thomas Sutherland. “Liquid Networks and the Metaphysics of Flux: Ontologies of Flow in an Age of Speed and Mobility.” *Theory, Culture & Society* 30, no. 5 (2013): 3–23.



for the sake of the network. In works like Manuel Castells' highly-influential study of the network society, media's flows are, similarly, constitutive of the network form that reorders global society.<sup>73</sup> Flow represents a particularly direct reproduction of an epistemological filiation that subsumes media's circulations to what they circulate in—or, to epistemological substitutes for the body.

We see a much subtler reproduction of the anatomical filiation in a concept that's in much closer proximity to the internet meme: virality. As a quality, virality is much more easily abstracted from media's concrete circulations, as we can see in the work of Anna Munster. Munster's discussion of viral videos draws on a multifaceted theoretical framework informed by Deleuze, Tarde and others to try to compass what she describes as a "not quite quantifiable" quality that's "generated when [viral] videos are uploaded and then circulate through networks."<sup>74</sup> What's interesting about this treatment is the tacit role circulation plays in explaining how this quality can come to be. At times, Munster describes this quality as one of a number of "vitalities" on which "networks parasitically feed" and which networks must "sustain and nurture."<sup>75</sup> At other times, she draws on Tarde to describe it as "a plastic, dynamic, and sticky communicability, a relational force...in which process, movement, and circulation take precedence."<sup>76</sup> Virality, vitality, communicability, and force stand in as cognate epistemological substitutes for a body; or, that for the sake of which viral circulations are. By contrast, Sampson's discussion of virality—arguably the other major point of reference for this concept in media theory—doesn't reproduce this filiation because it adopts in an alternate—but nevertheless heterodoxly-vitalist—theoretical framework. Likewise drawing on Tarde, Sampson's characterisation of the intra-bodily space in which virality operates as a "continuous, localized, and indirect epidemiological space where

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<sup>73</sup> Manuel Castells. *The Rise of the Network Society*. Hoboken, N.J.: John Wiley & Sons, 2011.

<sup>74</sup> Anna Munster. *An Aesthesis of Networks: Conjunctive Experience in Art and Technology*. Cambridge, Mass.: MIT Press, 2013. 103.

<sup>75</sup> Munster. *An Aesthesis of Networks*. 106.

<sup>76</sup> Munster. *An Aesthesis of Networks*. 125.

social inventions are always in passage, spreading out, contaminating, and varying in size”<sup>77</sup> explicitly critiques the concept of a “social body”, conceiving of media’s propagation using alternate epidemiological epistemology. Neither Munster’s nor Sampson’s treatments of virality invoke bodies; but in invoking circulation to describe media’s movements, they demonstrate media-theoretical attempts to *body* media. In Munster, this attempt reproduces the Harveian anatomical filiation at different scales and different levels of abstraction. In Sampson, this “body” is constituted by the epidemiological space constituted by social relations themselves.

The final example I want to analyse is Tiziana Terranova’s work. Terranova draws on Foucault’s later work on biopolitics to recast social networking sites as architectures for the control of circulations. Biopolitics is most often associated with a collection of lectures entitled *The Birth of Biopolitics*.<sup>78</sup> In *Security, Territory, Population*, the collection that precedes it, Foucault begins to articulate his theory of governance via the control of circulations. Foucault uses circulation “in the very broad sense” to encompass the “movement, exchange, and contact” and the “dispersion” and “distribution”<sup>79</sup> of people, goods, and things through territories. The emergence of techniques of “allowing circulations to take place” whilst nevertheless “controlling them” marks a crucial shift from governing territories to governing populations by influencing concerns like health, labour, or consumption; or, from paradigms of “safety” to “security.”<sup>80</sup> For us, what’s crucial to note is that in Foucault’s discussions, distinct circulations—relating to blood, or health; money, or goods; people, or states; and, finally, the spaces they occupy, or cities—converge. In a chapter on social media, Terranova explicitly draws on and extends this

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<sup>77</sup> Tony D. Sampson. *Virality: Contagion Theory in the Age of Networks*. U of Minnesota Press, 2012. 21.

<sup>78</sup> Foucault. *The Birth of Biopolitics: Lectures At the Collège De France, 1978-1979*. Translated by Arnold I. Davidson and Graham Burchell. Houndsmill, Basingstoke: Palgrave Macmillan, 2008.

<sup>79</sup> Foucault. *Security, Territory, Population: Lectures At the Collège De France 1977-1978*. Translated by Graham Burchell. Houndsmill, Basingstoke: Palgrave Macmillan, 2009. 64.

<sup>80</sup> Foucault. *Security, Territory, Population*. 65.

Foucauldian concept of circulation to conceptualise social media.<sup>81</sup> For Terranova, the internet operates according to Foucault's tendency to securitise: "it integrates more and more elements that both maximize circulation and minimize, without eliminating completely, error or loss."<sup>82</sup> Social media adds another element to this tendency, what Terranova calls "the social relation."<sup>83</sup> From within Foucault's biopolitical conception of governance, social media has the role of "ensuring an overall expansive stability" in the social relation by securing "an indefinite homeostasis able to withstand and re-absorb the uncertain and aleatory event of social subjectivation."<sup>84</sup> In Foucault, the distinct, concrete circulations he discusses are arguably subsumed to a motive-force-cum-epistemological-principle, their abstract governance. Through social media, Terranova extends this principle to what she calls the social relation. In both, we find a subtle reproduction of the anatomical filiation. What can be governed through its circulations is governed as though it's a body for the sake of which distinct circulations are.

## 5.5 BODYING MEDIA

This section has explicated the development, spread, and influence of circulation's anatomical filiation in order to demonstrate the influence it exercises over contemporary media theory. What brings its seemingly-disparate examples together is that they express a media-theoretical tendency to *body* media. To substantiate this tendency, we need to distinguish between a media-historical epistemological approach to theoretical practice, which is premised on concepts, and the classificatory schemes that underscore our standard approaches to doing theory.

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<sup>81</sup> Tiziana Terranova. "Securing the Social: Foucault and Social Networks," In *Foucault and the History of Our Present*, edited by Sophie Fuggle, Yari Lanci, and Martina Tazzioli. Springer, 2015. 114.

<sup>82</sup> Terranova. "Securing the Social." 114.

<sup>83</sup> Terranova. "Securing the Social." 114.

<sup>84</sup> Terranova. "Securing the Social." 124.

Standard theoretical practice might categorise the examples analysed above according to the differences between their theoretical frameworks, as expressed by the concepts or thinkers they adopt. In the work analysed above, these concepts include the network, flow, virality, vitality, and biopolitical circulation. In media theory more broadly, they include other, prevalent concepts, like infrastructure, materiality, archeology, process, the posthuman, affect, postphenomenology, and so on. Their thinkers include Harvey, Tarde, Deleuze, Guattari, and Foucault. At one level of generality, these examples express one or both of a pair of prevalent media-theoretical tendencies: they employ theoretical frameworks to either materialise media or to link media to embodiment. At another level of generality again, we might tie these concepts, frameworks, general tendencies to the theoretical paradigms currently ascendant across the humanities and social sciences: what's been variously called new materialism, the nonhuman turn, or the speculative turn; or, a mode of theoretical practice that combines a renewed interest in realism and materialism with the license to once again include ontological speculation in theoretical practice.<sup>85</sup> Combined, we might typically categorise the examples analysed above by saying they express this broader ontological tendency in one or both of the more specific, media-theoretical tendencies to materialise or embody media—which, themselves, cross over and sometimes merge into theoretical frameworks that think materiality as vital and processual and/or that think the biological through its materiality.<sup>86</sup> What I'm identifying as the tendency to *body* media cuts across this classificatory scheme. This tendency operates through the concept—circulation—and in an epistemological register, invoking circulation to reorder media theory—and, ultimately, to reduce media to ontology.

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<sup>85</sup> Iris Van der Tuin and Rick Dolphijn. *New Materialism: Interviews & Cartographies*. Ann Arbor, Mich.: Open Humanities Press, 2012; Richard Grusin, ed. *The Nonhuman Turn* Minneapolis: University of Minnesota Press, 2015; Levi Bryant, Nick Srnicek, and Graham Harman, eds. *The Speculative Turn: Continental Materialism and Realism* Melbourne: re. Press, 2011.

<sup>86</sup> This is most clearly articulated in the work of Jane Bennett, but it also emerges out of the lineage of thinkers—"Democritus-Epicurus-Spinoza-Diderot-Deleuze"—that she claims for her own work and that recur as key influences on recent media theory. See: *Vibrant Matter: A Political Ecology of Things*. Duke: Duke University Press, 2009. xiii and *passim*.

I'm claiming that this tendency expressed by the anatomical filiation is epistemological, because it doesn't directly—or, genealogically—reproduce Harvey's natural philosophical theoretical framework. Nor does this filiation directly invoke *a* body or an anatomical practice. It operates by tacitly filiating circulation to the epistemological object of Harvey's anatomical practices: the body—or its epistemological substitute—as circumscribed by the role it plays as that for the sake of which media circulate. The examples analysed above can be corralled into this general tendency, because they take it for granted that circulation can be applied to biological and technological domains interchangeably. This residual historical-epistemological aspect of the anatomical filiation allows circulation to be elevated from the status of concrete process—for instance, *blood circulates*—to the status of a principle. This is one cause of circulation's media-theoretical *underdeterminacy*. More crucially, this gesture inhibits our capacity to think the concrete specificities of media's circulations. In lieu of thinking media *in* circulation, it invokes circulation to subsume media's circulations to *a* body, or an epistemological substitute—the network, or flows, or virality, or vitality, etcetera—for the sake of which they are posited as circulating. The media-historical epistemological approach allows us to push this claim further and to cut across the categories that standard theoretical practice imposes. When media's circulations are informed by the anatomical filiation, media—not just media in circulation, but *media themselves*—end up subordinated to, and ultimately expressed as, constituent parts of these epistemological bodies. In the examples analysed above, the clandestine influence of the anatomical filiation leads, through a series of subsumptions, to the subordination of the media concept to the categories and, finally, to the ontologies that underlie these bodies. This filiation recasts the body for the sake of which media circulate as an ontological absolute: circulating media *become* body, reduced to an expression of vital and/or processual materiality or to materialised vitality. Media themselves recede.

We can express the effects of this filiation-cum-tendency in terms of circulation's organising problem: in order to think media in excess of themselves, this filiation subsumes their excessive circulations to that which circulation is invoked to body—ontology itself. My interest in identifying this tendency lies only partly in critiquing it. The effects of the filiation that I've outlined above might seem simple, or even reductive. Yet as we've seen, the epistemological residue of the anatomical body precipitates a wide range of media-theoretical practices that draw on numerous theoretical approaches and take a variety of—overt—objects. It represents one of the major forms of conceptual work that circulation does in media theory. Identifying this tendency contributes to my two-fold aim: of reconstructing circulation; and, of using these reconstructions as epistemological resources to reconstruct the concept differently. Moreover, this tendency is noteworthy because it exercises an organising influence on media theory akin to that exercised by platforms. We've seen how invoking circulation to body media subsumes media to ontology. I want to extend this analysis to media theory's other foundational concept: mediation. As I want to argue, the task of reconstructing circulation necessitates sorting through its distinction from, and tendency to overlap with, mediation.

This tactic of taking recourse to ontology to reconceive media as process and becoming—or, in the active tense, as mediation—is made clear by Sarah Kember and Joanna Zylinska in their work on the vitality of media. Kember and Zylinska's work doesn't necessarily reproduce the filiation we've been analysing, because it's not concerned with circulation. The premise of their approach is that "media need to be perceived as...temporary "fixings" of technological and other forms of becoming";<sup>87</sup> so, they argue, it's "impossible to speak about media in isolation without considering the process of mediation that enables such "fixings."<sup>88</sup> Drawing on Henri Bergson's vitalism—tempered by Jacques Derrida's deconstructive emphasis on "cuts"—they posit both that

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<sup>87</sup> Sarah Kember and Joanna Zylinska. *Life After New Media: Mediation as a Vital Process*. Cambridge, Mass.: MIT Press, 2012. 21.

media need to be apprehended through mediation, and that mediation ought to be “seen as another term for “life”, for being-in and emerging-with the world.”<sup>89</sup> What they call “mediation”, then, is at once the process by which media are “fixed”, or become, *and* a more general, vitalist ontological principle of becoming. This work is useful, for our purposes, because it helps us to understand what’s at stake in the media-theoretical tendency to body media. The invocation of circulation serves as a means to subsume media to body. Once media is bodied, it becomes something else: an expression of mediation rendered ontological by its prevailing theoretical framework. This subsumption transforms into another principle—mediation, the process by which discrete media come to be.

This filiation doesn’t help us to think media in excess of themselves because it, arguably, doesn’t think media at all. I don’t want to end this analysis on a wholly critical note, however. For all that I’ve critiqued its subsumption of media to body, the anatomical filiation and the tendency that coheres around it identifies a crucial characteristic of media in our postdigital media situation: in circulation, they *do* constitute something like bodies or interiorities; that is, there *is* a sense in which media circulate for the sake of—something. What I’m calling the anatomical filiation has provided us with an epistemological means to identify, circumscribe, and critique the media-theoretical tendency to body media. Yet its widespread influence in media theory suggests that this characteristic is crucial to thinking media’s online circulations. My contention is that this filiation tells us something crucial about media in circulation that we need to take account of in our reconstructed concept of circulation. If we’re to use this characteristic as a component of a reconstructed concept of circulation, we need to return to media *its* missing middle. To do so, we need to make an ontological intervention.

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<sup>88</sup> Kember and Zylinska. *Life After New Media*. 21.

<sup>89</sup> Kember and Zylinska. *Life After New Media*. 21.

My argument is that we need to posit our reconstructed concept of circulation using an explicitly-technical ontology. This approach allows us to recast that for the sake of which media circulates as something other than an anatomical body—or its epistemological substitute. What media circulate for, what they are in circulation, and what they do through circulation need not be conceived of as properties of absolute ontological categories. They can be conceived of as properties of *media themselves*. To untangle this seemingly-tautological proposition, I want to draw on recent philosophies of technology and a strand of media theory that conceives of media not just as “middle”, but as “middle place”—or, as milieu. What media circulate for the sake of is not a body, or its epistemological substitute, but their own capacity to constitute an enveloping, technical milieu.

Before proceeding to this reconstruction, however, I want to engage with and analyse one more filiation. Neither the platform nor the anatomical filiation exhaust the commonplace conceptual work that circulation does for media theory. In the next chapter, I want to analyse the role that the concept of infrastructure play in our media-theoretical uses of circulation. It's arguably no longer possible to think media's circulations without making reference to the concept of infrastructure. Yet this concept also over-codes our problem, how we might think media in excess of themselves, with another: whether or how media ought to be materialised. Infrastructure institutes a filiation that persists at the level of the epistemologies that order media theory itself, but that operates through a basic category: materiality. As I want to argue, thinking media in circulation necessitates thinking *matter after media themselves*.



## 6. THE INFRASTRUCTURAL TURN

### 6.0 THE FIELD OF ITS OWN REINVENTION

According to Alexander R. Galloway, media theory is in the midst of an “infrastructural turn.”<sup>1</sup> Infrastructure is a relatively recent concept for the humanities and social sciences, having really only come to prominence over the past few decades, but it has already established itself as a key media-theoretical concept. Media theorists use it to analyse media’s large-scale effects; to draw our attention to the often-overlooked systems that support media; to highlight media’s political, material, or environmental consequences; and to formulate new conceptions of how culture is produced and distributed. Christian Sandvig goes so far as to claim that the concept of infrastructure is “the new “network””; that is, that it’s an “at times inchoate as a concept” that holds “many, sometimes inconsistent meanings for different researchers”, but that it’s nevertheless “galvanising” a new media-theoretical tendency.<sup>2</sup> Crucially for us, this concept has also exercised a major shaping influence on what we mean when we claim that media circulate.

The concept of infrastructure institutes the final filiation that I want to analyse in this series of chapters. I take Galloway’s and Sandvig’s assessments of infrastructure’s status in media theory to mean that it has established itself as a new organising concept. Media theorists use this concept to make specific infrastructures available for study. But, it’s also an agent of a broader, discipline-wide epistemological shift. Infrastructure expresses the prevalent theoretical tendency in the humanities and social sciences to adopt materialist and theoretical frameworks. More importantly, infrastructure has spurred more

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<sup>1</sup> Matviyenko, Svitlana. “On Governance, Blackboxing, Measure, Body, Affect, and Apps: A Conversation With Patricia Ticiento Clough and Alexander R. Galloway.” *Fiberculture* 25 (2015): <http://twentyfive.fibreculturejournal.org/fcj-179-on-governance-blackboxing-measure-body-affect-and-apps-a-conversation-with-patricia-ticinetto-clough-and-alexander-r-galloway/>

capacious—distributed and concrete—conceptualisations of media themselves. In its *underdeterminacy* as a media-theoretical concept, circulation has been caught up in this re-organising “turn.” It’s very difficult to discuss media’s concrete circulations without also making reference to the infrastructures that make these circulations possible. Moreover, it’s very difficult to invoke circulation without drawing on infrastructural epistemologies that help us to think media at scale. In media-theoretical analogue to concrete infrastructures, the infrastructure concept has established itself as the discipline’s putative epistemological skeleton, framing and bolstering commonplace claims that media systems are distributed—and that media circulate.

The standard theoretical approach to a tendency like the “infrastructural turn” privileges the theoretical framework as the key rubric by which we make sense of concepts—and by which we demarcate theory itself as a set of practices. As I’ve already claimed, adopting a method derived from media-historical epistemology provides us with alternate means for positing concepts. It also allows us to question the privilege we accord to the theoretical framework. In the last chapter, I argued that treating the theoretical framework as the focus of theoretical practices risks allowing concepts to reproduce epistemological influences to prior theoretical practices, in the form of filiations. In this chapter, I want to explore the higher-order epistemological consequences of this approach to theoretical practice by asking how a concept like infrastructure fits in to the epistemologies that hold media theory together, as discipline and in practice. By privileging the theoretical framework, we treat the discipline as the field of its own reinvention: theory’s contemporaneity invests new theoretical frameworks with the capacity to renew theoretical practices. The media-historical epistemological approach I’ve adopted reorders the relationship between theory and discipline. Disciplines also have a concrete history. What I want to ask is this: How does this history tacitly shape the formulation and use

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<sup>2</sup> Sandvig. “The Internet as Infrastructure,” In *The Oxford Handbook of Internet Studies*. Oxford: Oxford University Press, 2014. 89.

of concepts? What are its effects on the concept that concerns us most—circulation?

In this chapter, I want to argue that the concept of infrastructure institutes a filiation that operates at the level of the discipline itself. It's not possible to think media's circulations online without taking account of the infrastructures that scale these circulations. But it's also insufficient, because it subsumes circulation to an epistemological complex that enlists the term in an altogether different *problem*. The concept of infrastructure institutes a filiation that enlists circulation as an expression of the problem of whether or how media ought to be materialised, overwriting the problem that concerns us: how we might think media in excess of themselves. This claim isn't premised on the theoretical frameworks we use to conceptualise infrastructure; that is, it's not premised on a claim that this concept is an expression of broader materialist theoretical tendencies. The concept of infrastructure is not a materialist concept, *per se*. Many examples of this concept are explicitly posited in opposition to new and prior forms of materialism. It's underwritten by a set of theoretical frameworks that are premised on ontological categories—matter, reality, relations, and so on—that cut across disciplinary domains of knowledge. But within media theory, infrastructure can't be extricated from prior discussions about media's materiality or immateriality. This is because infrastructure belongs to an epistemological lineage of concepts that attempts to *materialise* media. Whether or not a particular concept of infrastructure is materialist, its entry into pre-existing disciplinary debates frames it, in partisan terms, around the problem of whether or how media ought to be materialised—and informs our conception of circulation. Using media-historical epistemology, what I want to demonstrate is that *disciplines institute filiations* that must be acknowledged and worked through if we're to think circulation differently.

To explicate the filiation that infrastructure institutes, I want to link it to a salutary moment in media history: the emergence of telegraphy. With telegraphy, messages no longer needed to be carried by mail coaches, railways,

ships, or people, on foot or on horseback; with telegraphy, or so the official narrative goes, media supposedly leaves its material substrate behind. Through the influence of a seminal essay on the topic by James W. Carey that seems to have found its moment in the wake of the “infrastructural turn”, the emergence of telegraphy has become a key touchstone for proponents of media-theoretical materialisms—*whilst also* acting as a representative example of a dematerialising media-theoretical epistemology.<sup>3</sup> Beyond its avowed theoretical commitments, Carey’s essay exemplifies a persistent media-theoretical-*disciplinary* epistemology that’s premised on a foundational distinction between media and its material substrate, after which media’s immateriality *or* materiality can only be thought in opposition to their correlated term. Crucially, this epistemology doesn’t inhere in the theoretical frameworks we use to theorise media. In this case, this epistemology and its resultant filiation are expressed *in practice*, as products of the collision between the concept of infrastructure and extant disciplinary epistemologies. To repurpose a concept of Gilbert Simondon’s, I want to argue that this epistemology is “hylomorphic.”<sup>4</sup> In *materialising* media, this epistemology isn’t *materialist*. Rather, it subsumes circulation to a—hylomorphic—problem: whether or how media might be materialised; which is to say, how we might use circulation to think the materiality or *immateriality* of media in opposition to the prior concepts in this chain.

This chapter will analyse this filiation with three aims in mind. First, it will establish its epistemological status in order to explicate the influence it exercises over circulation—focusing, specifically, on online media. Second, it will use this analysis to establish one final characteristic that we need to address in our reconstructed concept of circulation. If infrastructures institute a new media-theoretical epistemology that allows us to account for media’s concrete circulations at scale, a reconstructed concept of circulation must,

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<sup>3</sup> James W. Carey. “Technology and Ideology: The Case of the Telegraph,” In *Communication as Culture, Revised Edition: Essays on Media and Society*. New York and London: Routledge, 2008. 155–77.

arguably, incorporate this new epistemology in order to be able to apprehend media's concrete online circulations—and, to conceptualise media in excess of themselves. Third, I want to use this media-historical epistemological analysis of infrastructure to explicate and to critique the more general epistemological role that materiality plays in media theory. As per the discussions of media-historical epistemology in Chapter 3, what follows will mix techniques of reviewing literature with techniques of analysing theory to produce epistemological material for further conceptual work. Starting with studies of infrastructure, it will move through analyses of Carey's telegraph essay, discussions of hylomorphism, and outlines of media materialisms.

The engagements in this chapter will provide the epistemological material for a key component of the reconstructed concept of circulation I want to present in the following one. Repurposing infrastructure to reconstruct the concept of circulation necessitates asking concrete media-historical epistemological questions. How does the filiation this concept institutes inform our commonplace usages of circulation? How might we identify and, so, avoid the higher-order disciplinary epistemologies that inform our media-theoretical practices? What would it mean for infrastructure to be *for* circulation, rather than one of its—materialist—predicates? Most crucially, my claim is that we need to ask questions that are much more abstract, but that have significant effects on our concrete media-theoretical practices: What is *materiality*—as framework, concept, category—*for* media theory? What is matter *for* media? The claim I want to make on the basis of the analysis in this chapter is this: if we want to think media in circulation, we have to think matter *after* media. If we are able to posit matter *after* media, its hylomorphism can be conceived of differently. We can treat it as a product *of* media that is at once concrete and epistemological; or, as a means that media themselves institute for distinguishing and positing distinctions and, so, for mediating the reality of matter for us.

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<sup>4</sup> Gilbert Simondon. "The Genesis of the Individual," In *Incorporations*, edited by Jonathan Crary, and Stanford Kwinter. Cambridge, MA: Zone Books, 1992. 300-1.

After all, what would a materialism adequate to the circulation of media be if not a materialism that sought its own conceptualisation in media's concrete circulations?

### 6.1 AN INFRASTRUCTURE OF WHAT? SOME PRELIMINARIES

Before preceding with an analysis of the concept of infrastructure, we have to establish some media-historical epistemological preliminaries. Perhaps unsurprisingly, the primary infrastructure that concerns media theorists is the internet. This is also the primary infrastructure that concerns us. Media theorists use the concept of infrastructure to identify and apprehend those qualities of the internet—its scale, distribution, complexity, and its occluded consequences—that are otherwise belied by its everyday uses. At the same time, these very qualities make the internet a difficult object to apprehend as *an* infrastructure. The internet is not *a* thing, but many. “Internet” is shorthand for “inter-network”, referring to the internet’s status as a “network of networks”, or a network that connects a multitude of disparate, “Local Area Networks.” Media-theoretical studies that conceptualise the internet as an infrastructure reflect this complexity—and would seem to contradict my claim that infrastructure belongs to an epistemological lineage of concepts that materialise media. To pursue this analysis further, we first need to disengage the concept of infrastructure from the usual categories that we’d employ to frame and categorise its permutations: the objects it takes; the discipline it belongs to; the theoretical frameworks that govern it. Or: what I’m calling the higher-order epistemologies that we use to organise the “infrastructural turn” and the discipline of media theory itself.

Media theorists that posit the internet as an infrastructure adopt a range of approaches that stretch the concept across scales and epistemological registers. Some media theorists focus on components that better reflect what we typically mean when we use infrastructure as a commonplace term. As

Susan Leigh Star notes in a seminal early essay on infrastructure, we typically use this term to refer to any “system of substrates—railroad lines, pipes and plumbing, electrical power plants, and wires” that are “part of the background for other kinds of work.”<sup>5</sup> In this vein, some scholars treat the internet’s physical substrates as its infrastructural components, applying the concept to the undersea cables that, quite literally, substantiate the internet; or, to the data centres that store this data and facilitate massively-distributed online services.<sup>6</sup> A related approach focuses on the internet’s physical infrastructures to outline the unwanted and often-overlooked products and consequences of its infrastructures—like waste, pollution, extraction, exploitation, and the entrenchment of inequality.<sup>7</sup> For these theorists, infrastructures are in space, howsoever that might be—theoretically—parsed.

For other media theorists, the internet’s status as a “network of networks” introduces other—computational—components that can be identified as its infrastructures. Some scholars focus on protocols, or the globally-negotiated and standardised codes that govern internet-facilitated inter-networking.<sup>8</sup> Yet others treat the software and services it distributes as its infrastructures, because they constitute the interfaces we use to access the internet and because they exert a significant influence on everyday practices, spanning both online cultural production and the “grey media”—like organisational software—that enable contemporary forms of organised labour.<sup>9</sup> Some scholars identify the internet’s computational architectures as its key infrastructures. As noted

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<sup>5</sup> Susan Leigh Star. “The Ethnography of Infrastructure.” *American Behavioral Scientist* 43 (1999): 380.

<sup>6</sup> Nicole Starosielski. *The Undersea Network*. Durham: Duke University Press, 2015; Robert Sumrell and Kazys Varnelis. *Blue Monday: Stories of Absurd Realities and Natural Philosophies*. Los Angeles: Actar-D, 2007.

<sup>7</sup> See: Jennifer Gabrys. *Digital Rubbish: A Natural History of Electronics*. Ann Arbor: University of Michigan Press, 2013; Jussi Parikka. “New Materialism as Media Theory: Medianatures and Dirty Matter.” *Communication and Critical/Cultural Studies* 9, no. 1 (2012): 95–100; Sy Taffel. “Escaping Attention: Digital Media, Hardware, Materiality, and Ecological Cost.” *Culture Machine* 13 (2012): 1–28.

<sup>8</sup> Paul Dourish. “Protocols, Packets, and Proximity: The Materiality of Internet Routing,” In *Signal Traffic: Critical Studies of Media Infrastructures*, edited by Lisa Parks, and Nicole Starosielski, 183–204. Urbana: University of Illinois Press, 2015.

earlier, Jean-Christophe Plantin and his co-authors argue that platforms constitute a key contemporary infrastructure, proposing that their programmability has an iterative shaping effect on the internet's very organisation.<sup>10</sup> Others identify the computational form known as "the stack" as the internet's key infrastructure. The stack is a model for the inter-related hierarchy of layers that govern inter-networked communication, offering a heuristic for the movement of data through its components.<sup>11</sup> But it's also realised by the protocols and the programmes that enact both the internet itself and software more generally.<sup>12</sup> By articulating inter-networking, these theorists argue, the stack articulates the internet itself. In his recent work, Benjamin H. Bratton adopts the stack as a concept that expresses the internet's facilitation of what he calls "planetary scale" computational processing, whose global effects rival those of the nation-state or the market.<sup>13</sup> In Bratton, these tendencies—loosely, focusing on physical or computational infrastructures, respectively—converge: the hard distinctions we might draw between them look less certain at planetary scale and in their scaling from micro-scale process to global-scale effect.

This brief overview prompts a few observations. First, the objects that media theorists take as the internet's infrastructure vary wildly in kind and, more importantly, in scale. Some of these objects are mutually-exclusive, but others articulate different aspects of the massively-distributed internet and its multi-scalar operations. In lieu of identifying the internet—or some component of it, taken as an object—as *an* infrastructure, it's perhaps more appropriate to refer to these components as different *infrastructural* aspects of its complex whole

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<sup>9</sup> Matthew Fuller and Andrew Goffey. *Evil Media*. Cambridge, Mass.: The MIT Press, 2012. 1-3.

<sup>10</sup> Jean-Christophe Plantin, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. "Infrastructure Studies Meet Platform Studies in the Age of Google and Facebook." *new media & society* 20, no. 1 (2018): 293-310.

<sup>11</sup> Till Straube. "Stacked Spaces: Mapping Digital Infrastructures." *Big Data & Society* 3, no. 2 (2016): 1-12.

<sup>12</sup> Rory Solomon. "Last in, First Out: Network Archaeology of/as the Stack." *Amodern* 2 (2013): <http://amodern.net/article/last-in-first-out/>.

<sup>13</sup> Benjamin H. Bratton. *The Stack: On Software and Sovereignty*. Cambridge, MA: The MIT Press, 2015.



in order to retain this sense of scale-dependency and the internet's hierarchical, layer-based organisation. Second, as Sandvig argues in his useful discussion of how the internet has been conceptualised as an infrastructure, the infrastructure concept is enmeshed in a "multi-disciplinary body of scholarship."<sup>14</sup> The internet exceeds usual disciplinary domains of knowledge, opening media theory out into adjacent fields to deal with the internet's global, local, and/or geo- politics; its social or geographical impacts; its technical complexity; its institutions; its cultures and the cultures it facilitates; and so on. We might recapitulate this in one of two ways. To substitute Sandvig's term for the cognate I've been using, media-theoretical studies of the internet's infrastructural effects tend to be *interdisciplinary*, tending to implicate multiple disciplinary domains of knowledge. Or, to frame these studies differently, infrastructure is a *trans*-disciplinary concept that cuts across disciplinary boundaries. We might articulate this another way again: infrastructure is interdisciplinary *and* trans-disciplinary, at the different epistemological levels at which we might order scholarly knowledge production. Finally—and most crucially for the purposes of my argument—concepts of infrastructure are not easily circumscribed according to the particular theoretical frameworks that we use to posit them.

And yet, the standard approach to articulating the emergence and impact of a media-theoretical tendency like the "infrastructural turn" is to try to parse it using the theoretical framework as a higher-order organising epistemology. To try to make sense of the profusion of concepts that constitutes the "infrastructural turn", Sandvig divides this tendency into two major schools of thought. The first of these schools is characterised by its use of overtly-materialist theoretical frameworks to conceptualise the internet's infrastructures: the approaches that constitute it explicitly claim that these infrastructures are the matter of the internet.<sup>15</sup> The second, which Sandvig describes as "relationalist", uses the concept of infrastructure to "materialize

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<sup>14</sup> Sandvig. "The Internet as Infrastructure." 91.

<sup>15</sup> Sandvig. "The Internet as Infrastructure." 100.

the ephemera of [the] norms and organizations” in which the internet’s enmeshed.<sup>16</sup> The division Sandvig posits provides us with a useful baseline, because it ascribes two further distinctions to these schools. First, Sandvig argues that they correspond to two distinct disciplines: that the materialist school corresponds to media theoretical concepts of infrastructure; the relationalist, to science and technology studies concepts. Second, Sandvig suggests that the materialism-relationalism distinction reflects emergent divisions within contemporary theory more broadly. So, media-theoretical concepts of infrastructure are representative of new—ontological—materialisms that have displaced older, dialectical materialisms within media theory; whilst science and technology studies concepts adopt realist theoretical frameworks that are premised on relations rather than ontological-materialist claims. What Sandvig presents, then, is a higher-order epistemology that categorises concepts of infrastructure according to theoretical frameworks they adopt and the general theoretical tendencies that they express in turn.

In one sense, these divisions are arbitrary. Rather than critiquing them, the more pertinent question we might ask is, Why adopt them? Sandvig’s overview is strategic. As with most divisions, those that Sandvig adopts are loose at best. But that’s the point this kind of theoretical overview: it draws tendencies out of a confusing profusion of concepts to both make these tendencies manifest and to spur further conceptualisation and analysis. These ordering epistemologies make our theoretical practices available for critique and for use. Rather than critiquing these divisions, then, the pertinent question we might ask is, *What are they for?* These epistemologies arguably typify the methods we often use to carve up and categorise theoretical practices. In claiming that this kind of higher-order organising epistemology is conventional, the point I want to make is that the shape they give to our theoretical practices shapes the kinds of conceptual work we can do with theory in turn. At the point at which theory makes contact with media, these divisions directly inform what theory is

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<sup>16</sup> Sandvig. “The Internet as Infrastructure.” 100.

for by shaping what it can be for. When we ask higher-order questions of theory, though, these divisions shape the kinds of questions we can ask of theory itself. By privileging the theoretical framework as the key category we use to order our theoretical practices, these divisions impose it as the standard frame for epistemological analyses of media theory itself, in practice. Without identifying or questioning this higher-order epistemology, it's difficult to extricate these epistemological analyses from the categories they privilege: in my brief analysis above, the objects concepts like infrastructure take; for Sandvig, the theoretical frameworks that inform concepts, the broader theoretical tendencies they express, or the disciplines in which they can be located.

It follows that my—media-historical epistemological—claim that concepts of infrastructure belong to an epistemological lineage of concepts that attempt to materialise media would typically be read as a claim that *all* media-theoretical concepts of infrastructure are premised on materialist theoretical frameworks, regardless of the objects they take. The implication would be that they also express broader, materialist theoretical tendencies. This is, in fact, the claim that Sandvig makes. And yet, the range of objects this concept takes and the interdisciplinary domains of knowledge that it engages eschew easy correlations between theoretical framework, discipline, and general theoretical tendency. If these concepts aren't easily circumscribed according to the theoretical frameworks they adopt, it follows that the concept of infrastructure resists being characterised as materialist, *tout court*. But we can look at this problem in another way. The concept of infrastructure resists being characterised as materialist, *tout court*, if we adopt the theoretical framework as the key higher-order epistemological category by which such a claim could be made. If the internet can't be conceptualised as *an* infrastructure, if the concept of infrastructure isn't circumscribable within *a* discipline, and if conceptualisations of infrastructure don't adopt *particular* theoretical infrastructures; if, that is, the concept of infrastructure eschews typical, higher-order epistemological forms of categorising media-theoretical practices, then

my claim that this concept materialises media operates in a different higher-order epistemological register altogether.

With the concept of infrastructure, what I want to identify is a media-theoretical epistemology that's expressed in the relationship between our media-theoretical practices and the discipline of media theory itself—where this discipline is understood as a collection of media-theoretical practices. Put otherwise: rather than seeing the discipline of media theory as frame we use to order practices according to the theoretical frameworks they adopt, I want to posit it, in media-historical epistemological terms, as both ordering category *and* concrete collection of practices. Within disciplines, other kinds of epistemologies take hold and develop, *in practice*. My claim that concepts of infrastructure *materialise* media expresses a concrete-disciplinary epistemology that's neither reducible to the theoretical framework, nor able to be demarcated using materialist ontologies.

To make this epistemology available for media-historical epistemological analysis, I want to adopt a different higher-order distinction: between concepts that overtly valorise materiality and those that have a more uneasy or overtly-critical relationship to materiality. This distinction is premised not on a particular theoretical framework, but on a much broader—and strategically-looser—organising frame: the category of materiality. To recall a discussion from an earlier chapter on historical epistemology, this distinction isn't *a priori*, or ontological; that is, it doesn't treat the category of materiality as that upon which concepts of infrastructure supervene. Instead, I want to identify how disciplinary debates frame materiality as a constituent component of media, of media infrastructures, and—most crucially—of media in circulation, situating the concept of infrastructure within an already-established media-theoretical epistemology that shapes this concept's relationship to materiality. This epistemology locks the media-theoretical work we do with materiality in to a pre-formed distinction: *for* or *against* materiality. It tacitly posits this category as the epistemological basis on which infrastructure can be conceptualised at

all. Moreover, it operates in spite of the overtly-anti-hylomorphic theoretical frameworks that many concepts of infrastructure adopt. So in practice and, we might say, *a posteriori*, concepts of infrastructure end up *materialising* media. This is what I'm calling the infrastructural filiation.

This alternate, disciplinary epistemology has its own lineage. This lineage expresses a different sort of temporality to that normally accorded to the theoretical framework—one that's also characterised by the emergence of novel, epistemological claims which inform burgeoning practices, but which also shade into the disciplinary background and become *commonplaces*. As commonplaces, or as what Lorraine Daston identifies as that which becomes self-evident, these claims become the epistemological skein that holds disciplines together. We might invoke a novel theoretical framework to formulate a novel media-theoretical practice, treating the discipline as the field of its own reinvention; but this gesture is always tempered by another: the gesture that recalls the media-theoretical practices that came before and that constitute that which lends the new theoretical framework its novelty. It's in this second gesture that we find the ordering epistemology that I want to analyse—the one that *materialises* media, in spite of the theoretical frameworks we might care to invoke. Media theorists are no doubt aware of the disciplining gestures they make when they introduce new theories. My claim is that they hold more epistemological weight than we might normally admit. We can use these gestures as the basis of a media-historical epistemological analysis of the relationship between new concepts and existing disciplinary practice.

## 6.2 INFRASTRUCTURE MATTERS

Media-theoretical concepts of infrastructure fall quite neatly into the distinction I've posited between those that valorise materiality and those that don't. In part, this reflects the looseness of this distinction, which deliberately avoids presenting materiality in any particularly-partisan theoretical frame. In

part, it also reflects the looseness with which materiality is used as a category by media theorists. Media theorists aren't philosophers; the uses to which materiality is put by media theorists aren't always informed by the kind of epistemological precision or the ontological specificity that we might associate with the broader theoretical trends they express. Adopting an epistemological method that privileges precision as the criterion by which we might categorise and/or judge these uses is counter-productive, because it's in their looseness that the filiation we want to identify takes root—and that media-theoretical practices cut the epistemological furrows that give sense and context to trans-disciplinary categories, like materiality, when they're introduced in to media theory. To draw out this metaphor a little more, these kinds of epistemological furrows turn what seem like hard distinctions into cleavages, connecting what they divide. In disciplinary context, concepts of infrastructure are for or against materiality because materiality already means something specific to media theory. In disciplinary context, we're positioned on one side of an extant epistemology rather than, and in contradistinction to, another. To show what this means in practice, I want to address concepts of infrastructure that fall on either side of this distinction.

In the introduction to their collection of essays surveying the applications of the infrastructure concept to media, Lisa Parks and Nicole Starosielski noted a series of themes that define the media-theoretical "infrastructural turn." One of these—conceptualising and analysing what they call "the materialities of media distribution"—<sup>17</sup>neatly summaries the motivating interest of those concepts that valorise infrastructures' materiality. One particularly-influential tranche of these focuses on what we could think of as the internet's *physical* components. A representative example—which is also, perhaps, the most influential—is Starosielski's personal research of the trans-oceanic cable networks that, quite literally, network the internet. Starosielski's study of these infrastructures articulates the internet's large-scale, geopolitical effects on the

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<sup>17</sup> Lisa Parks and Nicole Starosielski. "Introduction," In *Signal Traffic: Critical Studies of Media Infrastructures*, edited by Lisa Parks, and Nicole Starosielski. University of Illinois Press, 2015. 5, emphasis removed.

nations that it passes through. For our media-historical epistemological purposes, what's particularly noteworthy about Starosielski's study is that it argues that these undersea cables manifest "the physicality of the virtual."<sup>18</sup> Another is Robert Sumrell and Kazys Varnelis's analysis of the One Wilshire data centre in downtown Los Angeles. In this study, Sumrell and Varnelis adopt a similar theoretical framework to emphasise the foundational importance of the hubs that store, switch, and send the data that constitutes the internet's traffic. For Sumrell and Varnelis, data centres "undermine the concept of an autonomous virtual reality, revealing instead the simultaneous importance and abandonment of the physical world."<sup>19</sup> Work by scholars like Mél Hogan takes this focus on the physical even further. In a study of high-security data centres located in desert locations, Hogan adopts a new materialist theoretical approach to argue that these complexes are deeply enmeshed in their local environments, because they require a large amount of water to operate.<sup>20</sup> For Hogan, water is a literal material constituent of data's flows, providing a means to environmentalise the internet and to expose it to political-environmental critique and activism. Starosielski, Sumrell and Varnelis and Hogan represent a use of the concept of infrastructure that analyses the objects or sites that, quite literally, materialise the internet. They're representative of a major theme of the "infrastructural turn": to draw our attention to the systems and services that make inter-networking possible, thereby making them both apprehensible and available for study and critique.

If these approaches use the infrastructure concept to *physicalise* the internet and, so, to highlight the large scale material effects created by piping, routing, and powering its operations, another set of approaches focuses on this scale's other extreme by using the infrastructure concept to posit the materiality of data. For Paul Dourish, "the brute infrastructural materialities that we encounter in places like One Wilshire" have a complement in the protocols

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<sup>18</sup> Starosielski. *The Undersea Network*. 15.

<sup>19</sup> Sumrell and Varnelis. *Blue Monday*. 66.

<sup>20</sup> Mél Hogan. "Data Flows and Water Woes: The Utah Data Centre." *Big Data & Society* July-December (2015): 1-12.

that “route” data, or that transmit it to and from such centres—and through the internet in general.<sup>21</sup> Drawing on and extending Alexander R. Galloway’s concept of “protocol”,<sup>22</sup> Dourish argues that the physical properties of cables, the effects of signal degradation, and the capacity constraints of routing itself constitute the routing of data as a material process.<sup>23</sup> By adopting a materialist approach, Dourish shows how the wide distribution of a seemingly small-scale object—data—generates large-scale politics. Even something as innocuous as assigning IP addresses—the numerical codes that allow inter-networked data to find its destinations—is caught up in institutional politics that reflect global inequalities.<sup>24</sup> Where Dourish focuses on how data is routed, Jean-François Blanchette’s influential work on bits—the basic computational unit of information, expressed as either a 0 or a 1 in binary code—adopts a small-scale object to argue that it’s profoundly shaped by its—infrastructural—materiality. For Blanchette, computational infrastructures might be “precisely tasked with relieving users from the specific constraints of the material resources of computation”; but “this abstraction from the material can never fully succeed.”<sup>25</sup> This claim is predicated on another: that bits are never *just* abstractions: they must be understood as “physical quantities”—fundamentally, “magnetic polarities, electrical voltages, or radio waves”—that are “abstracted as bits” by computational processes.<sup>26</sup> This conceptualisation leads Blanchette to claim that computational infrastructures “are suffused through and through with the constraints of their materiality.”<sup>27</sup> We can read these smaller-scale approaches as friendly correctives to the approaches adopted by scholars like Starosielski and Sumrell and Varnelis: the material implications of the internet and of computation, they argue, aren’t just to be found *at* scale, because

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<sup>21</sup> Dourish. “Protocols, Packets, and Proximity.” 184.

<sup>22</sup> See: Galloway. *Protocol: How Control Exists After Decentralization*. Cambridge, Mass.: The MIT Press, 2004.

<sup>23</sup> Dourish. “Protocols, Packets, and Proximity.” 197.

<sup>24</sup> Dourish. “Protocols, Packets, and Proximity.” 197.

<sup>25</sup> Jean Blanchette. “A Material History of Bits.” *Journal of the American Society for Information Science and Technology* 62, no. 6 (2011): 1043.

<sup>26</sup> Blanchette. “A Material History of Bits.” 1055.

<sup>27</sup> Blanchette. “A Material History of Bits.” 1043.



they're premised on infrastructural technologies—routing; bits—that allow them to scale in the first place.

Each of these influential conceptualisations of the internet as a kind of infrastructure is posited as a means of opening media theory up to some broader process or analytical frame—whether it be political, institutional, or technical. For each, though, the act of positing the materiality of infrastructure draws its value, in part, from the act of positing the materiality of infrastructure in contradistinction to what this category negates. Before media theorists were extolling the internet's materiality, a lot of pixels were spilled extolling its *immateriality*—through concepts like “the virtual.” Many concepts of infrastructure explicitly critique this once-prevalent category. But what's noteworthy about this gesture is not this critique itself. My claim is that this framing disciplinary context establishes an epistemology that has the force of a filiation. In theory, these materialist concepts of infrastructure push against the idea that media is immaterial. But *in practice*, they introduce a higher-order identity with the category that they nominally oppose. As I want to argue, the categories they negate—the virtual, immateriality—are less opposites than the obverse side of a persistent epistemology.

At its most extreme, the concept of the virtual opposed digital media to its material substrate. In his study of this concept, Rob Shields notes that what he calls the “first-generation theorists” of the internet promulgated this idea by mapping “the virtuality of digital communications media on to a dichotomy of spirit and matter, with matter fixed firmly in the familiar world of the body.”<sup>28</sup> Matthew Fuller's overview of the field of software studies is also indicative: he notes how its approaches emerged “from a background of bemused frustration at the ways in which “high level” media theory would tend toward subsumptive generalisation about the “virtual”, or about “cyberspace.””<sup>29</sup> Pierre Lévy's

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<sup>28</sup> Rob Shields. *The Virtual*. London: Routledge, 2005. 78.

<sup>29</sup> Matthew Fuller. “Software Studies Methods,” In *The Routledge Companion to Media Studies and Digital Humanities*, edited by Jentery Sayers, 250–57. New York and London: Routledge, 2018. 250.

influential, pre-millennial work on virtuality fits in to this lineage. Drawing on Gilles Deleuze, Lévy complexifies the distinction between virtual and actual—where actual is treated, here, as a cognate for material or concrete—by reframing the virtual as a process—“virtualisation.”<sup>30</sup> This process, he claims, is best understood as a “mode of being” which always inflects our relationship to the actual;<sup>31</sup> only, what’s different about his contemporary moment—the moment in which he was writing, 1998—was that “[t]he speed and force of contemporary virtualisation are so great that they exile beings and their attendant knowledge, alienate them from their identity, skills, and homeland.”<sup>32</sup> In practice, Lévy exemplifies the valorisation of virtuality at scale, positing it as an emergent category that liquidates materiality even as it liquidates subjectivity. Jean Baudrillard’s once-influential work on simulation is also a key part of this concept’s theoretical backdrop.<sup>33</sup> What these specific instances point to is that around two decades ago, virtuality and immateriality once attained the status of commonplaces in media theory and in related, more populist discussions.

To recall Daston’s formulation again, commonplaces are terms that become self-evident. The *materialising* epistemology I’m attempting to identify persists in this epistemological register, or in the reciprocal proliferation and withering of disciplinary commonplaces that shapes what we mean by “materiality” in contemporary media theory. Starosielski and Sumrell and Varnelis push back against the looser, yet more widespread use of the term “virtuality” when they claim, respectively, that undersea cables and data centres materialise the virtual. This claim still hones their concepts’ critical edges because it’s still recalcitrantly present in the form of an absence where a once-discipline-shaping commonplace used to be, even if the concept itself hasn’t had that much purchase for a decade or more. This is how commonplaces form the

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<sup>30</sup> Pierre Lévy. *Becoming Virtual: Reality in the Digital Age*. Translated by Roberto Bonnono. Ann Arbor: The University of Michigan Press, 1996. “Introduction” and *passim*.

<sup>31</sup> Lévy. *Becoming Virtual*. “Introduction” and *passim*.

<sup>32</sup> Lévy. *Becoming Virtual*. 186.

<sup>33</sup> Jean Baudrillard. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor: University of Michigan Press, 1994.

skein that holds disciplines together: beyond theoretical precision, terms like materiality displace and replace the commonplaces that precede them. Dourish and Blanchette's work isn't as overtly critical of the concept of "the virtual" that precedes their own materialisms. But it can also be located in this particularly lineage, because materiality now enjoys the status of media-theoretical commonplace. This is not to say that media are self-evidently materialist; rather, it's to say that materiality has become a category that's self-evidently central to media-theoretical discussions. By critiquing the commonplace categories that precede them, Starosielski and Sumrell and Varnelis uphold the very distinction they're supposed to resolve. Dourish and Blanchette uphold this distinction in another way, by assuming that materiality is a category that can be treated as a commonplace. Materiality defines how we think infrastructure: either because it's valorised or because concepts of infrastructure have to define their non- or anti-materialist theoretical approaches in relation to it. We can see this at work in concepts of infrastructure that fall on the other side of the higher-order epistemological distinction I've proposed.

Media-theoretical concepts of infrastructure that eschew materialism are more clearly defined by their negative relationship to materiality than they are by the alternate, realist, "relationalist"—to recall Sandvig's term—or processual theoretical frameworks they adopt. Blanchette's object, the bit, operates at a scale—and in a theoretical register—that's one step back from that brink beyond which Kittler infamously declared, "there is no software."<sup>34</sup> Or it would be, if it wasn't governed by the abstract, computational logic of "the stack." This concept provides us with a bridge between materialist and relationalist approaches to infrastructure. What Blanchette calls "resource stacks" organise the circulation of material bits. For Till Straube and Rory Solomon, the computational architecture of the stack articulates a different infrastructural concept of the internet—one that's predicated on relations that are

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<sup>34</sup> Friedrich Kittler. "There is No Software." *CTheory* ao32 (1995): <http://www.ctheory.net/articles.aspx?id=74>.

materialised, but that can't be straightforwardly articulated using a materialist theoretical framework.

The transmission of data that constitutes internet-based networking is governed by a layered hierarchy of protocols that handles the routing of data from users' devices, via intermediate networks, to the target devices that they're attempting to query—that is, by what computer scientists refer to as a stack. The idea of this model was to establish an agreed-upon set of protocols to facilitate communication between what Straube describes as “a diverse set of parallel (and often proprietary and competing) networking technologies.”<sup>35</sup> The model we use today dates back to the “Open Systems Interconnection” model, which was first developed in the 1970's to enable the design and implementation of distributed telecommunication networks in disparate contexts.<sup>36</sup> Originally, this model specified seven layers. The model that's most important to the contemporary internet is the Internet Protocol Suite, which is commonly substituted for, but not reducible to, TCP/IP, or the Transmission Control Protocol/Internet Protocol.<sup>37</sup> For both Straube and Solomon, the stack is both a model that organises how computation is designed and implemented, and a computational architecture that's made operative by specific programs, protocols, and systems. Both use it as something like an analytic: as a way of conceptualising infrastructures both through what they do and through what they organise—or, we could say, “relationally.”

This—computational—concept of the stack allows Straube and Solomon to articulate the internet, *at scale*, by focusing on the computational processes that allow it *to scale*. As Straube puts it, the stack's “hierarchy of layers is real” and allows us to “trace a gradual translation... through a series of descending

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<sup>35</sup> Sträube. “Stacked Spaces.” 5.

<sup>36</sup> Sträube. “Stacked Spaces.” 5; Keller Easterling. *Extrastatecraft: The Power of Infrastructure Space*. Londo: Verso Books, 2014.

<sup>37</sup> R. Braden “RFC1122: Requirements for Internet Hosts - Communication Layers.” *Internet Engineering Task Force* (October 1989): <https://tools.ietf.org/html/rfc1122>. Accessed May 16, 2017.

levels of abstraction all the way ‘down’ to the material handling of bits.”<sup>38</sup> But these layers are in computational process: “[i]mportantly”, Straube continues, “the stack is not simply an enumeration of different elements that constitute a whole”, because “each of its layers is an articulation of a specific logic that already encompasses the entire system.”<sup>39</sup> They can’t be thought in overtly-materialist terms. What Solomon outlines as the “recursivity” of the stack leads him to argue that this approach to computational systems—in contradistinction to the media-archaeological approach of scholars like Wolfgang Ernst, whom he draws upon and reworks—“problematizes the materialist approach” by adding further “lower” layers of materiality, whilst re-capitulating lower, infrastructural layers in higher-order levels of processing.<sup>40</sup> In effect, it problematizes the ontological primacy of the category of materiality. Drawing on the work of Karen Barad, Straube argues, in a slightly different theoretical register, that what he calls the “time-spaces of digital infrastructures” are “built in to the very materiality of stack-like configurations”, but are “*performative of and performed by*” the devices enrolled in these configurations.<sup>41</sup> In both Straube and Solomon, the concept of the stack incorporates materiality into its operative *modelling* of the internet. What they intimate is closer to a practice of diagramming—or a form of processual modelling that’s materialised, but not materialist—than it is to any overtly-theoretical materialism. Put otherwise, these approaches think infrastructures both relationally and in terms that question the efficacy of materialist theoretical frameworks. Nevertheless, this relationality can’t expunge the continuing shaping influence of the category of materiality on their claims. These theorists might be uneasy with materiality, but they still posit their conceptualisations of infrastructure in contradistinction to it.

This uneasiness is shared by Tung-Hui Hu in his excellent study of cloud computing infrastructure. Hu argues that to apprehend the internet—or what

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<sup>38</sup> Sträube. “Stacked Spaces.” 6.

<sup>39</sup> Sträube. “Stacked Spaces.” 6.

<sup>40</sup> Solomon. “Last In, First Out.”

<sup>41</sup> Sträube. “Stacked Spaces.” 8, emphasis original.

he refers to as “the digital network”—as infrastructure, we have to “think about the network in the absence of individual technologies.”<sup>42</sup> That is, the internet only makes sense as infrastructure if it’s apprehended in epistemological terms that sit uneasily with technologies and their materialities. In a passage commenting on his analysis of the cloud in relation to other, overtly-materialist approaches to infrastructure, Hu notes that,

...to lose sight of the cloud’s infrastructure is to forget about the literal stream of waste that the cloud produces: the pollution from coal-fired power plants used to feed the data centers; the stream of electronic waste that accompanies cloud providers’ need to constantly upgrade computers. But the same could be said about the many other infrastructures that we choose to ignore.<sup>43</sup>

Hu identifies a tendency in media-theoretical studies of infrastructure to tie materiality to what I think of as its indexical quality. He goes on to argue that “[m]erely obtaining more knowledge about digital culture’s materiality may not address the root problem.”<sup>44</sup> We can restate this as an admonishment: it’s not enough to say that infrastructures are *here*—which seems, at times, to be the driving impulse, if not the epistemological result, of materialist concepts of infrastructure. In his magisterial study of the elements that extends media’s infrastructural qualities to the environment itself, John Durham Peters makes a similar point. In a play on structuralism and poststructuralism, he labels his own approach “infrastructuralism” and characterises it by saying that “[i]ts fascination is for the basic, the boring, the mundane, and all the mischievous work done behind the scenes.”<sup>45</sup> But “media”, he also ruminates, “are perhaps more interesting when they reveal what defies materialisation.”<sup>46</sup>

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<sup>42</sup> Tung-Hui Hu. *A Prehistory of the Cloud*. Cambridge, Mass.: The MIT Press, 2015. 33.

<sup>43</sup> Hu. *A Prehistory of the Cloud*. 67.

<sup>44</sup> Hu. *A Prehistory of the Cloud*. 67.

<sup>45</sup> John Durham Peters. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. Chicago: University of Chicago Press, 2015. 33.

<sup>46</sup> Peters. *The Marvelous Clouds*. 11.

For Hu, what's crucial for understanding such infrastructures is what he calls "the heuristic that we use to imagine how information is organized, whether in physical space or in digital space."<sup>47</sup> Hu's "cloud" is another kind of diagram: a means of modelling and apprehending and, so, understanding the internet as an object that has emergent effects and that can be critiqued. For Peters, what's interesting about infrastructures is that they accrue their status "only insofar as they are normalized into taken-for-granted", which means that they "have social as well as technical components."<sup>48</sup> Starosielski, Sumrell and Varnelis, Hogan, Dourish and Blanchette would hardly argue with this point—but there's something else at stake in their respective valorisations or admonishments of materiality. When Fuller claims that "[w]e are in the amusing position where the emphasis on materiality is elevating technical content to the same kind of generalizations that, say, the more banal pronouncements of postmodernity suffered from in their heyday",<sup>49</sup> we can read this as an affirmation: materiality is the point of origin for a lot of bad theory—and a lot of good—because it's become a commonplace, in the sense that Daston establishes. More than this, because it's become an epistemological fulcrum around which theoretical pronouncements turn. In being for or against materiality, concepts of infrastructure affirm its status as a commonplace—and are shaped by it even as they negate it.

In higher-order epistemological terms, this status establishes an identity between approaches that valorise materiality and approaches that eschew it that I want to characterise as *hylomorphic*. In practice, these seemingly-opposed approaches express an underlying media-theoretical epistemology that's unified precisely by their antagonism. It's this epistemology that constitutes what I'm calling the infrastructural filiation. Moreover, it's by this epistemology that concepts of infrastructure *materialise* media. To explicate

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<sup>47</sup> Hu. *A Prehistory of the Cloud*. 67.

<sup>48</sup> Peters. *The Marvelous Clouds*. 33.

<sup>49</sup> Fuller. "Software Studies Methods." 251.

what I mean by this, I want to turn now to Simondon's concept and to Carey's seminal essay on telegraphy.

### 6.3 HISTORY AS ONTOLOGY: THE CASE OF THE TELEGRAPH

Theory establishes its own precursors. These include theoretical frameworks or specific theorists; but outside of the formalised adoption of a theoretical framework, other kinds of precursors can be invoked to demarcate a particular theoretical practice. Above, I argued that materiality displaced the concept of the virtual as a discipline-shaping commonplace. The virtual and the category it represents, *immateriality*, are precursor commonplaces—though their effects are often felt *in absentia*. Particularly-idiosyncratic theorists or thinkers often fulfil this role, too, as do prior theoretical movements that are hard to fit in to normal theoretical categories. To formalise the claims I've been making about infrastructure and the *materialising* epistemology it expresses, this section will present an analysis of an essay Carey wrote on telegraphy, which is not only profoundly influential, but will also help us to apprehend the higher-order epistemology that I'm outlining in this chapter: that the category of materiality institutes an epistemological identity between it and its opposite in media-theoretical practice.

In 1989, James W. Carey published an essay on the relationship between the telegraph and ideology. Influenced as much by Harold A. Innis and Marshall McLuhan as the American pragmatists—particularly John Dewey—and the emergence of what would come to be known as cultural studies, Carey is best known for his “ritual” model of communication.<sup>50</sup> But the essay on the

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<sup>50</sup> On ritual, see: Carey. “A Cultural Approach to Communication,” In *Communication as Culture, Revised Edition: Essays on Media and Society*. New York and London: Routledge, 2008. 11–28; on Carey's indebtedness to the Canadian school, see e.g.: Carey. “Harold Adams Innis and Marshall McLuhan.” *The Antioch Review* 27, no. 1 (1967): 5–39; on Carey's relationship to the American Pragmatists, see: Jeremy Packer and Stephen B. Crofts Wiley. “Becoming Mollusk: A Conversation With John Durham Peters About Media, Materiality, and Matters of History,” In *Communication Matters: Materialist Approaches to Media, Mobility, and Networks*, edited by Jeremy Packer, and Stephen B. Crofts Wiley. London: Routledge, 2011. 35–50.



telegraph became seminal for an entirely different set of reasons. In this essay, Carey makes a pair of assertions that continue to play a key epistemological role in media theory. In part, Carey's essay was written in response to what he saw as an oversight in broader discussions of media and communications: too few scholars, he argued, had studied the broad-scale social and technical changes wrought by the introduction of telegraphy.<sup>51</sup> Carey's study had much broader implications for media history and media theory.<sup>52</sup> The dynamics of citation are such that the simple act of referencing this essay identifies it with Carey, the author and theorist. But it's not Carey's work as a whole that I want to talk about. By the same token, the dynamics of citation are such that groundbreaking claims can sometimes outgrow the names to which we attach them. Carey's essay on telegraphy provides us with a particularly idiosyncratic precursor, because it's come to stand in for the defining role that a particular moment in media history plays for media theory as a whole.

The titular "ideology" addressed by Carey's essay dealt with a more wide-reaching process than the Marxist usages of the term usually denote: by it, he meant to identify the telegraph as "a thing to think with, an agency for the alteration of ideas."<sup>53</sup> The telegraph is significant, he argues, because "it opened up new ways of thinking about communication within both the formal practice of theory and the practical consciousness of everyday life."<sup>54</sup> Before the advent of the telegraph, Carey notes that "communication" referred to "transportation as well as message transmittal", because messages could only be moved by carriers on foot, on horseback, or by rail.<sup>55</sup> He goes on to assert that the telegraph "ended that identity" by allowing "symbols to move independently of geography and independently and faster than transport."<sup>56</sup> This double claim is salutary for a number of reasons. It prefigured concepts,

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<sup>51</sup> Carey. "Technology and Ideology." 158.

<sup>52</sup> Benjamin Peters. "And Lead Us Not in to Thinking the New is New: A Bibliographic Case for New Media History." *new media & society* 11, no. 1&2 (2009): 13–30.

<sup>53</sup> Carey. "Technology and Ideology." 157.

<sup>54</sup> Carey. "Technology and Ideology." 157.

<sup>55</sup> Carey. "Technology and Ideology." 157.

<sup>56</sup> Carey. "Technology and Ideology." 164–5.

like “the virtual”, that would proliferate half a decade later. His reading of the telegraph explicitly identifies this technology as a precursor to the internet and its systems of “control”: its “great theoretical significance”, he claimed, lay not only in separating communication from transport and geography, but in “the use of the telegraph as both a model of and a mechanism for control of the physical movement of things.”<sup>57</sup> So, Carey’s study prefigures later media-historical readings of the telegraph as the internet’s predecessor, by scholars like Tom Standage,<sup>58</sup> or is used as a key example of theoretically-inflected media history, by scholars like Graham Murdoch and Michael Pickering.<sup>59</sup> Carey’s claim that the telegraph brought about the “annihilation of space and time”—this phrase is, originally, Alexander Pope’s—resonates<sup>60</sup> with Paul Virilio’s writings on speed and acceleration and David Harvey’s analyses of capitalism.<sup>61</sup> But this double claim is salutary for another reason, because it both delimits and helps us to explicate the epistemological lineage of concepts into which infrastructure slips.

Taken as written, the influence of Carey’s essay on *media theory*—or, on the set of practices that I’m demarcating from “media studies”, the broader, mostly Anglo-American field of which Carey was more properly a part—hasn’t been particularly large.<sup>62</sup> As Peters outlines in a comparison of the work of Carey and Kittler, the former never really found much of an audience outside of North America because of his normative commitments to democratic politics, oral traditions, journalistic practices, and modes of cultural studies that now

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<sup>57</sup> Carey. “Technology and Ideology.” 165; see also 176.

<sup>58</sup> See: Tom Standage. *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century’s on-Line Pioneers*. London: Walker & Company, 1998; for a theoretically-inflected historical take, see also Parikka. “Critically Engineered Wireless Politics.” *Culture Machine* 14 (2013): <https://www.culturemachine.net/index.php/cm/article/view/514/529>.

<sup>59</sup> Graham Murdock, and Michael Pickering. “The Birth of Distance,” In *Narrating Media History*, edited by Michael Balley. London and New York: Routledge, 2009. 173.

<sup>60</sup> Rod Giblett. *Sublime Communication Technologies*. London: Palgrave Macmillan, 2008. 50.

<sup>61</sup> Paul Virilio. *Speed and Politics: An Essay on Dromology*. Translated by Mark Polizzotti. New York: Semiotext(e), 1986; David Harvey. *The Limits to Capital: New and Fully Updated Edition*. London and New York: Verso, 2006. 406.

seem idealist.<sup>63</sup> That is, its influence hasn't been particularly large until recently. Carey's work remains relatively-under-cited in media theory, but his essay on telegraphy seems to have belatedly found its moment with the "infrastructural turn." As we might expect, this essay crops up in the work of North American media theorists like Peters and Jonathan Sterne, who claim Carey as an influence. More surprisingly, it's also cited as a precursor in a range of other recent studies of infrastructure and related concepts. What's particularly curious about its belated influence is that Carey is invoked as a precursor for overtly-materialist concepts of infrastructure *and* as a representative of anti-materialist approaches to media theory.

In his typically-incisive reading of the essay on telegraphy, Peters argues that Carey "seems to hold to the theoretical possibility at least of symbols without a material anchor besides electricity, of communication free of transportation."<sup>64</sup> This reading of Carey is shared by Leah A. Lievrouw, who associates him with what she calls an idealist trend in media theory—confusingly containing Peters' earlier, philosophically-inflected study of the concept of communication.<sup>65</sup> In his critical analysis of Carey's essay, Sterne argues that Carey's reading of telegraphy could only elevate the category of the "symbolic" to privilege once it had "severed" the relationship between communication and transportation.<sup>66</sup> For his part, Ned Rossiter's recent conceptualisation of logistical infrastructures explicitly critiques Carey's claim that the telegraph instituted

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<sup>62</sup> One exception is McKenzie Wark's first book, *Virtual Geography*, which includes a commentary on Carey's essay on telegraphy. See: McKenzie Wark. *Virtual Geography: Living With Global Media Events*. Bloomington: Indiana University Press, 1994. 215-16.

<sup>63</sup> Peters. "Strange Sympathies: Horizons of German and American Media Theory," In *American Studies as Media Studies*, edited by Frank Kelleter, and Daniel Stein. Hiedelberg: Winter, 2008. 3-23.

<sup>64</sup> Peters. "Technology and Ideology: The Case of the Telegraph Revisited," In *Thinking With James Carey: Essays on Communications, Transportation, History*, edited by Jeremy Packer, and Craig Robertson. New York: Peter Lang, 2006. 148.

<sup>65</sup> Leah Lievrouw. "Materiality and Media in Communication and Technology Studies: An Unfinished Project," In *Media Technologies: Essays on Communication, Materiality, and Society*, edited by Tarleton Gillespie, Pablo J. Boczkowski, and Kristen A. Foot. Cambridge, Mass.: The MIT Press, 2014. 21-51; Peters. *Speaking Into the Air: A History of the Idea of Communication*. Chicago and London: University of Chicago Press, 1999; Giblett. *Sublime Communication Technologies*.

the separation of communication and geography.<sup>67</sup> For each, Carey's essay on telegraphy represents a key precursor for the privileging of the *immaterial*—understood as the symbolic, the ideal, or the cultural—at the expense of materiality. What's curious about this essay is that another set of media theorists invoke Carey as a precursor for their overtly-materialist approaches. David Morley summarises this trend when he suggests that Carey's telegraph essay has recently “come to be seen as something of a potential “keystone” for a whole new thread of historically inflected, materialist work in communications studies.<sup>68</sup> Mimi Sheller evokes Carey as materialist precursors in her studies of infrastructure.<sup>69</sup> In an essay on telegraphy that emphasises the embodied role of its operators, Kate Maddalena and Jeremy Packer present a nuanced re-reading of Carey's work that draws it in to a materialist lineage, noting that “trains and telegraph wires” play the role of “materials” in his analysis.<sup>70</sup> In Carey, we seem to find a representative of two opposite tendencies—or, rather, one whose identity is secured by this very divergence.

In an interview with Jeremy Packer, Peters helps us to clarify what's at stake in this seemingly-contradictory set of readings of Carey's essay. For Peters, Carey's work managed a “balancing act” between a form of “idealism”, represented by his theorisation of the telegraph, and a form of “materialism”, expressed in his sociology.<sup>71</sup> Likening Carey's work to William James's, Peters argues that it manages to “wiggle out” between these two poles.<sup>72</sup> This reading of Carey allows Peters to claim that, “[s]ociologically, electrical telegraphy

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<sup>66</sup> Jonathan Sterne. “Transportation and Communication: Together as You've Always Wanted Them,” In *Thinking With James Carey*. 118.

<sup>67</sup> Ned Rossiter. *Software, Infrastructure, Labor: A Media Theory of Logistical Nightmares*. New York and London: Routledge, 2016. 7.

<sup>68</sup> David Morley. “Communications and Transport: The Mobility of Information, People and Commodities.” *Media, Culture & Society* 33, no. 5 (2011): 747.

<sup>69</sup> Mimi Sheller. “Materializing US-Caribbean Borders: Airports as Technologies of Communication, Coordination, and Control.” In *Communication Matters*: . 233–34.

<sup>70</sup> Kate Maddalena and Jeremy Packer. “The Digital Body: Telegraphy as Discourse Network.” *Theory, Culture & Society* 32, no. 1 (2015): 101.

<sup>71</sup> Packer and Crofts Wiley. “Becoming Mollusk: A Conversation With John Durham Peters.” 41-2.

<sup>72</sup> Packer and Crofts Wiley. “Becoming Mollusk: A Conversation With John Durham Peters.” 41.

might have separate communication and transportation, but cosmologically”—that is, at a larger scale of analysis—“it married them.”<sup>73</sup> It allows Sterne to read Carey’s distinction between transport and communication back against itself:

By linking communication to movement, we leave open the relationship between mind and body, mental and physical labour, and content and means. These become questions we have to answer in each particular case that we study.<sup>74</sup>

As precursor, what Carey’s work arguably represents is the identity of materiality and its obverse *in their duality*. What’s crucial to note about its role as precursor, moreover, is that most theorists treat Carey’s essay as though it pitted communication—as the immaterial symbolic—against materiality. Yet the specific terms Carey uses, and which he makes sure to distinguish, are “transport” and “geography.” This retroactive subsumption is telling in and of itself. What was a more complex pair of bifurcations—media loses its identity with transport *and* with geography—becomes a simple distinction. The conflation of these terms in materiality marks out the peculiar epistemological dynamic at play here. Carey’s essay isn’t a precursor of this particular theoretical framework or that. Rather, it’s able to act as a precursor for a media-theoretical epistemology that’s elevated materiality to the status of a category that encompasses movement, space, and speed, if only by claiming that the emergence of telegraphy heralds their diminished role in what media do. It reflects the role that materiality would come to play as a commonplace, but in the negative. It reflects, then, the commonplace role that materiality would later attain as a category that must either be valorised or eschewed. What Carey’s essay provides us with is a historical-epistemological precedent, in two senses.

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<sup>73</sup> Peters. “Technology and Ideology.” 152.

<sup>74</sup> Sterne. “Transportation and Communication.” 138.

My interest is less in what Carey's essay explicitly does than what it is indicative uses it's put to. Carey's essay might be profitably read as an example of what I'm calling media-historical epistemology. By returning to the emergence of telegraphy, Carey identifies the emergence of an epistemology that would shape what media could be used to do in their time *and* what uses they might be put to later, drawing a line from the telegraph to computational forms of control. But this is neither the kind of use that I want to put this essay to nor the kind of use that its put to by contemporary media theorists. That it can be cited as an exemplar of either idealist *or* materialist media-theoretical approaches indicates the interconvertability of these terms in media-theoretical practice. By linking this claim to a concrete media-historical moment, Carey's essay does double-precursive-duty: it comes before, from 1989; but what it theorises, telegraphy, comes before, too. In taking this essay as a precursor, media theorists arguably make a mistake that Carey himself avoids. By treating the emergence of telegraphy as a salutary moment for media history and for media theory itself, they also elevate the *theorisation* of the emergence of telegraphy to exemplary status, conflating media's concrete conditions with the conditions of possibility in which media's materiality might be discussed. As precursor, this essay rolls history, epistemology, and media-theoretical debate together. As a gesture, it expresses how the identity of materiality and what it negates can be maintained by referencing what came before—in media theory and in media history alike. Historicisation merges with theorisation to effect their ontologisation. The result is a practical-epistemological form of what Simondon calls "hylomorphism."

In the prefatory material for his own philosophy of individuation, Simondon introduces "hylomorphism" to characterise materialist ontologies of being. Whereas ontologies of substance—he cites Spinoza's—posit a single ontological category to explain being, materialist ontologies posit two: what he identifies, after Aristotle, as matter—or *hyle*—and form—or *morphe*.<sup>75</sup> Simondon uses

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<sup>75</sup> Simondon. "The Genesis of the Individual." 300-1. See also: Muriel Combes. *Gilbert Simondon and the Philosophy of the Transindividual*. Translated by Thomas LaMarre. Cambridge, Mass.: The MIT Press, 2013.

hylomorphism as a means of categorising distinct metaphysics, which I've been generalising as theoretical frameworks. I want to adopt hylomorphism as an epistemological heuristic. Simondon's concept establishes a reciprocity between the categories of matter and form. In conversation with Bruno Latour, Michel Serres makes a claim that helps us to understand what's at stake with this reciprocity: "[a]n idea opposed to another idea", he says, "is always the same idea, albeit affected by the negative sign. The more you oppose one another, the more you remain in the same framework of thought."<sup>76</sup> By privileging materiality, media-theoretical concepts of infrastructure might adopt theoretical frameworks that critique antecedent media-theoretical tendencies, like virtuality—but *in practice*, they're premised on the same media-theoretical epistemologies as this tendency because they reproduce the same dichotomies. Materiality is not *immateriality*; reciprocally, *immateriality* is not materiality—and through this distinction, a higher-order, disciplinary epistemology takes shape, in the practices that cite its precursors and, so, that reproduce it.

Theory, I said, makes its own precursors. For this media-historical epistemological analysis of infrastructure, Carey is one of ours. More than how telegraphy can be theorised or how media's history might be used, what his essay represents is how a discipline-level epistemology emerges both in practice and through the proliferation and reproduction of theoretical commonplaces—materiality—and their own predecessors. What it demonstrates is how varied the role of the precursor can be in media-theoretical practice. The concept of infrastructure fits in to a lineage of concepts for which Carey's essay gives us the outlines—neither in form nor content, but in the identity of the seemingly-contradictory media-theoretical uses to which it can be put. In claiming that concepts of infrastructure *materialise* media, what I mean is that these concepts reproduce a practical-epistemological form of hylomorphism that establishes materiality as the self-

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<sup>76</sup> Michel Serres and Bruno Latour. *Conversations on Science, Culture, and Time*. Translated by Roxanne Lapidus. Ann Arbor: The University of Michigan Press, 1995. 81.

evident category against which our concepts must push or with which they must hew. So, they're not materialist, *per se*; rather, in treating materiality as, self-evidently, commonplace, they materialise media-theoretical epistemology, at the level of the discipline of media-theory; they materialise infrastructure, as concept operating, in practice, within this epistemology; and they materialise infrastructure's objects, by positing materiality as a category that must be valorised or eschewed. In Simondon's terms, then, this epistemology is materialist in effect, if not in theory—epistemologically, we might say, rather than ontologically.

This effect recedes when a moment like the emergence of telegraphy is held to have general media-theoretical significance. By rolling together history, epistemology, and media-theoretical debate, it mistakes epistemology's history for what's "contemporary." This is not to critique historical approaches to doing media theory; only to note that between history and its ontologisation sit disciplinary epistemologies that have a habit of making something else out of the theoretical material—the precursors—they're given. This is what I'm calling the infrastructural filiation. In effect, the concepts of infrastructure caught up in this epistemology *materialise circulation*, recapitulating it as a term that expresses whether or how media and their infrastructures are materialised, rather than how we might think media in excess of themselves.

#### 6.4 CIRCULATIONS MATERIALISED

To return to the issue at hand—the conceptual work that circulation does, in practice and in our media-theoretical present—the infrastructural filiation constitutes one of the major influences on our commonplace usages of circulation. Concepts of infrastructure are peppered with invocations of media's circulations. This concept provides us with a crucial means of thinking media's circulations, at scale and as they scale, and in their scaling complexity; as processes with concrete—political, environmental—consequences; with technical nuance; and, of course, in their materiality. In the introduction to this



chapter, I claimed that the “infrastructural turn” instituted a higher-order epistemology that had an organising effect on how we conceptualised media and, by extension, media in circulation. At scale, concepts of infrastructure materialise media and their circulations: they recapitulate media’s relationship to infrastructure as a hylomorphic one, but they also shift the epistemological value of the media concept itself. After infrastructure, media’s circulations only matter insofar as they express theirs’ and infrastructure’s materiality.

This hylomorphic epistemology is straightforward in Starosielski and Vernelis. Starosielski asserts that studying the internet’s physical instantiation in cables “reveal[s] the environments that shape contemporary media circulation”<sup>77</sup>, reinstituting a distinction between material-infrastructural substrate and circulating media, at higher levels of abstraction. Vernelis likewise sets up a distinction between the circulating data that we access and the material infrastructures, like data centres, that make this access possible. If the desire to be “plugged in” colloquially expresses a desire for this data and the virtuality it occasions, for the data centre “[b]eing plugged in is their literal need”; here, the language of virtuality is opposed to a literal physicality, drawing a critical edge from the privileging of the latter in contradistinction to the former.<sup>78</sup> Blanchette’s bits are subject to the material constraints of storage, bandwidth, processing, and noise as they’re “circulated up and down the resource stacks, the layered chains of modules that obtain between applications and resources.”<sup>79</sup> This materiality is premised on a dualist distinction between the material aspects of bits and the abstract nature of the computational spaces in which they circulate, positing circulation in contradistinction to infrastructure. Dourish’s expression of this epistemology is a little more complex. Dourish’s technical-material object of analysis is “routing”, which he characterises as “the protocols and mechanisms that...allow digital data to traverse a complex, heterogeneous, and dynamic internet.”<sup>80</sup> Media’s circulations are not at all the

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<sup>77</sup> Starosielski. *The Undersea Network*. 15.

<sup>78</sup> Sumrell and Vernelis. *Blue Monday*. 66.

<sup>79</sup> Blanchette. “A Material History of Bits.” 1055.

<sup>80</sup> Dourish. “Protocols, Packets, and Proximity.” 184.

topic of Dourish's study and I don't mean to critique his work for not addressing a process that's outside its remit. What's not said here is nevertheless telling. "Traverse" stands in for circulation in this statement, but what traverses the "dynamic internet" is not media, but their materialised basis—data. Scaling infrastructure down splits the materialising hylomorphic epistemology across scales, too, allowing what's left out to limn what's materialised as its opposite, what's transmitted.

Using hylomorphism as an epistemological heuristic, we can ascribe this materialising influence on the conceptual work that circulation does to concepts of infrastructure that are uneasy with, or outrightly critical of, materiality. Straube, Solomon, Hu, and Peters don't talk about circulation explicitly, but we find expressions of hylomorphism-in-practice in other, not-so-clearly materialist concepts of infrastructure. In his work on the environmental impacts of media infrastructures, Sy Taffel argues that the materiality of our media infrastructures is bound up in what he calls the "flows of materials, energy, and capital that comprise contemporary global capitalism."<sup>81</sup> These infrastructures' need for rare minerals like coltan and tantalum generates a correlate: waste, pollution, even war. Taffel invokes a cognate of circulation—flow—that's often developed in antagonism with just the kind of hylomorphic materiality I've been discussing. Taffel's claim that infrastructures are material is premised on Gilles Deleuze and Félix Guattari's concept of a "plane of immanence", which construes category of materiality in explicitly univocal, and therefore non-hylomorphic, terms.<sup>82</sup> But to illustrate how these flows instantiate the circulation of media, Taffel offers an example—the constituent material processes that are enlisted when we stream a Youtube video—that recapitulates this hylomorphism in practice.<sup>83</sup> These flows explain how media arrive at our screens, but not how media operate *as* media. This aspect of media is left as the unaddressed other side of these material processes; the complementary form, in practice, to streaming's materiality.

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<sup>81</sup> Taffel. "Escaping Attention." 10.

<sup>82</sup> Taffel. "Escaping Attention." 2.

Taffel's claim that "[t]he microscopic scale at which [] data exists is thoroughly alien to humans", but "there is nothing virtual or dematerialised about it",<sup>84</sup> becomes unintentionally salutary, indicating the higher-order epistemological hylomorphism that his arguments institute in practice even as they disavow them in theory.

We can also use this heuristic to re-interpret the epistemological status of Keller Easterling's influential relationalist account of infrastructures and what she calls "extrastatecraft." Easterling's large-scale look at infrastructural spaces—which include broadband alongside spatial distributions like free trade zones—adopts a theoretical framework that's heavily influenced by the work of relationalist theorists, like Bruno Latour, alongside theorists and philosophers who are less commonly cited in media theory, like the analytic philosopher Gilbert Ryle. Easterling introduces a powerful concept in her work: what she calls infrastructure's "dispositions." Easterling likens dispositions to latent effects. "Spaces and urban organisations are usually treated, not as actors, but as collections of objects or volumes", she says, yet just as a simple object—her example is a ball—"does not have to roll down the incline to have the capacity to do so", so, too, do "physical objects in spatial arrangements...possess an agency that resides in relative position."<sup>85</sup> Infrastructures are able to affect other things because they possess a disposition that's "immanent, not in the moving parts, but in the relationship between the components."<sup>86</sup>

So far, this approach has clear resonances with Latour's early work on relations and "force"—and, like Latour, they don't use materiality as a key category.<sup>87</sup> In fact, it reads as an exception to the higher-order epistemological distinction that I introduced earlier. Easterling goes on to argue that infrastructures adopt these dispositions through the influence of what she calls "active forms" that,

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<sup>83</sup> Taffel. "Escaping Attention." 3-4.

<sup>84</sup> Taffel. "Escaping Attention." 4.

<sup>85</sup> Easterling. *Extrastatecraft*.

<sup>86</sup> Easterling. *Extrastatecraft*.

like “sequences of code”—she lists “spatial products and repeatable formulas like zones, suburbs, highways, resorts, malls, or golf courses”—construe infrastructures as something akin to “operating systems.”<sup>88</sup> But what’s crucial to her conceptualisation of what infrastructure does and how we might critique them is that they express their dispositional politics through the “circulation of...active forms within it.”<sup>89</sup> It’s this use of circulation the language of form that I want to focus on.

An uncharitable reading of Easterling’s work might argue that this claim is essentially hylomorphic; that, in adopting the metaphor of the “operating system” and in valorising the circulation of form, it adopts form as the principle term that shapes its substratal, material supports: buildings, zones, cables—infrastructure. A more charitable reading would point out that though Easterling talks at length about broadband infrastructure, she’s more of an urban theorist or theorist of architecture than a media theorist. What her work points to is the subtlety of the epistemological form of hylomorphism that media theorists express, in practice. Easterling’s work particularly recalls an early tenet of Latour’s Actor-Network Theory: “what resists is real.”<sup>90</sup> This tenet is key to Latour’s theory of “irreductionism”, or the set of principles that he used to fashion his wildly influential theory of relations.<sup>91</sup> More recently, philosophers with quite different investments—Graham Harman and Ray Brassier—have both argued that Latour’s theory relies on a tacit form of hylomorphism.<sup>92</sup> Without assuming the generative capacity of something like a material substrate, Latour can’t explain how his networks assemble in the first place—so, as Harman points out, his later work introduces the concept of

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<sup>87</sup> Latour. “Irreductions,” In *The Pasteurization of France*, Cambridge, Mass.: Harvard University Press, 1988.

<sup>88</sup> Easterling. *Extrastatecraft*.

<sup>89</sup> Easterling. *Extrastatecraft*.

<sup>90</sup> Easterling. *Extrastatecraft*.

<sup>91</sup> Latour. “Irreductions.” 151.

<sup>92</sup> Graham Harman. “Realism Without Materialism.” *SubStance* 40, no. 2 (2011): 52–72; Ray Brassier. “Concepts and Objects,” In *The Speculative Turn: Continental Materialism and Realism*, edited by Levi Bryant, Nick Srnicek, and Graham Harman, 47–65. Melbourne: re. Press, 2011.

“plasma” to specify the outside from which networks spring.<sup>93</sup> A reading of Easterling’s work that’s a little less than uncharitable might point out that it can’t escape positing space in these plasmic terms—tacitly, in theory. Easterling barely even mentions the term “materiality.” Taken together, we could use these readings to present Easterling’s work as an edge case in which circulation is presented in the conceptual language of form—if, admittedly, in a form that’s not entirely congruent with media. It’s premised, arguably, on a conception of space as potential that recapitulates materialist ontologies: form might be ascendant, but it falls back on the latent, dispositional force of the spaces it “formats.” This approach materialises circulation from the other side of the form-matter dyad—in practice, again, if not in theory. But what’s most interesting about this work, for our purposes, is that it draws our attention to materiality’s quality of *resistance*.

In media theory, materiality’s what resists. We posit this resistance as the source of its ontological force. Its resistance to subsumption by precursor concepts—like the virtual or immateriality—is what gives it traction in contemporary media theory. In combination, it’s what’s established materiality as a media-theoretical commonplace. But this quality has also established what we might identify, at a higher-order epistemological level and with apologies to William Morris, as something like a “resistance in the *material*.”<sup>94</sup> Materials resist, but the category of materiality is also a resistant shaping constituent of our media-theoretical epistemologies. It’s something that concepts like infrastructure have to deal with, because it’s something that we assume to be *there*—before what’s made of it or in and alongside what’s made through it, but always resistantly and irreducibly present. To riff on Latour, materiality has an epistemological reality because it resists. This status shapes Easterling’s work when it’s drawn in to media-theoretical discussions: materiality is that which is

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<sup>93</sup> Graham Harman. *Prince of Networks: Bruno Latour and Metaphysics*. Melbourne: re:Press, 2009. 132-3; the relevant place to find this concept in Latour’s work is: *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press, 2005. 244-5.

<sup>94</sup> Quoted in Jerome J. McGann, *Black Riders: The Visible Language of Modernism* (Princeton, New Jersey: Princeton University Press, 1993) p. xiii.

resistantly primary. It's also what shapes the other concepts of infrastructure that I've engaged with: materiality can't be done away with, and so is incorporated in to, and shapes, how infrastructures—and through them, media—are conceptualised. And circulation? After infrastructure, one of the main uses to which we put circulation is to express the materiality of media or of their infrastructures. We valorise media's materiality, or we eschew it. Either way, infrastructure implicates media in a particular *problem*: whether or how materiality ought to be materialised.

This is how the infrastructural filiation expresses its hylomorphism and, in turn, shapes circulation. It institutes materiality as a resistant epistemological material that shapes how we think media and their circulations *in practice*. This undermines our capacity to think media in excess of themselves, because it subordinates this problem and its related questions to materiality. These questions aren't quite the same. Media doesn't just exceed itself because materiality resists; it's not reducible, in circulation, to a category that we tacitly posit as primary to it. Media can't be conceptualised in circulation if they're subordinated to this problem. This problem simply leaves us with no room to ask what media *are* when they *are in* circulation. This is not to say that circulating media need be conceptualised in wholly non-materialist terms. Rather, it's to parse media's materiality through another question: What is materiality *for media*?

## 6.5 DISCIPLINARITY AND MATERIALITY

This question opens our discussion of infrastructure back out to a more general discussion of the higher-order epistemologies we use to shape our media-theoretical practices. This discussion is not separate from the applied question of what kind of conceptual work we can do when we adopt a particular concept, theoretical framework, or media-theoretical tendency. Adopting the concept of infrastructure as the focal point for a more general discussion of the role that the category of materiality plays in media theory

raises a pair of basic questions: Why organise this discussion around infrastructure, rather than materialist theoretical frameworks? and, What do we mean by “materiality” in media theory? As concept, as progenitor of a range of theoretical frameworks and as ontological category, materiality and its cognates—matter, materialism—have been undergoing a resurgence in recent media theory. To further situate this chapters arguments, I want to present a brief outline of recent materialist media-theoretical approaches.

Recent materialist media-theoretical approaches are influenced by broader theoretical trends in the humanities and social sciences, including the renewed focus on materialist and realist ontological categories. A catalogue of these approaches might begin with seminal media-theoretical studies by Lev Manovich, N. Katherine Hayles, or the German media theorists collected in *Materialities of Communication*, each of which, respectively, established trajectories for the study of software, embodiment, or media’s materiality that still shape media theory today.<sup>95</sup> More recent work following in their stead addresses media’s materiality using a number of productive theoretical approaches. These include the nuanced discussions of media’s materiality developed in what’s known, in the Anglophone world at least, as the German media theory tradition.<sup>96</sup> From Kittler’s work on discourse networks to more recent approaches, like the media archaeology of Wolfgang Ernst or Jussi Parikka or Bernhard Siegert’s studies of “cultural techniques”, this tradition has developed numerous, equally-compelling materialist concepts of media systems, discrete media, and media’s constituent techniques.<sup>97</sup> They include

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<sup>95</sup> Lev Manovich. *The Language of New Media*. Cambridge, Mass.: The MIT press, 2001; N. Katherine. Hayles. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press, 1999; Hans Ulrich Gumbrecht and Ludwig Pfeiffer, eds. *Materialities of Communication* Stanford: Stanford University Press, 1988.

<sup>96</sup> See: Eva Horn. “Editor’s Introduction: “There Are No Media.”” *Grey Room* 29 (2007): 6–13; Geoffrey Winthrop-Young. “Krautrock, Heidegger, Bogeyman: Kittler in the Anglosphere.” *Thesis Eleven* 107, no. 1 (2011): 6–20.

<sup>97</sup> Umbrecht and Pfeiffer. *Materialities*; Kittler. *Gramophone, Film, Typewriter*. Translated by Geoffrey Winthrop-Young and Michael Wutz. Stanford University Press, 1999; Wolfgang Ernst. *Digital Memory and the Archive*. Minneapolis: University of Minnesota Press, 2013; Parikka. *What is Media Archaeology?* London: Polity, 2012; Bernhard Siegert. *Cultural*

concepts of materiality developed by literary scholars who work on media, from N. Katherine Hayles' seminal essay on print and code to Matthew Kirschenbaum's concept of forensic materiality, through to more-distantly related fields, like the history of the book.<sup>98</sup> They include a range of new Marxist conceptualisations of digital culture, including the more orthodox-Marxist work by Christian Fuchs through to the post-autonomist work of scholars like Nick Dyer-Witherford.<sup>99</sup> They include work that adopts new materialist theoretical frameworks, by scholars like Anna Munster or Parikka.<sup>100</sup> They also include studies of media and embodiment that adopt more recent concepts from the universe of materialism, like Patricia Ticiento Clough's analyses of media and affect or Mark Hansen's post-phenomenological studies of new media.<sup>101</sup> We must also note earlier, Marxist materialist analyses of media, including the influential work of Smythe, mentioned earlier; studies by or influenced by the Frankfurt School and their concept of "culture industries"; or the singular work of Walter Benjamin.<sup>102</sup> Each of these approaches is influential. Some are particularly compelling. Taken together, they are representative of what's more-or-less loosely meant by materialist media theory. For the purposes of this argument, what I want to note about this—necessarily incomplete—overview is that it's also representative of how we normally carve up and categorise a media-theoretical tendency, like materialist media theory.

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*Techniques: Grids, Filters, Doors, and Other Articulations of the Real*. Oxford: Oxford University Press, 2015.

<sup>98</sup> Hayles. "Print is Flat, Code is Deep: The Importance of Media-Specific Analysis." *Poetics Today* 25, no. 1 (2004): 67–90; Matthew Kirschenbaum. *Mechanisms: New Media and the Forensic Imagination*. Cambridge, Mass.: The MIT Press, 2007.

<sup>99</sup> Christian Fuchs. *Digital Labour and Karl Marx*. London: Routledge, 2014; Nick Dyer-Witherford. *Cyber-Proletariat: Global Labour in the Digital Vortex*. London: Pluto Press, 2015.

<sup>100</sup> Anna Munster. *An Aesthetics of Networks: Conjunctive Experience in Art and Technology*. Cambridge, Mass.: MIT Press, 2013; Parikka. "New Materialism and Media Theory."

<sup>101</sup> Patricia T. Clough. "The Affective Turn: Political Economy, Biomedicine, and Bodies." *Theory, Culture & Society* 25, no. 1 (2008): 1–22; Mark B. N. Hansen "Media Theory." *Theory, Culture & Society* 23, no. 2–3 (2006): 297–306.

<sup>102</sup> Dallas W. Smythe. "Communications: Blindspot of Western Marxism." *Canadian Journal of Political and Social Theory* 1, no. 3 (1977): 1–27; Theodor W. Adorno and Max Horkheimer. *Dialectic of Enlightenment: Philosophical Fragments*. Translated by Edmund Jephcott. Stanford: Stanford University Press, 2002. For a representative sample of Walter Benjamin's difficult-to-categorise work, see: *Illuminations*. Translated by Harry Zohn. New York: Schocken Books, 1968.



What Sandvig does for the concept of infrastructure, this kind of outline does for media theory itself.

Recent surveys of materialist media-theoretical approaches by Holger Pötzsch, Nathalie Casemajor, and Jeremy Packer and Stephen B. Crofts Wiley are indicative of this higher-order epistemological exercise and the assumptions that typify it.<sup>103</sup> Each of these surveys sorts materialist media-theoretical approaches into a number of different categories. These categories might be ordered according to the variety of materialism a particular approach expresses; the objects they take; their—historical and/or concrete—context; or their organising concepts. What's crucial about the epistemology that this ordering expresses is that they privilege the *theoretical framework*. Appellations like “German media theory”, “affect” or “Marxist digital culture” express extant media-theoretical practices, making them available for critique and, more importantly, for use. So whilst Pötzsch, Casemajor, and Packer and Wiley might argue over extant categories—they adopt four, six, and five distinct ordering categories, respectively—each essentially adopts the same epistemology to represent materialist media-theoretical approaches as constituents of an overarching materialist media-theoretical tendency. This method reflects not just how we constitute theoretical tendencies, but how we apprehend, judge, and work with the media-theoretical epistemologies they index.

My claim that the infrastructural filiation materialises commonplace usages of circulation doesn't map on to this higher-order epistemology. Materialist theoretical frameworks—“literary media theory”; “new materialism”; “post-phenomenology”—neither reflect nor begin to exhaust the epistemological role that “materiality” plays in media theory. Whilst acknowledging, for instance, that this thesis is particularly indebted to the German media theory tradition, both overtly—in its critical use of Kittler—and tacitly—through the influence

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<sup>103</sup> Holger Pötzsch. “Media Matter.” *TripleC* 15, no. 1 (2017): 148–70; Nathalie Casemajor. “Digital Materialisms: Frameworks for Digital Media Studies.” *Westminster Papers in Communication and Culture* 10, no. 1 (2015): 4–17; Jeremy Packer and Stephen B. Crofts

and the historical focus of its promulgators, like Parikka—the media-historical epistemological approach I've adopted is concerned with a chain of concepts—materiality, infrastructure, circulation—that intimate a different ordering epistemology. This epistemology is expressed by concrete media-theoretical practices, exposing the arbitrariness of the catalogue of categories broached above. Privileging a concept rather than a theoretical framework allows us to ask a crucial media-historical epistemological question: Beyond their avowed theoretical approaches, what kinds of conceptual work do our concepts actually *do*? Conversely, we might also ask of extant materialist media-theoretical approaches: How would they contribute to helping us think media in excess of themselves?

To answer the second of these questions first, the materialist media-theoretical approaches briefly outlined above don't bear directly on circulation or its attendant epistemological problem. The German media theory tradition's varied foci—discrete media, in Kittler; the materialities of specific media and the consequent, "ownmost" temporalities they produce, in Ernst; or the deconstruction of media into their constituent techniques which are, recursively, used to think media otherwise, in Siegart—provide<sup>104</sup> rigorous conceptualisations of media's materiality, but they're arguably informed by a different set of media-historical epistemological problems. The literary approach opens up on to considerations the distribution of literary media online, particularly in the work of Hayles;<sup>105</sup> but, its abiding concern with literature's constituent, language, works in a different epistemological register. I want to address the new materialist approach advocated by Parikka and others in the next chapter; for now, we can note that it deals more properly with questions of whether or how media envelop, rather than how we might think them in circulation. This thesis's object, media in circulation, doesn't concern

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Wiley. "Strategies for Materializing Communication." *Communication and Critical/Cultural Studies* 9, no. 1 (2012): 107–13.

<sup>104</sup> Kittler. *Gramophone, Film, Typewriter*; Siegart. *Cultural Techniques*; Ernst. *Digital Memory in the Present*.

<sup>105</sup> Hayles. "Print is Flat."

embodiment—at least in the registers adopted by Clough or Hansen. Or, the Marxist approaches of both Fuchs and Dyer-Witherford *do* conceptualise circulation directly, but they do so in a Marxist register, which understands it as the existence of capital in each of its stages, simultaneously rather than as a concept that allows us to conceptualise media in excess of *themselves*.<sup>106</sup>

Lastly, to be able to answer the first question I asked above, we have to shift not only how we *do* theory. We also have to shift how we conceive of theory's role *for* media: both in our media-theoretical practices and, at a higher level of epistemological abstraction, in those moments in which we carve out and catalogue new media-theoretical approaches to make them available for use and critique.

## 6.6 MATTER AFTER MEDIA

My claim that infrastructure belongs to an epistemological lineage of concepts that attempt to materialise media doesn't fit the standard theoretical approach that operates under the aegis of this higher-order epistemology. In standard theoretical terms, the infrastructure concept isn't a materialist concept, *per se*. In fact, it's caught up in broader theoretical developments across the humanities and social sciences: this concept overtly expresses a range of theoretical frameworks—new materialist, realist, processual, vital—that are often incompatible with, or inimical to, the kind of materialism that I am arguing that it expresses, *in practice*. But if we unburden our theoretical practices of the primacy normally accorded to the theoretical framework, we needn't establish that all concepts of infrastructure are avowedly materialist in order to substantiate the claim that this concept materialises media. This question is displaced by another: in practice, how does the infrastructure concept construe this relation? To make a proposition in light of this discussion, I would argue that the organising concept—as I've adopted and adapted it from Ian Hacking—gives us better epistemological traction on what

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<sup>106</sup> As cited above, Ch. 3: Marx. *Capital Vol. 2*. Translated by David Fernbach. London: Penguin, 1992. 182-185.

it means for a concept like infrastructure to initiate a discipline-wide “turn.” Privileging theoretical frameworks arguably overlooks the epistemological drag that disciplines exert on “new” theoretical claims. Here, the term “discipline” operates as a category, too. As categories construed *in practice*, disciplines exert their own, higher-order, epistemological influences on our media-theoretical practices.

To ask what materiality is *for* media is to ask a different kind of higher-order epistemological question altogether: not what media-theoretical tendency best circumscribes this term, but what conceptual work it’s put to and what epistemological value it holds for a particular concept and/or problem. A media-historical epistemological analysis implicates the category of the discipline, from practice up, as a higher-order site of analysis, but also as an irreducible frame in which something like our reconstructed concept of circulation must be posited.

The gesture of invoking precursors, like Carey, uses the framing invocation of a specific media moment—the emergence of telegraphy—to perpetuate materiality’s resistant status as shaping commonplace media-theoretical term. At the level of the discipline itself, we might tie this gesture to the higher-order epistemologies that shape media theory in practice. At the level of the concept, infrastructure, we can identify how this gesture institutes what I’m calling the infrastructural filiation, shifting the epistemological value we assign to both infrastructure and media and subsuming the latter to the problem of whether or how media are materialised. For the concept that concerns us, circulation, we see how the infrastructural filiation materialises media’s circulations by subordinating them to this problem. I called this an epistemological complex because each of its parts are articulations of materiality’s *epistemological* resistance: its persistence in media theory as a category that contours our media-theoretical practices, whether or not it’s incorporated in to the theoretical frameworks we adopt. Our attempts to reconstruct circulation can’t avoid this epistemological terrain. If it’s necessary

to think media's online circulations after infrastructure, we have to be able to acknowledge infrastructure's epistemological influence on media theory itself. This means eschewing its role in perpetuating materiality's status as a commonplace category around which theoretical practice shapes itself and through which our commonplace usages of circulation are *materialised*. Our challenge is to lever materiality out of its role as disciplinary-epistemological precursor. In excess of themselves, I want to argue that we have to think matter *after* media: neither before, as substrate; nor with, in process or immanently; but, epistemologically *a posteriori*.

The next chapter will bring us full circle. This chapter and the two that preceded it presented analyses of what I take to be the three main filiations that inform our media-theoretical usages of circulation. Each of these analyses argued that these filiations foreclosed our capacity to conceptualise media in excess of themselves. Yet each also presented epistemological materials that we can use to reconstruct a concept of circulation that's adequate to the internet meme and that can be used to formulate a theory of it. They produced these materials by demonstrating the different characteristics of media that we invoke circulation to think. In the next chapter, I want to use these characteristics as the basis for a reconstructed concept of circulation. As I've outlined here, this concept will have to posit an alternate relationship to materiality and to the higher-order disciplinary epistemology that it expresses. This concept will have to take account of my claims that media's online circulations supervening on platforms. It will also have to take account of the influence that the anatomical body continues to exert over our concepts of circulation. To frame this reconstructive effort, I want to rearticulate these parameters in the interrogative: How might we think circulation *after* platforms, *as* bodied, and *before* materiality? What are media *in circulation*, sloughed of these framing and filiating predicates? Perhaps most crucially—*What can we use circulation for?*

### III. THE MEME IS/IN CIRCULATION

## 7. CIRCULATION, BEFORE AND AFTER

### 7.0 WRIGGLE ROOM

After all, what is circulation? Or, what is circulation for media theory, for our indeterminate postdigital media situation, and as the pivot around which a media-theoretical practice might be articulated? To recall the introduction to this thesis, circulation must be a concept that's capable of conceptualising media in excess of themselves. For a concept of circulation to be able to respond to our postdigital media situation—we might say to be filiated to it—it would also have to be *in indeterminacy*. This construction deliberately flirts with paradox. The indeterminacy of our postdigital media situation is both a concrete product of media's circulations and the context in which circulation becomes a problematic media-theoretical concept. We could take this to be a prohibition against certain kinds of media-theoretical gestures, but it can also be articulated as a premise. If we posit a concept of circulation in indeterminacy, *it* wouldn't be indeterminate. Rather, it would be formulated to hold the media it takes as its objects in productive tension with the epistemological effects these media have on our theoretical practices. It would be supple enough to incorporate indeterminacy as a constituent component of what it does, yet incisive enough to give us purchase on the concrete indeterminacy that constitutes the field in which it works.

The preceding chapters adopted a media-historical epistemological approach to analyse our extant media-theoretical usages of the concept of circulation. These chapters adapted the concepts of the problem, the commonplace, and the filiation to identify circulation's *underdeterminacy*, to identify its commonplace usages, to outline some of the effects of its *overdeterminacy*, and to apprehend the organising conceptual work that circulation does when it's invoked to think media. They claimed that in taking media's online circulations to be already given, our commonplace invocations of circulation tacitly allow the term to supervene on the technical ensembles that put media

in to circulation, reducing media to “content.” They claimed that when we treat circulation as a principle that we can invoke to claim that media circulate for the sake of something else, we reproduce its filiation to the anatomical body—or the anatomical body’s epistemological substitute, reducing media to their ontological predicates. They claimed that circulation’s tacit relationship to media theory’s higher-order epistemologies drew it in to a disciplinary tendency to *materialise* media, substituting this problem for the problem of how we might think media in excess of themselves. We might characterise the analyses posited by these chapters, in the negative, as assertions of what a concept of circulation adequate to our postdigital media situation *is not*. Whilst they identify the characteristics of media that we typically use circulation to address, they stop short of making propositions about what circulation ought to be.

But these chapters didn’t fail to make any propositions at all. In identifying circulation’s complementary problem, establishing circulation’s role as a commonplace media-theoretical term, and mapping the persistent influence of circulation’s filiations, these chapters made propositions about what it means to practice media theory in the present. Their overt aim was to outline the characteristics of media that we typically use circulation to address. In the process, they addressed the ways in which circulation’s *under-* and *overdeterminacy* impacts our capacity to think media in excess of themselves. But they also provided an—admittedly-limited—overview of the conditions in which circulation was able to become an *under-* and *over-*determined media-theoretical concept. These analyses double, that is, as a mapping of the epistemological effects that media have on our media-theoretical practices. These analyses delimited the epistemological indeterminacy that a reconstructed concept of circulation must be able to incorporate. What they produced was a set of epistemological materials that we can use to reconstruct this concept under these conditions.



We can articulate what these chapters have set out to do in another way. We allow the media concept to supervene on platforms because we treat circulation as a commonplace; we body media because we don't ask why we treat circulation as a principle, or recognise that we use it to posit something for the sake of which media circulate; we materialise media because the emphasis we place on the higher-order epistemological category of the theoretical framework obscures the epistemological drag that disciplines exert on our theoretical practices. These are the *concrete-epistemological* conditions in which the concept of circulation might be reconstructed. These are—at least some of—the prerequisites for the concept of circulation I want to posit in this chapter. The concept of circulation I want to posit works in and works with the wriggle room that media-historical epistemology establishes between concrete and epistemological. If media don't determine our situation but nevertheless inform our theories of them, circulation's necessity inheres in its potential to be situated precisely in this recursion without being paralysed by it.

This recursive relation shifts circulation's role within the clutch of concepts that define media theory. It's not another concept of the middle, the characteristic which we can identify, by elimination, as that which most concisely defines the media concept.<sup>1</sup> Nor does it articulate a process or a set of relations, which are terms we might otherwise use to express the concept of mediation.<sup>2</sup> Rather, my assertion is that characteristic that we can most concisely use to conceptualise circulation is that it is *before and after media*. It's *before* media, because media's concrete circulations constitute the conditions in which media present themselves as objects of theorisation. It's *after* media, because circulation takes media as its object. It's *before* media, because

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<sup>1</sup> This notion is not universal, but it's perhaps the best extant minimal definition of media. I'll expand upon the differences between these later, but examples of media theorists that adopt a variation of this minimal definition include: John Guillory. "Genesis of the Media Concept." *Critical Inquiry* 36, no. 2 (2010): 321–62; Florian Sprenger. "The Metaphysics of Media: Descartes' Sticks, Naked Communication, and Immediacy." *Cultural Studies* 30, no. 4 (2016): 630–49; John Durham. Peters, "Mass Media," In *Critical Terms for Media Studies*, edited by W.J.T. Mitchell, and Mark B.N. Hansen, 266–79. Chicago: University of Chicago Press, 2010.

<sup>2</sup> Galloway, Alexander R. "Love of the Middle," In *Excommunication: Three Inquiries in Media and Mediation*. Chicago: University of Chicago Press, 2014. 25–75.

circulation has a reciprocal, organising effect on the media concept and the concept of meditation. It's *after* media, because it articulates media in excess of themselves. It's *before* media, because it's their concrete-epistemological frame; but it's *after* media, because it's not an ontological principle by which we can extrapolate a trans-historical, "contemporary" concept of media. The *in* of *in circulation* captures this before and after. In circulation, media are in excess of themselves—conditioning and conditioned in turn. This *in* also captures the *in* of *in indeterminacy*. Circulation is a concept whose utility only lies in circulation, or in modes of analysis that shade in to modes of theorisation and in epistemologies that are reciprocally assembled in and by their concrete applications.

This chapter represents the culmination of the *after*, tying the epistemological materials assembled by the previous three chapters into a concept of circulation. These analyses respectively claimed that we need to think circulation *after* platforms, *as* bodied, and *before* materiality. Following on from these claims, the propositions I want to make in this chapter are these: after platforms, circulation is technical; in circulation, media's materiality is a *technical*-epistemological product rather than an ontological predicate; circulation *bodies* media as milieu; and that in circulation, media can be expressed as instance and/or plurality. To make these propositions, this chapter will introduce further theoretical resources drawn, in particular, from the philosophy of technology and from media theory. To avoid recapitulating a "contemporary" theoretical practice, I will translate these resources from an ontological register into an epistemological one, using them to further finesse the role that media play in constituting the conditions in which they present themselves as objects of theorisation. I'll also deal with these propositions in a different order to the respective chapters in which they were broached, in order to capitalise on different conceptual connections. What draws these propositions together into a coherent whole is that they respond to the problem that has organised this thesis and that has provided its refrain: How

do we think media in excess of themselves? In the form of a concept, I finally want to respond—in circulation.

Circulation isn't a method; it's a concept. Media-historical epistemology provided us with a method, but it operates in too specific and yet too generalising a conceptual key to give us much purchase on the banality and extremity of online culture. With the concept of circulation and in the wriggle room we can force between the recursively-related concrete and epistemological, we find what I'm calling "meme theory."

"Meme theory" is the media-theoretical *practice* that complements the media-historical method I used to analyse circulation and the concept of circulation I will posit here. This practice will use the concept of circulation and the method of media-historical epistemology to inform a media theory that's never "contemporary", but always concretised. Rather than proposing a concept of circulation that would be universally applicable to media, it affirms that this concept must be fitted to the media that it is used to think in excess of themselves. It recognises that circulation plays an organising role for media theory, but it also acknowledges that a media theory that's aware of media's capacity to inform our theories of them must necessarily be reassembled in and through its application to novel media. It recognises, finally, that this reassembly will only be successful if our media-theoretical practices eschew "contemporaneity" in lieu of remaining responsive to the relationship between its own concrete-epistemological contexts—and, sometimes, their occluded, often-convoluted histories. If this chapter thinks circulation *after* media, the one that follows it will handle the *before*; or, the task of thinking circulation *through* the internet meme and, so, articulating what I'm calling "meme theory." It will do so by using circulation to frame an analysis of a particularly defining moment for the internet meme and for online culture: its uptake in the new online culture wars. For now, though, I want to note that what I'm calling "meme theory" is a media theory tailored to be practiced in our indeterminate

postdigital media situation—or, we might say, *in* circulation. After all, to be in circulation is to be in indeterminacy, in the present.

## 7.1 CIRCULATION AFTER THE PLATFORM

This thesis's analyses of circulation began in the present, with media's concrete online circulations and with the computational architecture that makes them possible—the platform. In my analysis of the platform, I argued that it exercised an epistemological influence on media theory. Because circulation is *underdetermined* as a media-theoretical concept, we typically invoke it as a commonplace term, taking for granted that online media have to be put in to circulation by computational architectures or processes. The effect, I argued, was that our commonplace invocations of circulation reduce media to “content”—or to the epistemological form of that which can be circulated online by platforms—and conflate media with the parameters of the platforms that make their circulations possible. Platforms inform media theory by reproducing media as the empty form of “content.” I used this analysis to argue that circulation plays an organising role in media theory in spite of its *underdeterminacy* because it informs our conceptualisations of media—tacitly and in practice, if not overtly. The question this analysis raised is this: How can we think circulation after the platform? That is, how can we think circulation in ways that not only account for the concrete and epistemological influences the platform exerts on media theory, but that make these influences available as epistemological resources for circulation's reconceptualisation?

My first proposition is this: after the platform, circulation has to be conceptualised in technical terms. Earlier, I argued that our alternate concept of circulation could be reconstructed out of the conceptual work that the term already does for media theory. Concrete platforms, we might say, *process* media theory as they make media available for theorisation. Rather than focusing on the platform, the abstract concept, I want to focus on this active influence by returning to what several scholars refer to as “platformisation”, or

the process by which platforms increasingly organise the contemporary internet and by which they recursively organise themselves—and, so, process media theory. The media-theoretical concept of circulation is technical insofar as its capacity to put in to circulation has concrete-epistemological effects. To formalise this influence, I want to conceptualise platforms as technical ensembles.

For Anne Helmond, platformisation names a process by which sociality is increasingly organised by the platform's "programmability." By recentralising data collection in the platform and decentralising of data production to users, platforms become recursive and self-fashioning, or "programmable": what users produce in their "modular" compartments has the capacity to reorganise what platforms serve to users, on both small and large scales.<sup>3</sup> For Helmond, "[p]latformization [sic] entails the extension of social media platforms into the rest of the web and their drive to make external web data "platform ready"", informing how the web is organised by informing how data is produced and made circulatable.<sup>4</sup> In a recent article on programmability, Adrian Mackenzie extends this idea further. For Mackenzie, platformisation is also a process that exerts an organising, gravitational influence on the internet. Only, this process is at once extensive and intensive: platformisation is "the process of constructing a somewhat lifted-out or well-bounded domain as a relational intersection for different groups."<sup>5</sup> Moreover, Mackenzie argues that what Helmond and others call "programmability" has undergone a significant shift. Because platforms are increasingly facilitated by artificial intelligence and other forms of machine learning, he suggests that programmability has shifted from a mode "focused on linking systems" to a mode "centred on prediction."<sup>6</sup> This mode employs predictive systems—he focuses on four Facebook projects—that employ artificial intelligence and other forms of machine learning to

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<sup>3</sup> Anne Helmond. "The Platformization of the Web: Making Web Data Platform Ready." *Social Media + Society* 1, no. 2 (2015): 1–11.

<sup>4</sup> Helmond. "The Platformization of the Web." 7.

<sup>5</sup> Adrian Mackenzie. "From API to AI: Platforms and Their Opacities." *Information, Communication & Society* (2018): 7.

<sup>6</sup> Mackenzie. "From API to AI ." 2.

reconstitute platforms as sites of experimental, recursive refashioning. In media theory, it's commonplace to point out the proprietary, "black boxed" nature of platforms' algorithms.<sup>7</sup> That is, it's commonplace to note that platforms are "opaque."<sup>8</sup> For Mackenzie, platforms' opacity has a specific technical basis. Because platforms process data at massive scales, they employ higher-order experimental models to try to control the way they organise the relations they make possible and exploit. What Mackenzie calls "opacity" corresponds to what I've been referring to as *epistemological* indeterminacy. Only, my argument is that this indeterminacy is not only a product of platforms, but that it informs our media-theoretical practices.

Platformisation is both extensive and intensive. That is, it names a process by which platforms' programmability is increasingly organising the internet and by which they constitute themselves as experimental sites for recursive self-refashioning. Platforms are, obviously, technical. So are processes of platformisation. In claiming that circulation has to be conceptualised in technical terms, I mean to posit it as a concept that sits *in indeterminacy*. Circulation has to conceptualise media in circulation by acknowledging that concrete platforms—or another, more appropriate technical process—inform how media are presented to us as objects of theorisation, using the influence they exert as epistemological material for media-theoretical work. The "technical" part of this formulation is crucial, because it's often assumed, but not usually accorded a theoretical stature that matches its epistemological import. Crucially, this formulation can also help us to lend more specificity to my claim that our postdigital media situation is indeterminate. If circulation is

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<sup>7</sup> Taina Bucher. "Neither Black Nor Box: Ways of Knowing Algorithms," In *Innovative Methods in Media and Communication Research*, edited by Sebastian Kubitschko, and Anne Kaun, 81–98. Palgrave Macmillan, 2016; Tarleton Gillespie. "Algorithmically Recognizable: Santorum's Google Problem, and Google's Santorum Problem." *Information, Communication & Society* 20, no. 1 (2017): 63–80. See also my forthcoming co-authored chapter with McKenzie Wark, which picks up on this idea in the context of thinking circulation: "Circulation and Its Discontents," In *Post Memes: Seizing the Memes of Production*, edited by Alfie Brown, and Francis Russell, Forthcoming. Santa Barbara: punctum books, 2019.

<sup>8</sup> Jean-Christophe Plantin, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. "Infrastructure Studies Meet Platform Studies in the Age of Google and Facebook." *New Media and Society* 20, no. 1 (2018): 293–310.

technical, we can construe this indeterminacy as a concrete-epistemological condition.

Mackenzie uses the concept of platformisation to claim that platforms are “sites of ongoing engineering research” that are designed “to negotiate an opacity or indeterminacy generated in the process of platformisation or in the grouping together of technical elements in an ensemble.”<sup>9</sup> He draws the concept of the ensemble from Gilbert Simondon, for whom it denotes a higher-order technical form: neither a tool nor a machine, but a collection of technical elements that’s organised by a “margin of indeterminacy.”<sup>10</sup> This concept captures the irreducible degree to which complex technical ensembles are defined by their openness—their inextricability from their relations; their capacity for change within the limits they impose upon themselves; and the paradoxical way in which what’s indefinable about them is what distinguishes them as coherent and identifiable technical entities.<sup>11</sup> I want to draw on this notion of the “technical” nature of the platform to frame my concept of circulation—with a crucial caveat.

In Simondon’s conceptual language, the technical ensemble has a specific valence: it’s part of a philosophy of technology that attempts to posit technology as a “third mode of being” that’s irreducible to either materiality or life.<sup>12</sup> This claim is recapitulated as one of the foundational premises of Bernard Stiegler’s recent philosophy of technology, when he argues that philosophy treats technological beings as “nothing but a hybrid” of “mechanics”—or materiality—and “biology” and that they continue to have “no

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<sup>9</sup> Mackenzie. “From API to AI.” 15.

<sup>10</sup> Gilbert Simondon. *On the Mode of Existence of Technical Objects*. Translated by Cecile Malaspina and John Rogrove. Minneapolis: Univocal Publishing, 2017; see also Brian Massumi in conversation with Arne De Boever, Alex Murray, and Jon Roffe. ““Technical Mentality” Revisited: Brian Massumi on Gilbert Simondon.” *Parrhesia* 7 (2009): 36–45.

<sup>11</sup> Pascal Chabot. *The Philosophy of Simondon: Between Technology and Individuation*. Translated by Aliza Krefetz with the participation of Graeme Kirkpatrick. London and New York: Bloomsbury, 2013. 15–17.

<sup>12</sup> Simondon. *On the Mode of Existence*. 43.

more ontological status than they did in ancient philosophy."<sup>13</sup> We could make a standard-theoretical move, here, and posit platforms as technical beings that inform our media-theoretical practices, using the claim that circulation is a technical process, in the strong, ontological sense, as the basis for further theorisation. I want to draw on a similar claim made by Friedrich Kittler in a late essay on media and ontology. "Metaphysics", Kittler claimed, "always already forgets technical media, from writing itself up to the written book, its own precondition."<sup>14</sup> Following Kittler, theory and philosophy—and, by extension, the standard theoretical approach—have a media-theoretical problem that can be construed as epistemological in nature. What we forget is that our practices of theorisation are informed by media—and that these media are technical. In claiming that the concept of circulation is technical, I want to disentangle it from the foundational claims that Simondon and Stiegler make of technology.

This is not to say that ontological postulation is invalid or unnecessary. Rather, it's to claim that the ontological question of what media are is superseded by the epistemological question of how they're presented to us as objects of theorisation when they're thought in circulation. In circulation, media generate their own ontologies too quickly for theory to keep pace. If the concept of circulation does exert an organising influence on media theory and on the media concept, the question of what media are has to be resolved after we establish what they are, *in circulation*. What Kittler identifies—perhaps inadvertently—is an epistemological gap. By claiming that circulation is technical, we can posit epistemological indeterminacy as the point of departure for our concept of circulation.

One extrapolation we might make from my earlier analyses of the platform is that its modularity and programmability make the circulation of media like the internet meme possible. When they're taken for granted, they reduce media to

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<sup>13</sup> Bernard Stiegler. *Technics and Time: The Fault of Epimetheus*. Translated by Richard Beardsworth, and George Collins. Stanford, CA.: Stanford University Press, 1998. 2.

<sup>14</sup> Friedrich Kittler. "Towards an Ontology of Media." *Theory, Culture & Society* 26, no. 2-3 (2009): 27.



"content." More than this, concrete platforms produce indeterminacy by contributing to media's concrete contemporary ubiquity. This is crucial for thinking contemporary online media—like the internet meme—in circulation. But we might make another extrapolation. The process of platformisation provides us with the epistemological means to further specify my claim that our postdigital media situation is indeterminate. This situation is indeterminate, in part, because media circulate in excess—their ubiquity overwhelms. But it's also indeterminate because epistemological indeterminacy is an operative component of the technical ensembles—like the platform—that put media in to circulation online. The epistemological indeterminacy of our postdigital media situation isn't a condition; it's a concrete product of platformisation.

What I meant to convey when I claimed that the concept of circulation has to be posited *in indeterminacy* is that it has to be able to articulate a media-theoretical practice that would remain responsive to indeterminacy—understood as a concrete-epistemological condition of theorisation and as the operative means by which media inform the conditions in which they become objects of theorisation. Circulation is a technical concept because it provides us with the conceptual means to work in and work with this indeterminacy; or, to think media after circulation and circulation after the platform. A media-theoretical practice that thinks with the concept of circulation in the present has to think through its technicity. Our capacity to conceptualise media themselves depends on it.

## 7.2 CIRCULATION BEFORE MATERIALITY

The chapter after my analysis of platforms turned to another of circulation's filiations: the anatomical body. Before dealing with that chapter and explicating my proposition that circulation *bodies* media as what I want to call "milieu", I want to circle ahead and to pick up the thread of the chapter after that one and before this, which analysed what I called the infrastructural filiation.

A little rehearsal is necessary to outline this chapter and the proposition I want to posit in response. The aim of the analysis presented in the last chapter was to demonstrate the epistemological role that the discipline—and its *ad hoc* canons of already-existing research—plays in shaping our media-theoretical practices. The premise of this chapter was its claim that the concept of infrastructure belongs to an epistemological lineage of concepts that attempts to *materialise* media; that is, that in practice, concepts of infrastructure get caught up in a persistent disciplinary question of whether or how media are materialised. It explored this premise by identifying and analysing what I called the higher-order epistemologies that inform and shape our media-theoretical practices. This chapter made two key claims: first, that materiality shapes media theory because of its epistemological persistence, rather than its ontological resistance; and second, that the gesture of invoking theoretical precursors extends to key media-historical moments, and that we have a tendency to glean ontological claims from otherwise concrete, historically-specific media.

I want to take a cue here from an assertion that John Durham Peters makes in his recent conceptualisation of the elements as media. In his discussion of what he labels “infrastructuralism”—his term for the “infrastructural turn”—Peters suggests that “[o]ntology, whatever it is, is usually just forgotten infrastructure.”<sup>15</sup> This assertion might be presented as a wry witticism, but—like most of Peters’ seemingly-offhand assertions—it demands to be treated programmatically. After Peters, we might say that the media-historical moment of telegraphy’s emergence shades into ontology once we forget the telegraph’s status as infrastructure. This claim is subtly different to the Heideggerian-phenomenological idea most famously promulgated by Susan Leigh Star: that “[t]he normally invisible quality of working infrastructure becomes visible when it breaks.”<sup>16</sup> Peters’ claim addresses infrastructure and

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<sup>15</sup> Peters. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. Chicago: University of Chicago Press, 2015. 38.

<sup>16</sup> Susan Leigh Star. “The Ethnography of Infrastructure.” *American Behavioral Scientist* 43 (1999): 382.

ontology, but it has epistemological implications. My take on it is that at the higher-order epistemological level of the discipline, the emergence of telegraphy can only institute an ontology when we allow its concrete effects to be subordinated to the epistemological significance it's accorded within the discipline of media theory as a putatively-key media-historical moment.<sup>17</sup> In effect, treating Carey as precursor subsumes the concrete, infrastructural specificity of the telegraph to its status within the discipline of media theory and the development of *its* epistemologies. When Carey's essay is invoked as a precursor, it's often invoked as the representative of a particular media-historical conjuncture after which what media *are* is no longer the same. Its precursive role is not historical, but is rather doubly disciplinary-epistemological and ontological. It's posited as a key historical moment so that media theorists can glean media-theoretical ontological propositions from concrete media situations.

Insofar as our media-theoretical epistemologies are historically variable, we ought to question whether media's histories are able to bear this kind of ontological burden. This question is particularly apposite to the present chapter. It opens up the disciplinary question of what materiality is, *for* media. More crucially, it opens up the specific question that has occupied this thesis as a whole: How might we think media in excess of themselves? In response to this infrastructural filiation, the prior chapter made a two-part argument: first, infrastructure is necessary for thinking media in circulation in our postdigital media situation, because it helps us to account for media's concrete circulations at scale; but second, it's insufficient, insofar as it subsumes circulation to a wholly different epistemological problem. My assertion is that the latter forecloses our ability to articulate a concept of circulation that's adequate to the former. I argued that in order to posit media's infrastructures as a constituent part of media's circulations, we need to disengage the concept

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<sup>17</sup> It has to be noted that Peters is guilty of just this bait and switch in his essay on Carey's essay on the telegraph. See: Peters. "Technology and Ideology: The Case of the Telegraph Revisited," In *Thinking With James Carey: Essays on Communications, Transportation, History*, edited by Jeremy Packer and Craig Robertson. New York: Peter Lang, 2007. 137–57.

of infrastructure from this materialising lineage: by thinking materiality *after* media. This—admittedly rather gnostic—postulation is the point of departure for my second proposition about the concept of circulation: in circulation, media’s materiality is a *technical*-epistemological product rather than an ontological predicate.

This second proposition is contingent upon the one I just introduced above—that after platforms, circulation is technical. But the infrastructural filiation could be conceived of as the reciprocal near-inverse of the platform filiation. Overlooking the role that the platform plays in putting media in to circulation allows our commonplace usages of circulation to supervene on the platform. The infrastructural filiation, by contrast, is informed by a higher-order epistemology that’s expressed at the level of the discipline itself. It doesn’t overlook the influence of media on our theories of them; rather it *inflates* this influence, occluding the historical variability of our media-theoretical epistemologies in the process. In response, my proposition is that we need to treat materiality as a historically-specific constituent of media. This approach is not critical of the ontological uses to which the category of materiality are put, *per se*. Rather, it responds to the precursive role accorded to historically-specific, concrete media by media theory’s higher-order disciplinary uses of the category of materiality. This higher-order epistemology renders materiality hylomorphic. I want to further examine the interrelation of the media-historical moment, media-theoretical practice, and the ontological claim to argue that hylomorphism—as epistemology and as putative ontology—is, in fact, a product *of* media.

Per Peters, that infrastructure gets forgotten isn’t simply natural. Peters notes that infrastructures “are” only “insofar as they are normalized into taken-for-granted.”<sup>18</sup> In his overview of what he calls “infrastructuralism”, he leaves the agent of this forgetting unnamed. In a recent essay, Alexander R. Galloway puts a further spin on the commonplace claim that infrastructures only become

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<sup>18</sup> Peters. *The Marvelous Clouds*. 33.

visible when they break that's particularly apposite to our present discussion. Galloway notes, in reference to what I've been referring to as our postdigital media situation, that "we live within the cybernetic universe without necessarily being conscious of it and we use these digital tools without necessarily reflecting on them."<sup>19</sup> This claim echoes Star's. But he goes on to say not only that "the naturalization of technology has reached unprecedented levels with the advent of digital machines", but that "[n]ature likes to hide itself, and it's no different with computers."<sup>20</sup> This claim echoes the claim I made of platforms, but its consequences for media theory are quite different. For some media theorists, platforms are a kind of infrastructure.<sup>21</sup> Where the forgetting of platforms allows our commonplace invocations of circulation to supervene on them and, so, to organise the media concept, the proposition that infrastructures are defined by being forgotten is bound up in a related, but nevertheless distinct, ontological presupposition: that infrastructures persist. Under the influence of the higher-order epistemology expressed in the practices that constitute media theory as a discipline, this persistence is accorded to infrastructures' resistant materiality. In recapitulating infrastructure as a hylomorphic concept *in practice*, this higher-order epistemology uses the infrastructure concept to construe materiality as a component of media, which is to say, as coincident with it; or, as a condition of media, and so precedent to it. My claim is this: that infrastructure gets forgotten presents it as analogous to nature, but that it gets forgotten is not "natural"; it's technical.

To pluck at a stray thread of Galloway's argument, *computers like to hide themselves*. This claim has epistemological consequences for media theory's treatment of the category of materiality. In our postdigital media situation, computers' self-obfuscation is best expressed by the logic of the interface. Computational systems organised as stacks facilitate the relation between their layers with interfaces that, as Florian Cramer and Matthew Fuller put it,

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<sup>19</sup> Alexander R. Galloway. "The Cybernetic Hypothesis." *differences* 25, no. 1 (2014): 127.

<sup>20</sup> Galloway. "The Cybernetic Hypothesis." 127.

“describe, hide, and condition the asymmetry between the elements conjoined.”<sup>22</sup> So, we typically access our computational devices using keyboards, mice, screens, or touch-sensitive panels; but at other levels, interfaces facilitate the access of, for instance, automated processes to machine-readable data. As Christian Ulrik Andersen and Søren Bro Pold argue in a recent book, the interface could be considered one of the defining computational logics of our indeterminate postdigital media situation; as logic, this constitutes what they call the “metainterface.”<sup>23</sup> They present the interface as representative of a more general, computational tendency, recapitulating the version of the media concept that claims operative media recede from notice for an age in which computation is massively distributed. Another response to the interface and to the media-theoretical claim it recapitulates might change its terms. In mediating their capacity to recede from notice, media arguably *present* the category of materiality to us as an epistemological means by which they might be apprehended, in theory. That is, that media mediate undermines the category of materiality’s capacity to explain media ontologically. This argument isn’t idealist so much as it concretises our media-theoretical epistemologies: that media are *there* must be filtered through their capacity to frame “there” in its obdurateness and resistance.

One of Kittler’s late essays provides us with the means to formalise this approach to materiality. In a reflection on the general absence of technology from philosophy—which echoes the framing claims of Stiegler’s own philosophy of technology—Kittler<sup>24</sup> argues that the categories of form and matter that constitute Aristotle’s hylomorphic doctrine “are categories stemming originally from technical things and more or less forcibly transferred

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<sup>21</sup> Plantin et. al. “Infrastructure Studies meets Platform Studies.”

<sup>22</sup> Florian Cramer and Matthew Fuller. “Interface,” In *Software Studies: A Lexicon*, 149–52. Cambridge, Mass.: MIT Press, 2008. 150.

<sup>23</sup> Christian Ulrik Andersen and Søren Bro Pold. *The Metainterface: The Art of Platforms, Cities, and Clouds*. Cambridge, Mass.: MIT Press, 2018.

<sup>24</sup> Stiegler. *Technics and Time*. 3.

also to natural ones."<sup>25</sup> He uses this argument to claim that "[i]t is precisely because the opposition of form and matter stems from technology...that ontology systematically excluded media technologies from its domain."<sup>26</sup> I am less concerned with this—ontological—argument than I am with its epistemological implications. Kittler means to establish technical media as philosophy's *a priori* conditions of possibility, as per the discussion of an earlier essay of his in Chapter 3. But he also ties this *a prioretic* status to hylomorphic doctrines. Noting my earlier arguments against his positing of media as *a priori*, we can use Kittler's claims to make a media-historical epistemological proposition: media's materiality is a *technical*-epistemological product rather than an ontological predicate, because media constitute the—concrete-epistemological—conditions in which their own materiality becomes available as a category for theorisation. This puts another spin on his claim, cited above, that metaphysics "forgets technical media, from writing itself up to the written book, its own precondition."<sup>27</sup> This forgetting is by design. More than this, Kittler implies that the idea that nature likes to hide itself, *qua* Galloway, is an epistemological product of the kinds of hylomorphic distinctions that media technologies produce. Because it's by design, the specificities of this forgetting varies with media—and so, too, do the specificities of materiality itself.

In the convolution of media theory's higher-order disciplinary epistemologies—which shape how the materiality of media can be thought; and concrete media—which shape materiality for thought, the media-historical epistemological analysis I've presented doesn't claim that media are *not* material. Within the context of media theory, making this claim would necessarily posit them as being *immaterial*—or would, at least, open this claim up to this critique. Rather, the basic claim I mean to make is this: that media present materiality to us—that media mediate—renders ontology secondary and epistemology primary. By historicising the materiality of media with the claim that our media-theoretical epistemologies are historically variable, this

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<sup>25</sup> Kittler. "Towards an Ontology." 25.

<sup>26</sup> Kittler. "Towards an Ontology." 25.

analysis renders materiality as doubly recursive. Positing materiality as a predicate of media—that is, as before or coincident with media—might help us to specify their materiality, but it does not help us to think media in excess of themselves. This positing is caught up in media's own presentation of their materiality and in higher-order, media-theoretical-disciplinary epistemologies. Moreover, it's not enough to simply posit matter *after* media.

Bernhard Siegert's recent conceptualisations of "media after media" help us to understand why this gesture is potentially problematic. In response to what he identifies as the "becoming-inauthentic of media" in what I call our indeterminate postdigital media situation, Siegert argues for an approach that thinks what he describes as "the concrete ontic operations and practices that produce first of all ontological distinctions."<sup>28</sup> His approach to thinking these operations is to identify the constituent "cultural techniques" that media formalise. I've mentioned this concept in this thesis already; what makes it relevant to this discussion is the way it posits what's before and after media. For Siegert, using concrete cultural techniques to think ontology places media—and the media concept—in the position of being *after* mediatic operations. But it also introduces a recursion: what's after cultural techniques is the media that have been dissolved into cultural techniques. Cultural techniques might gain recursive purchase on the operative production of ontological distinctions, but would not be able to tell us more about media than that if they are material, their materiality is specific. Geoffrey Winthrop-Young describes this method as a "deconstructive manoeuvre" that we can use to "disentangle acts, series, techniques and technologies"; tellingly, he ascribes it the capacity to identify "the materialities of ontologization."<sup>29</sup> What escapes this recursion is what media are in excess of themselves. The same goes for a media-theoretical method we might construe from Kittler's assertion that

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<sup>27</sup> Kittler. "Towards an Ontology." 27.

<sup>28</sup> Bernhard Siegert. "Media After Media," In *Media After Kittler*, edited by Eleni Ikoniadou, and Scott Wilson. London: Rowman and Littlefield, 2015. 85; 87.

<sup>29</sup> Geoffrey Winthrop-Young. "The *Kultur* of Cultural Techniques: Conceptual Inertia and the Parasitic Materialities of Ontologization." *Cultural Politics* 10, no. 3 (2014): 387.



media produce hylomorphisms. In positing that materiality ought to be thought *after* media, what I'm trying to propose is an approach that rescues the media concept by positing its perpetual inauthenticity, as grounded by its concrete-epistemological specificity.

Instead, I want to take a cue from another of Matthew Fuller's articulations of software studies. In an approach that resonates with the subsection above on platforms, Fuller argues that recent software studies methods add a fourth term to Kittler's infamous tripartite conceptualisation of media. To foreshadow the next subsection, Kittler famously asserts that "the most elementary definition of media" is that they "record, transmit, and process information."<sup>30</sup> Fuller suggests that insofar as media "have in many cases become a subset of computational systems"—or inauthentic—they're also defined by what he calls "analysis": "the breaking down of complex entities into what, at a certain scale, can be read as nominally fundamental units, and working out their immanent, potential, or emergent relationships."<sup>31</sup> Media that defined by their own capacity for reinvention are also subject to perpetual analysis. At a certain scale—the scale of media's constitutive operations—the concept of cultural techniques *analyses* media. At the scale at which the internet meme operates, what analysis means is contingent. After Fuller, analysis is contingent on our media situation. Analysis is an epistemological operation. Once media become inauthentic—which is to say, once they're constituent parts of our indeterminate postdigital media situation and are, in turn, informed by this situation—these epistemological operations express the need to think media in excess of themselves. For Fuller, this operation is akin to Siegert's cultural techniques, seeking a given scale's—provisional—"fundamental unit"; but it also assumes that media already *are* in excess of themselves. Here, materiality is tacitly posited as coming after media because it's framed by analysis's scale.

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<sup>30</sup> Kittler, "The City is a Medium." *New Literary History* 27, no. 4 (1996): 722.

<sup>31</sup> Fuller. "Software Studies Methods." 254.

To think the internet meme or media like it, the next step is to ask how media that are already in excess of themselves might also already be *plural*. The infrastructures that enable media's massive distribution and help us to apprehend their circulations are material—but their materiality is expressed after media and, in chain, *after circulation*. This gesture neither relativises materiality nor claims its obdurate resistance is not a constituent part of media. Rather, it emphasises the epistemological need to specify what materiality is, in its historical concreteness and *for media*.

When we practice theory as though it's contemporary and when we treat the discipline of media theory as the field of its own reinvention, we treat the past as a component of the present. This is made possible by the forgetting of media or of infrastructure—and by the concomitant establishment of materiality as predicate that this forgetting facilitates. In this sense, we might say that by forgetting materiality, we can re-member infrastructure. The precursive role accorded to the category of materiality by media theory's higher-order disciplinary epistemologies would have to be revised. Instead of predicating the concrete—or coming before, materiality would give us a means of apprehending media's instantiated resistiveness *in medias res* and after we've established what media are *in circulation*. More than this, it enjoins us to reconsider the status of infrastructure itself within media theory. Thinking materiality *after* media amounts to a double gesture: it would allow media to express their specific, concrete materiality; but it would also draw upon the first media-historical epistemological precept, that media inform the conditions in which they become objects of theorisation, to reorder the relationship between the category of materiality and the media it instantiates. With this claim, the first media-historical epistemological precept converges with the second—that media-theoretical epistemologies are historically variable. In combination, what Kittler, Peters, and Fuller suggest is that concrete infrastructure doubles as *the infrastructure of thought*: not as its *a priori*, but as the large-scale, manifest concrete conditions in which theorisation is practiced

and in which the excessiveness of concrete circulating media can be analysed, which is to say, specified.

### 7.3 CIRCULATION AS BODY

Thought after the platform, the concept of circulation that I'm positing places the media concept in suspension. If media are in circulation, part of the task of thinking them is specifying what media are in excess of themselves; or, to put this another way—in excess of themselves, *what media are*. But this claim runs the risk of reproducing what I earlier identified as circulation's anatomical filiation.

In an earlier chapter, I used an analysis of William Harvey's anatomical experiments and his natural philosophical epistemology to identify what I called a tendency to *body media*. The anatomical filiation operates by reproducing the role that the body plays in Harvey's anatomical practices. As a natural philosopher, rather than what we'd now consider a scientist, Harvey's discovery was informed by an epistemology that attributed a final cause to the circulation of the blood, positing that it had to circulate *for the sake of* something: the vital body. Through a series of analyses of Harvey's influence on subsequent philosophical and commonplace usages of circulation, I argued that the term retains an anatomical filiation that reproduces the role that the body plays in Harvey's natural-philosophical epistemology and that this filiation persists in contemporary media theory. The persistence of this filiation is attributable, in part, to the epistemological interchangeability that we often accord to biological and technical processes, which allows circulation to be posited *for* an epistemological equivalent to Harvey's body—as in newspapers' circulation, the network, flows, vitality, or biopolitical circuits. Where Harvey elevates circulation to the body's organising principle, the persistence of this filiation subsumes media's concrete circulations to the "body" for the sake of which they circulate, ultimately reducing media to the ontological principles

that govern this “body” in contemporary media theory: vital and/or processual materialisms or materialised vitalisms.

Claiming that circulation is a technical concept runs the risk of reproducing this filiation’s epistemological gesture; or, of positing the technical ensemble—here, the platform—as that for the sake of which media circulate, reducing media’s circulations to expressions of a technical ontology. This is partly why I disengaged my claim that circulation is a technical concept from any specific technical ontology. At the same time, I also argued at the end of my analysis of circulation’s anatomical filiation that circulation’s tendency to *body* media actually expresses a crucial characteristic of media that we have to incorporate into our reconstruction of this concept. Insofar as media articulate something like a circuit, or something seemingly greater than the sum of their circulating whole, I suggested that media do constitute something like a body. There is a sense, that is, in which media circulate for the sake of something; or, to further freight this claim with meaning, that media circulate in excess of themselves. That is, there’s a sense in which media constitute pluralities and in which these pluralities generate emergent or large-scale effects.

Media theory obviously has a number of concepts that articulate this characteristic. Aside from those I focused on in my analysis of the anatomical filiation, which was explicitly concerned with circulation, we might list concepts like media ecology, media system, atmosphere, environment, the stack, or even media sphere. The third proposition I want to make is that this characteristic is crucial to thinking media in our postdigital media situation, but that it’s expressed in and by media’s concrete circulations. That is, rather than proposing that this characteristic emerges because media circulate for the sake of a body—or its epistemological equivalent, my argument is that this characteristic emerges because media circulate for the sake of *themselves*. In circulation, *media body themselves*.

My argument that the concept of circulation places the media concept in suspension clears the ground for this proposition. This proposition is tailored to articulate media's capacity to constitute something like a body, whilst avoiding reducing media to expressions of underlying ontologies. If media are after circulation, what media circulate for the sake of emerges in media's circulations. Posited in ontological terms, this claim flirts with tautology: *media circulate for the sake of media circulate...* Posited in concrete-epistemological terms, though, this proposition can help us to grasp not only how media exceed themselves, but also how in exceeding themselves, media seem to constitute provisional, concrete wholes—pluralities that envelop. To qualify this proposition, though, we have to address a double-sided question: in circulation, how do media *body* themselves?

The question of what media are in excess of themselves opens up a fundamental media-theoretical question that this thesis has worried at, but perhaps not ruminated on directly: *What are media?* We could list any number of responses to this question. Canonically, we might invoke one of the polar extremes represented by Marshall McLuhan's infamous claim that "the medium is the message" and Raymond Williams' equally-infamous retort, that media's status as "intermediate substance" has to be understood in the context of the broader "social practices" of which it forms a part.<sup>32</sup> That is, we might answer this question by positing a media concept in the lineages of technological determinism or social constructivism. Recent media theory seems to have moved beyond this reductive dichotomy, however. Media theorists are more likely to define media by highlighting other basic qualities, like media's functions. Some point out ways in which media might be thought in excess of themselves—if not in circulation. Yet others follow an alternate lineage of the media concept that I want to draw on to support my proposition that media *body* themselves. The approach I want to adopt posits that media can also be conceptualised as milieu, or as a middle place. I want to use this concept to

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<sup>32</sup> Marshall McLuhan. *Understanding Media: The Extensions of Man*. Cambridge, Mass.: The MIT Press, 1994, 7; Raymond Williams. *Marxism and Literature*. Oxford: Oxford University Press, 1977. 159; 163-4.

argue that media are able to *body* themselves because in circulating for the sake of themselves, they constitute emergent, enveloping milieus. This quality is not ontological. Because it emerges *after* circulation, it's concrete. Its capacity to envelop has epistemological effects. We can use it to articulate and to apprehend what circulating media body: online culture's seeming capacity to envelop and to overwhelm.

Before we can adopt the claim that media are conceptualisable as milieu, we have to contextualise it. This claim hinges on the idea that the media concept has two lineages: the dominant one, whereby media are conceived of as some variation on a "middle"; and an alternate one, which returns to the source of the media concept to identify a series of concepts that treat media as place. To recuperate this alternate lineage, both John Durham Peters and Antonio Somaini argue that the emergence of the media concept out of the Latin word *medium* is the result of a mistranslation. The source of *medium* is the Greek word *metaxy*, which Aristotle used to describe the intermediary substances that constitute our capacity to perceive things in the world. In a key passage in *On the Soul*, Aristotle argues that, "[s]eeing is due to an affection or change of what has the perceptive faculty, and it cannot be affected by the seen colour itself; it remains that it must be affected by what comes between."<sup>33</sup> He names this substance the *diaphanes*. This intermediary is one of many *metaxy* that Aristotle develops and which Somaini describes as the general category of those "necessary, intermediary entities that make sensory experience possible by transmitting the forms of external objects to the sensory organs."<sup>34</sup> This word would later be transposed into *medium* by Michael Scotus, who translated Averroes' commentary on Aristotle's *On the Soul*—the first source of this text in the Western world—into Latin.<sup>35</sup> Michael Scotus's translation could

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<sup>33</sup> Aristotle. *On the Soul*. In Jonathan Barnes, Jonathan, ed. *Complete Works of Aristotle, Volume 1: The Revised Oxford Translation*. Princeton: Princeton University Press, 2014. §7, 419a.

<sup>34</sup> Antonio Somaini. "Walter Benjamin's Media Theory: The Medium and the Apparatus." *Grey Room* 62 (2016): 30.

<sup>35</sup> Somaini. "Walter Benjamin's Media Theory." 30.

be charitably described as infelicitous: the Greek cognate for the Latin *medium* is not *metaxy*, but *mésōn*, the middle or the medium. If the *medium* and the *mésōn* are things, the *metaxy* is a place: a middle ground. Peters argues, consequently, that “[*m*]edium has always meant an element, environment, or vehicle in the middle of things.”<sup>36</sup> So, media always already include—or, indeed, For Peters and Somaini, *are*, in the ontological sense—environments, spaces, atmospheres, even the elements themselves.

In this vision, media studies would be irreducible to object, technology, or means. It encapsulates the tendency for media to be conceived of as *medium* or the occluded tendency to think media beyond mere means: recovering the connotations of *medium* from its translation into French, as what Peters calls *milieu*.<sup>37</sup> I want to use this concept to substantiate my proposition that media *body* themselves. However, rather than positing the *milieu* as an ontological quality of media, I want to posit it as an effect of media’s concrete circulations. Moreover, I want to argue that media express the oscillating capacity to act as both middles *and* middle places. This argument is made possible by my claim that media are after circulation. To make it, we need to provisionally answer that fundamental media-theoretical question: *What are media*—at least minimally?

Contemporary media theorists provide one answer to this question by defining media using their basic functions. The conception of media that’s proven to be one of the most influential—and, perhaps, the most parsimonious—is Kittler’s: as noted above, that media record, transmit, and process information. We can think of this as a technical conception of media: it conceptualises and categorises what media are through the basic technical functions of storing,

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The translation of *metaxy* as *medium* is occasionally attributed to Aquinas, as by Peters in *the Marvelous Clouds* (46). However, Somaini favours the claim that Averroes was the likely source, citing an influential Aristotle scholar—Emmanuele Coccia—as his authority. I follow Somaini and Coccia in this lineage. See: Coccia. *Sensible Life: A Micro-Ontology of the Image*. Translated by Scott Alan Stuart. New York: Fordham University Press, 2017.

<sup>36</sup> Peters. *The Marvellous Clouds*. 47.

<sup>37</sup> Peters. *The Marvellous Clouds*. 47.

transmitting, and processing, all of which converge in the computer.<sup>38</sup> For another clutch of media theorists, what most defines media is their capacity to recede from perception when they mediate. For Florian Sprenger, this quality means that media are “only relationally observable[] in other media, in associations and in differences.”<sup>39</sup> Sprenger argues, in terms that resonate with the arguments that I made in an earlier chapter on media-historical epistemology and the concept, that media must be conceptualised “not as fixed entities, but rather by historical circumstances in which something becomes a medium”, or that they are historically variable.<sup>40</sup> Sybille Krämer pushes media’s tendency to recede from perception even further in her recent reconceptualisation of media. Krämer argues that “a medium’s success... depends on its disappearance, and mediation is designed to make what is mediated appear unmediated.”<sup>41</sup> When media function, they institute a split between perceivable surface and physical medium: they are, she asserts, “bodies that can be disembodied.”<sup>42</sup> If Sprenger’s approach is historical, Krämer’s might be best described as Platonic. Its objects are the media that lie beyond their perceivable surfaces of mediation. One other noteworthy approach emphasises the role that media play as intermediaries. For John Guillory, media are middles; but rather than simply occupy places in between, they actively produce spaces between sender and receiver even as they overcome these spaces in mediation. Guillory identifies this process with the verb “distanciation.”<sup>43</sup> This echoes Michel Serres’ concept of the “parasite”, or the intermediary that establishes relations between whilst using its role to

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<sup>38</sup> Kittler. *Gramophone, Film, Typewriter*. Translated by Geoffrey Winthrop-Young and Michael Wutz. Stanford University Press, 1999. See also: Kittler. “The History of Communication Media.” *CTheory* (1996): <http://journals.uvic.ca/index.php/ctheory/article/view/14325/5101>.

<sup>39</sup> Sprenger. “The Metaphysics of Media.” 645.

<sup>40</sup> Sprenger. “The Metaphysics of Media.” 645.

<sup>41</sup> Sybille Krämer. *Medium, Messenger, Transmission: An Approach to Media Philosophy*. Amsterdam University Press, 2015. 31.

<sup>42</sup> Krämer. *Medium, Messenger, Transmission*. 34.

<sup>43</sup> Guillory. “Genesis of the Media Concept.” 257.



exploit those relations.<sup>44</sup> Whether conceived in spatial or abstract terms, this “middle” *inter-mediates*.

What unites each of these concepts is that they begin in the middle by positing a middle, construed as technical, recessive, absent, spatialised, or parasitic. Each also elaborates what we might think of as an ontology of media: because media is or does x, media *is*. I want to briefly mention one final media concept that fits in to this category of defining media using their basic qualities. This concept has the advantage of doubling as an epistemological heuristic that we can use to establish what’s at stake in asking the question, *What are media?*, in our postdigital present. Elsewhere, Peters argues that the media concept has three basic components: the message, the means itself, and the agents it involves.<sup>45</sup> This claim has the advantage of being able to stand in for similar conceptions in fields as varied as cybernetics, semiotics, cultural studies, and philosophy; in fact, it might lay claim to being the most exhaustive of its kind.<sup>46</sup> Interestingly, it also places the McLuhan and Williams approaches on a continuum. After Peters, we can argue that media theorists near the McLuhan pole focus explicitly on one component of this triad—the means, whilst those at the Williams pole think media across the triad of message, means, and agents.<sup>47</sup> As a basic concept of media, Peters’ triad helps us to understand why all of the concepts I glossed above fit in to the middle-*medium* lineage. Each pivots around the idea that media are means. More than this, Peters’ triad helps us to understand why concepts in this lineage struggle to respond to the problem of thinking media in excess of themselves.

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<sup>44</sup> Serres, *The Parasite*

<sup>45</sup> Peters. “Mass Media.” 267.

<sup>46</sup> Michel Serres. *The Parasite*. Translated by Lawrence R. Schehr. Minneapolis: Minnesota University Press, 2007.

<sup>47</sup> Peters. “Mass Media.” 267. Here, Peters distinguishes between the medium treated by media theory and the medium treated by art history: if the former is usually considered as means, the latter is conventionally conceived, after Clement Greenberg, as the material support for a work of art.

In a brief recent commentary on the media concept, Florian Cramer notes that what we call media now seems to include one, some, or all of the apices of Peters' triad, from "TV sets and record players", which are "receivers"; to networked electronic devices, which are "senders and receivers at once"; or even "the contents received and played back by them, such as music and video too."<sup>48</sup> As Cramer puts it, the media concept has undergone a "tumorous expansion" so that it now encompasses any or all of these particular referents.<sup>49</sup> As a result, he argues that the media concept has become troublingly ambiguous. For Cramer, the solution to the question, *What are media?*, lies in ignoring it altogether. He responds to this situation by—at least half-ironically—adopting the term "anti-media", noting that despite the media concept's seeming lack of utility, "[w]e can't rid ourselves of the word "media" simply because of its wide use and great impact on contemporary culture and politics."<sup>50</sup> But we might glean another meaning from Cramer's insouciant claim: a media concept that focuses on basic functions struggles to gain purchase on our indeterminate contemporary media situation and its massively distributed, constituent circulations.

A number of media theorists respond to this situation's excess of circulating media in conceptual kind. I've already dealt with a number of their concepts throughout the course of this thesis: in the introduction, the concepts of "post-media" or "post-internet"; in the chapter on the platform, several concepts that employ concepts of circulation drawn from other domains of knowledge, including political economy, the study of infrastructures, linguistics, or the sociological study of culture; in the chapter on the anatomical filiation, concepts that elevate circulation to the status of a principle and so reduce media's concrete circulations to the—network, flow, viral, vital, or bio-political—bodies for the sake of which they're posited as circulating; or in the previous chapter, the various media, literary, new materialist, affective, or political economic materialisms that either overlook circulation or else recuperate

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<sup>48</sup> Cramer. "Introduction." *Anti-Media: Ephemera on Speculative Arts*. NAI Publishers, 2013. 13.

<sup>49</sup> Cramer. "Introduction." 13-14.

circulation to the problem of whether or how media are materialised. Each of these sets of concepts deals, in some way, with the question of how we might think excesses of circulating media. However, each of these sets of concepts posits an approach to media that draws support from beyond the media concept itself.

My proposition that media *body* themselves accords this capacity *to* the media concept. It's premised on the—perhaps quixotic—idea that we can retain the media concept in the face of its tumescent expansion, which is to say, its contemporary dissolution. The question, *What are media?*, is shadowed by another: How might we retain the media concept today? My attempts to think media in circulation are certainly informed by this qualifying question. What I want to claim is that thinking media after circulation and as body requires that we posit an alternate, minimal media concept. Here, my proposition that circulation bodies media as milieu converges with the problem of media's ambiguous double status as instance and plurality and *its* concomitant proposition: that in circulation, media can be expressed as instance and/or plurality.

#### 7.4 INSTANCE AND PLURALITY—OF CIRCULATION

To contextualise this fourth proposition, I want to differentiate it from a set of media-theoretical approaches that I've yet to address in this thesis. There are a number of different concepts of media that posit media as enveloping wholes, but that don't employ the "milieu" concept that Peters and Somaini develop. These approaches resonate with other contemporary theoretical frameworks that think enveloping wholes—I'm thinking of the work of Simondon on individuation and technology's "associated milieu", or Félix Guattari's "three ecologies", or Peter Sloterdijk's work on "spheres" as conditions for contemporary life, or Jacques Rancière's concept of the "distribution of the

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<sup>50</sup> Cramer. "Introduction." 13-14.

sensible<sup>51</sup>.” However, they often theorise this capacity by drawing on theoretical frameworks from outside of media proper.

In the introduction to their edited collection of essays on media theory’s key critical terms, Mark Hansen and W. J. T. Mitchell tease the following proposition out of media’s capacity to be used to refer to singular or plural objects: the media concept opens out “the notion of a form of life, of a general environment for living—for thinking, perceiving, sensing, feeling—as such.”<sup>52</sup> For them, the media concept refers to devices, but it also encompasses environments. Similarly, recent reconceptualisations of the concept of “media ecology” emphasise the need to conceptualise media in and through their situated, material heterogeneity. Going beyond Neil Postman’s informational concept of media ecology, which treats media in their totality as the constituents of “a complex message system which imposes on human beings certain ways of thinking, feeling, and behaving”,<sup>53</sup> or Marshall McLuhan’s conception of media as “the extensions of man” that institute “new ratios” which “interact among themselves”,<sup>54</sup> these concepts posit media in their dynamic processuality. In his influential treatment of the concept, Matthew Fuller explains that he adopts the term “ecology” because “it is one of the most expressive language currently has to indicate the massive and dynamic interrelation of processes and objects, beings and things, patterns and matter.”<sup>55</sup> Extrapolating from Fuller’s concept, Jussi Parikka argues that “[m]edia function as an ecology in the sense that they are formed through circulations of energies, functions and so on”, which opens the media concept

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<sup>51</sup> Simondon. *On the Mode of Existence*; Félix Guattari. *The Three Ecologies*. Translated by Ian Pindar and Paul Sutton. London and New Jersey: The Athlone Press, 2000; Peter Sloterdijk. *Bubbles: Spheres Volume 1*. Translated by Wieland Hoban. Cambridge, Mass.: The MIT Press, 2011; Jacques Rancière. *The Politics of Aesthetics: The Distribution of the Sensible*. Translated by Gabriel Rockhill. London: Verso, 2004.

<sup>52</sup> W. J. T. Mitchell and Mark B. N. Hansen. “Introduction,” In *Critical Terms for Media Studies*, edited by W. J. T. Mitchell and Mark B. N. Hansen. Chicago: University of Chicago Press, 2010. xii.

<sup>53</sup> Neil Postman. “The Reformed English Curriculum,” In *The Shape of the Future of American Secondary Education*, edited by A. C. Eurich, 161.

<sup>54</sup> McLuhan. *Understanding Media*. 53.

<sup>55</sup> Fuller. *Media Ecologies*. 2.

to the way that media “redistribute the forces that are not only technological in their existence but also aesthetic, economic, and chemical.”<sup>56</sup> These concepts open our media-theoretical imaginaries to the possibility of apprehending how media exceed and, so, envelop us by constituting environments that we inhabit—but I want to take a different tack.

For Mitchell and Hansen, media’s plural-environmental nature informs the nature of the human itself. Drawing on Stiegler’s concept of “hominsation”—the idea that technology constitutes the human’s interiority by first allowing it to exteriorise themselves by producing memory supports—Hansen and Mitchell argue that “[b]efore it becomes available to designate any technically specific form of mediation, linked to a concrete medium, media names an ontological condition of humanisation.”<sup>57</sup> Their approach *bodies* media by embodying its purpose in the remembering human. For Fuller and for Parikka, the media concept is distributed into its ecologies. This concept captures media’s dynamism by situating it in place; it’s interesting and it’s useful, but it’s arguably not relevant to our particular problem because it stretches the media concept beyond media, *per se*, by adopting ontological principles of the sort that I want to avoid ascribing to circulation. Another tendency finds its representative in Alexander R. Galloway’s work, which invites us to critique what he calls—also at least half-ironically—“media-centric” media concepts that coincide with the technical apparatuses that instantiate media and, in response, to focus on processes of “mediation.”<sup>58</sup> This echoes Sarah Kember and Joanna Zylinska, but instead of arguing that we need to adopt vitalist theoretical frameworks to think mediation, Galloway argues that we need to develop alternate methods of apprehending media. In response to what I’ve been calling our postdigital media situation, Galloway calls for what he calls “furious” methods that are able to respond to the digital network in its expansiveness, or

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<sup>56</sup> Jussi Parikka. “Media Ecologies and Imaginary Media: Transversal Expansions, Contractions, and Foldings.” *The Fibreculture Journal* 17: unnatural ecologies (2011): 37.

<sup>57</sup> Stiegler. *Technics and Time 1*. 141-2; Mitchell and Hansen. “Introduction.” xii.

<sup>58</sup> Galloway. *The Interface Effect*. Cambridge and Malden, MA: Polity, 2012. 13; “Love of the Middle.”

as “an ecosystem, a swarm, a cloud.”<sup>59</sup> Whilst Galloway’s approach is compelling, it arguably doesn’t successfully substantiate what “furious” media might be or how they might be apprehended.

Instead, I want to draw on Peters’ and Somaini’s respective conceptualisations of media as milieu. For Peters, this concept offers a means of thinking the elements and our physical environments themselves as media. As he argues, the media concept has “always stepped in to fill the environmental gaps to explain contact at a distance.”<sup>60</sup> Somaini uses detailed reengagements with Walter Benjamin’s body of work to introduce a distinction between the media apparatus—for Benjamin, the “*Apparate*”—and the “*Medium*”, which for Benjamin constitutes “the spatially extended environment, the *milieu*, the atmosphere, the *Umwelt* in which perception occurs.”<sup>61</sup> After Benjamin, Somaini argues, the analysis of media constitutes an “aesthetics” that “studies the historical transformations of a sensory experience that is *always* somehow technically mediated.”<sup>62</sup> I want to use their approaches as a point of departure for a media concept that we can use to substantiate my claim that media *body* themselves—with one caveat. Rather than positing a distinction between media conceived as “middle” and media conceived as “milieu”, my proposition is that these mediatic modes are not ontological, but concrete. That is, I want to propose that they emerge *after* circulation, *as* bodied media.

Earlier, I said that Cramer’s concept of “anti-media” demonstrated that the media concept struggles to gain purchase on our contemporary media situation. We might glean one more meaning from his claim that the media concept has undergone a “tumescant expansion”: that if we’re to retain this concept and if it’s to have any purchase on our postdigital media situation, it needs to be able to address media in a plurality of spatial configurations. That is, it needs to be able to address media as middles *and* as milieus; or, *in* their

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<sup>59</sup> Galloway. “Love of the Middle.” 58.

<sup>60</sup> Peters. *The Marvelous Clouds*. 47.

<sup>61</sup> Somaini. “Walter Benjamin’s Media Theory.” 7.

<sup>62</sup> Somaini. “Walter Benjamin’s Media Theory.” 8. Emphasis original.

capacity to expand and, conversely, to contract. By proposing that media are after circulation, the approach that I've introduced here arguably provides us with the epistemological means to introduce such a revised concept of media. My claim that media *body* themselves is posited in response, to think two contradistinctive characteristics of contemporary media: first, what Benjamin H. Bratton has called massively-distributed media's quality of "placefulness";<sup>63</sup> and second, what art historian David Joselit notes—in a different theoretical register—as media's paradoxical "status of being everywhere at once rather than belonging to a single place"—or, what we might call "everywhereness."<sup>64</sup> These claims seem just as distinct as the concepts of *milieu* and *medium*. One articulates envelopment; the other, an excess of circulating media instances. But the media concepts underlying these qualities need not be mutually exclusive.

In a commentary on the significance of Aristotle's concept of the *metaxy*, Kittler provides us with a point of departure we can use to formalise a media concept that reconciles these two distinct conceptions. With the *metaxy*, Kittler argues, Aristotle "is the first to turn a common Greek preposition—*metaxú*, between—into a philosophical noun or concept: *tò metaxú*, the medium."<sup>65</sup> By positing media as a noun, Aristotle identifies media as that which envelop us and enable perception. Kittler goes on to downplay the significance of the *metaxy* in Aristotle. For him, this is not a media concept, because it relegates the media function to *aisthesis*, or sensory perception.<sup>66</sup> But he also makes an offhand comment that I want to use, in a manner not originally intended, as the basis for an alternate media concept. With Aristotle's conceptual innovation, claims Kittler, "there exists no nothing anymore, but a mediatic relation."<sup>67</sup> My proposition is this: media are, minimally, this *no*

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<sup>63</sup> Somaini. "Walter Benjamin's Media Theory." 29.

<sup>64</sup> David Joselit. *After Art*. Princeton: Princeton University Press, 2013. 17.

<sup>65</sup> Kittler. "Towards an Ontology." 27.

<sup>66</sup> Kittler. "Towards an Ontology." 24.

<sup>67</sup> Kittler. "Towards an Ontology." 30.

*nothing*; it's only afterwards, in practice, that they express the quality of acting as *milieu* or as *medium*—or, indeed, as both.

This *no nothing* is a-ontological. It doesn't posit media as *this* rather than that. It might be accused of being apophatic—of positing media only by positing it as what it is not. My intention is not to avoid the question of what media are so much as to avoid assigning a particular spatiality to media in advance. We're now in a position to further qualify my claim that media *body* themselves. In circulation, media need not circulate for the sake of an-other body, posited as an ontological principle. In and through their concrete circulations, media articulate spatialities—operating as intermediaries, which is to say, as instances; or enveloping in their plurality; or, indeed, circulating as an excess of instances. By placing the media concept in suspension, this approach operates in a concrete-epistemological register: what media are depends on how they're bodied, and how they're bodied depends, at least in some cases, on how they circulate. What I want to propose is that in circulation, media can be bodied as *either milieu* or as *medium*, because circulation articulates media as *either* "placefulness" and/or "everywhereness"—as middle-place or as a multiplicity of middles. What mediates these capacities are media themselves, as they're put in to circulation by technical ensembles and as they produce the distinctions that make them legible to us. In claiming that media *body* themselves in circulation, I mean to express both that they can't be subsumed to an ontological principle *and* that in circulating for the sake of themselves, they're able to express enveloping wholes. This is another way of saying that in circulation, media can form reciprocally-related pluralities *and* collections of instances.

This returns us to the problem that I introduced at the beginning of this thesis and that I've been pursuing, circuitously, ever since—the internet meme's ambiguous double status as instance and plurality. Our reconstructed concept of circulation provides us with the epistemological means to resolve this problem. In circulation, the internet meme is after the platform: the platform as



technical ensemble puts it in to circulation, but doesn't define it as media; that is, as "content." In circulation, the internet meme doesn't take ontological predicates, but rather produces the distinctions by which it might be conceptualised; this is another way of saying that a category, like "materiality", can't help us to think a type of media that's defined by its own capacity for reinvention, because its constant mutations reinvent its relationship to such predicates. In circulation, the internet meme *bodies* itself, circulating as an excess of discrete media produced by users and also for the sake of something in excess of the discrete media the user produces: for itself. If its mediatic spatiality is defined both by its own capacity for reinvention and, minimally, by the notion that as media, it's *not nothing*, then it can express "placefulness" or "everywhereness", or both at once. Or: in circulation, the excess of circulating instances that constitute the internet meme as meme constitute, and are reciprocally informed by, its plurality.

This proliferation of terms might invite a question: Why instance and plurality? Aren't these duplicates of *medium* and *milieu*? If media are after circulation, my contention is that *medium* and *milieu* are, too. These are the terms we might ascribe to the minimal, *not nothing* concept of media—the media we apprehend once we've suspended the media concept—once we establish it as media, after circulation. That is, the *not nothing*, the instance-plurality, and the *medium-milieu* are expressions of what media are before, in, and after circulation. These are not hard and fast categories; rather, they're more akin to epistemological heuristics—conceptual tools that we can use to think media in circulation and, crucially, *in indeterminacy*.

It might also invite another: Why instance and plurality, rather than any number of like pairs—to list a few of the most seminal, Charles Sanders Peirce's token/type; Niklas Luhmann's medium/form; Walter Benjamin's original/reproduction?<sup>68</sup> His pragmatism notwithstanding, Peirce's token/type

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<sup>68</sup> Charles Sanders Peirce *Philosophical Writings of Peirce*, edited by Justus Buchler. New York: Dover Publications, 1955; Niklas Luhmann. *Art as a Social System*. Translated by Eva M. Knodt. Stanford: Stanford University Press, 2000. 102-132; Walter Benjamin. "The Work

is too semiotic and too idealist to be thought after circulation. Luhmann's medium/form captures media's emergent qualities, but is premised on a systems-theoretical framework that's arguably too hung up on the role communication plays in articulating discrete entities. Benjamin's original/reproduction best suits my personal theoretical interests, but it might also be subjected to a media-historical epistemological critique. To adapt Benjamin's distinction to a postdigital media situation characterised by indeterminacy and to a circulating media type—the internet meme—defined by its own capacity for reinvention would be to glean an ontological predicate from a specific media-historical moment, the advent of technological reproducibility. That is, it would be to institute Benjamin and technical reproducibility as precursor, taking the specific epistemological effects of his media age—what he calls a “shock effect” and which he ascribes to film—to be universally applicable to ours.<sup>69</sup> In lieu of shock, we have indeterminacy—terms that might be related to one another but for the concrete media-historical gulf between them.

What this reconstruction of circulation and its attendant propositions articulate is not an alternate theoretical framework that we can use to displace the media concept or its cognates and dependents, but a concrete-epistemological reflection on how we might think media in our indeterminate postdigital media situation. What it offers is a concept, a method, and an approach: circulation, media-historical epistemology, and what I call “meme theory.”

## 7.5 BEFORE AND AFTER

During a brief discussion of “infrastructuralism” and the work of Harold A. Innis, Peters introduces a reflection on media that will help us to conclude this chapter by construing what I'm calling “meme theory” as a media-theoretical

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of Art in the Age of Its Technological Reproducibility [Third Version],” In *Selected Writings Vol. 4, 1938-1940*, edited by Howard Eiland, and Michael W. Jennings. Cambridge, Mass. and London: The Belknap Press of Harvard University Press, 2003. 252–83.

<sup>69</sup> Benjamin. “The Work of Art.” 267.

practice. For Peters, what makes Innis's work so compelling is that it operates in what he calls the "ablative case"; that is, it always thinks media as that "by means of which."<sup>70</sup> The ablative case is a way of thinking media as always in the process of. The approach I've adopted in this thesis adopts a similar line of thinking, but construes it as reciprocal. It's not only that media must be thought in the ablative case; reciprocally, so must media's impact on our media-theoretical epistemologies. To think media in circulation and to be able to apprehend media in our indeterminate postdigital media situation necessitates adopting a media-theoretical practice that is situated *in indeterminacy*, concepts and methods at the ready not only to apprehend media in circulation, but to be recapitulated in turn.

In a recent essay, Galloway asks a question that's relevant to this reflection:

Whether or not critique remains viable, we must still ponder the original Kantian question: is thought as such dictated by the regularity of an inherited structure, or is thought only possible by virtue of an asymmetrical and autopoitional posture vis-à-vis the object of contemplation? Having inherited the computer, are we obligated to think with it?<sup>71</sup>

In response, the argument of this thesis would be that it's not possible to think contemporary media—at scale and as defined by what Fuller calls "analysis"—apart from the computer or the other media it represents. This does not mean that we need to think *with* the computer, but merely that it's not possible to think in the same way *after* its advent. This raises a question that is, perhaps, more pertinent: once we posit that media constitute the conditions in which they become objects of theorisation, do media have a reductive or deterministic effect on our conceptions of theoretical practice?

By claiming that the concept is the higher-order epistemological category around which theoretical practice should be organised rather than the

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<sup>70</sup> Peters. *The Marvelous Clouds*. 21.

<sup>71</sup> Galloway, 126

theoretical framework, what I'm calling "meme theory" recognises that whilst media theory might have its own epistemologies, media have theirs too. Whilst it might imply that media theory is wholly determined by its media situation, the aim of this approach is instead to both recognise *and to formalise* the proposition that media's epistemologies are much more concrete and much more banal—and, crucially, that their epistemologies are more *historically variable*—than the concept of determination otherwise implies. Whilst it might imply that we have to approach media unequipped with theory, what it suggests is that because media produce epistemologies, our engagements with them are nothing if not minimally theoretical. As an approach, to start *in indeterminacy* is to come equipped with concepts that can help us assemble theories, frameworks, or whole epistemologies at the point of contact between media theory and concrete media.

In this vein, the reconstruction of the concept of circulation offered by this chapter isn't easily generalisable beyond the discipline of media theory. To briefly recall Osborne's reflections on theoretical practice, the concept of circulation is not a "trans-disciplinary" concept *a la* "the text." As I've posited it here, it's in fact the opposite: it's situated, recursive, responsive, concrete, and contingently-epistemological. It doesn't generalise a condition so much as present a set of propositions that one might use to disentangle media and theory from their concrete-epistemological convolutions and to lend a little specificity to the indeterminacy that characterises our postdigital media situation. Again, in claiming this, I don't mean to critique interdisciplinary modes of knowledge production, only to point out that they have epistemological costs that aren't always recognised or paid by theoretical practices carried out under the auspices of theoretical frameworks.

What, then, of our indeterminate postdigital media situation? One way of articulating its indeterminacy might be to recognise that our media-theoretical practices often contribute to it, by forgetting the technical ensembles that put media in to circulation; by subsuming circulating media to ontological bodies;

by positing categories—like materiality—*before* media. To draw out the spatial metaphor, if what I'm calling "meme theory" is a practice that begins *in indeterminacy*, or with the assumption that media constitute the conditions by which they become objects of theorisation, what it might offer is a means apprehending, gaining purchase on, and perhaps even *working with* indeterminacy. Circulation perhaps provides us a means of discerning the lineaments of our postdigital media situation. This approach starts with concrete media, but it starts thinking them by starting with their before and their after. Instead of starting with theoretical propositions, it starts with media-historical epistemological problems. It starts by asking a question: *How do media exceed themselves?*

## 8. THE NEW ONLINE CULTURE WARS

### 8.0 IN EXCESS

An analysis of the internet meme in circulation has to begin by asking a question: *How do these media exceed themselves?* In this chapter, I want to use this question as the prompt for a series of engagements with concrete, circulating internet memes organised around the emergence of what I call the new online culture wars, which broke out—and broke out of online culture proper and in to the mainstream—during the contentious 2016 U.S. Presidential election.

This moment is unavoidable in a thesis about internet memes. It is, perhaps, online culture's single most defining moment in the past decade—besides the Gamergate moment that preceded it and that is, arguably, its direct precursor.<sup>1</sup> Internet memes have played such a defining role in these culture wars that they've become bound up together in popular understandings of what they are and what they're for. This also makes this moment particularly apposite as the focus of our analyses. This chapter will focus on three meme-pluralities that fomented during this moment: the now-infamous Pepe the Frog meme; a meme that was made out of an image of an infamous far-right internet demagogue, Richard Spencer, being punched during Donald J. Trump's inauguration parade; and a meme that circulated online in the wake of 2016's seismic political events—in the West at least—as variations on the phrase—and the sentiment—"Fuck 2016."<sup>2</sup>

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<sup>1</sup> Adrienne Massanari. "#Gamergate and the Fappening: How Reddit's Algorithm, Governance, and Culture Support Toxic Technocultures." *new media & society* Pre-print (2015); Michael Salter. "From Geek Masculinity to Gamergate: The Technological Rationality of Online Abuse." *Crime Media Culture* Pre-print (2017): 1–18.

<sup>2</sup> Know Your. Meme. "Fuck 2016." Accessed 28 September, 2018. <https://knowyourmeme.com/memes/fuck-2016>.

This chapter will begin with an enquiry into what it means for its examples to circulate as an excess of concrete instances. This capacity is what allowed the Pepe meme, in particular, to break in to mainstream culture. In circulation, though, internet memes constitute pluralities, recursively defining the collection of instances of Pepe, “punch a Nazi”, and “Fuck 2016” memes as coherent, perpetually reinvented *bodies*. What the reconstructed concept of circulation helps us to recognise is that in constituting pluralities, what internet memes are circulated *for the sake of* is not just their defining, plural selves, but often something more. In the case of the new online culture wars, I want to argue that internet memes began to circulate for the sake of, and so to *body*, another kind of plurality again: what I want to call “negativity.” I don’t mean to invoke this term to describe any particular affect or effect. Rather, I mean negativity in a very general sense. After Sianne Ngai, I want to identify negativity as a complex of what she calls “ugly feelings”, a set of “minor” emotions that have no particular object and are easily dispersed. Negativity can be emotional or affective, but it can also be political. It can be situated in specific encounters in online spaces, but it can also be targeted. Online, it’s technically instantiated. These internet memes are particularly interesting because they help us to identify one of the mechanisms that organises contemporary online culture: the act of targeting negativity at audiences that do not yet exist, but who can be manifested through the act of circulating internet memes that invokes them as imagined antagonists.

This tactic isn’t always successful. At the massively distributed scale of the internet itself, it can also be terrifying. This tactic makes use of the capacity for internet memes to circulate for the sake of themselves to seemingly mobilise *the internet itself* against the antagonists it invokes into being. To help explain its dynamics, this chapter will draw on the work of Ernst Cassirer and Chantal Mouffe to argue that it operates as a technics of “myth.” We don’t often use this term to discuss contemporary culture, but its political-temporal dynamics can help us to understand how platforms inform and afford a contestatory, negative form of politics that hinges on the capacity to invoke antagonists in to

being. What I'm calling "meme theory" helps us to unpack the cultural politics of these new online culture wars by apprehending them in their cultural, technical, mediatic, and *mythic* registers. After circulation, internet memes emerge as pluralities. Negativity is not another of these pluralities but, rather, their plural effect. By holding the media concept in suspension, "meme theory" helps us to identify what internet memes are able to *body* beyond themselves when they circulate for the sake of themselves: mediate, emergent effects that are at the scale of the internet itself and that actively use the indeterminacy that characterises our postdigital media situation as a means for the practice of culture and of politics. What I'm calling "negativity" operates *in indeterminacy*.

What Pepe, the "punch a Nazi", and the "Fuck 2016" memes teach us is that whilst internet memes might be made by us, but what they circulate *for* is an open question to which "negativity" is an ambiguous but ultimately plausible answer. Negativity isn't what defines internet memes embroiled in the new online culture wars as media. What negativity *is*, in the ontological sense—as affect, feeling, politics, mediation, or all of these—only makes sense *after* circulation. But circulation also offers us a means to think the technical ensembles and operations that precede negativity's bodying. By taking a particular moment in the new online culture wars as the focus for this chapter's analyses, we can open this chapter up beyond particular internet memes to think the dynamics of media's concrete circulations more broadly. I want to adopt this before-after framing to illustrate both how negativity operates and, conversely, how circulation's status before and after media can also help us to identify and analyse our indeterminate postdigital media situation itself: by making *its* processes manifest.

This chapter will use its engagements with this internet meme to both develop and to apply the media-theoretical practice I'm calling "meme theory". Its analyses will be premised on the reconstructed concept of circulation that I posited in the last chapter, using its attendant propositions to present the internet meme—or, rather concrete internet memes—in their indeterminacy. It



will adopt a technical epistemology as a minimal framing heuristic to show that the internet meme's mutative reinventions are inextricable from the computational architectures—the platforms—that put them in to circulation; that internet memes body themselves as they circulate and are circulated for themselves; and that they perpetually—and provisionally—reconstitute the ontological terms with which they might be engaged. Part of what I want to demonstrate in this chapter is that internet memes' defining capacity to reinvent themselves necessarily informs media theory by concretely shaping how we might engage with media. Internet memes' capacity to self-obsolete requires a media-theoretical practice that's formulated to remain reflexively-responsive to its objects, lest it become obsolescent too.

## 8.1 THE NEW ONLINE CULTURE WARS

The internet is awash with negativity. It has always been difficult to talk about internet memes without talking about the bad feelings, questionable politics and outright hatefulness that perfuse meme cultures. It's now all but impossible: since 2014, online culture has been ground zero for a new and particularly virulent string of culture wars. Historically, this term referred to the increasingly-polarised battle for the "soul of America"—as Pat Buchanan put in his infamous 1992 address to the Republican Convention—that came to define politics in the United States from the nineties onwards.<sup>3</sup> It's often used to refer to no-quarter institutional political contests over fundamental—and mutually-exclusive—norms or ideals in the West more generally. The new online culture wars are different. These contests over norms don't play out in political speeches or the broadcast media, or even in clear antagonistic expression; rather, their terrain is the "ironical in-joke maze of meaning" that typifies online cultural production—and one of their main means is the internet meme.<sup>4</sup>

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<sup>3</sup> James D. Hunter. *Culture Wars: The Struggle to Define America*. New York: BasicBooks, 1991.

<sup>4</sup> Angela Nagle. *Kill All Normies: Online Culture Wars From 4chan and Tumblr to Trump and the Alt-Right*. Winchester and Washington: Zer0 Books, 2018. 11.

We can trace the genesis of these new culture wars to an event known as “Gamergate.” In principle, the Gamergate event describes a moment of intense antagonism in the online gaming community over who the culture of gaming should be for: on one side, progressive indie game designers and game critics; on the other, populist gamer sub-cultures. In practice, it played out as a campaign of harassment targeting a female game designer named Zoë Quinn. In hindsight, Gamergate proved to be the moment in which creeping tensions between different segments of online culture metastasised into an aggressive new brand of far-right politics, characterised by new ideological constellations of racism, anti-semitism, Ethno-nationalism, misogyny, homophobia, transphobia, and the advocacy of violence: what’s sometimes—reductively—referred to as the “Alt-Right.”<sup>5</sup>

It has to be noted that this sudden resurgence of far-right and reactionary tendencies into mainstream online and, later, offline political discussions has a prehistory. As the journalist David Niewert meticulously documents in his investigative account of reactionary politics in America, many of the major ideological trends that define the new online culture wars—like libertarianism, Ethno-nationalism, racism, anti-semitism, and secessionism—can be traced to specific precursor movements in recent U.S. Political history, many of which percolated in offline spaces and in protests, like the Rancher movement in rural Oregon or Timothy McVeigh’s Oklahoma bombing.<sup>6</sup> What Gamergate provided was a catalyst and a platform for these tendencies to coalesce into something resembling a globalised and coherent, if tenuous, movement.<sup>7</sup> Online, it intensified a series of fractures between distinct subcultural groups into new fault lines—between mainstream “gamers” and those they pejoratively deride as “social justice warriors” or, conversely, between “liberals”—adopted from the

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<sup>5</sup> Nagle. *Kill All Normies*.

<sup>6</sup> David Niewert. *Alt-America: The Rise of the Radical Right in the Age of Trump*. London and New York: Verso, 2018.

<sup>7</sup> Nagle. *Kill All Normies*.

U.S. politics term for a centrist-left partisan—and those they scorn as bigots.<sup>8</sup> The internet has always been characterised by an excess of negativity, but Gamergate gave it a new, frightening purpose—a war over the soul of online culture itself.

Over the course of the 2016 U.S. Presidential elections, it became spectacularly apparent that these new culture wars and their new politics could spill into the mainstream. Their agents included people like Steve Bannon, one of Donald J. Trump's closest advisors and the editor of Breitbart, a far-right website and Alt-Right hub; Richard Spencer, a proponent of U.S. "Ethno-states", or areas exclusively for white people; and Milo Yiannopolous, a reactionary provocateur who rose to prominence as a political commentator by exploiting Gamergate as a platform.<sup>9</sup> They also included a now-infamous internet meme known as Pepe the Frog. It's impossible to talk about internet memes without addressing Pepe, the new culture wars, and the intense currents of negativity that circulate in and as online culture. After 2016, internet meme culture was caught up in a broader politics of negativity that's crucial to understanding contemporary online cultural production. Pepe introduced the mainstream to online reactionary politics and to negativity that has come to define it.

## 8.2 NEGATIVITY

As the gloss above suggests, however, the complex of feelings, politics, antagonism and cultural production that's constitutive of the Pepe, "punch a Nazi", and the "Fuck 2016" memes' context, the new online culture wars, is so convoluted, conjoined, and con-fused as to seem almost impossible to properly characterise. To specify any one of these potential subjects as the focus of an analysis of the new online culture wars and its internet memes necessarily

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<sup>8</sup> Adrienne Massanari and Shira Chess. "Attack of the 50-Foot Social Justice Warrior: The Discursive Construction of Sjlw Memes as the Monstrous Feminine." *Feminist Media Studies* 18, no. 4 (2018): 525–42.

<sup>9</sup> Salter. "From Geek Masculinity to Gamergate." 8–9.

attenuates our capacity to analyse this moment as a whole, let alone to make sense the politics that have come to define it. This is why I'm adopting a deliberately-ambiguous term negativity as the conceptual fulcrum of this analysis.

Negativity connotes specific emotions and affects; denial and disagreement; disagreeableness; an approach to politics; a philosophical movement—nihilism; a philosophical manoeuvre—to negate; lack; charge; even nothing. Negativity, I want to argue, is one of the things that internet memes circulate for the sake of in the distributed engagements that constitute the new online culture wars. To think this term in its capaciousness, we can posit negativity as a non-specific concretion of what Sianne Ngai calls “ugly feelings.”<sup>10</sup> Ugly feelings—Ngai specifies feelings like disgust, envy, irritation, or anxiety—are both less intense and more convoluted than the emotions, like anger, that are the typical objects of scholarly reflection. Ngai conceptualises ugly feelings as “agonistic emotions” informed by a “global affect of against” that, crucially, doesn't necessarily take an object; whereas anger, for instance, is felt in response to something or someone, ugly feelings are far more diffuse.<sup>11</sup> As Ngai puts it, these feelings are “algorithmic or operational, rather than value- or meaning-based, involving processes of aversion, exclusion, and of course negation.”<sup>12</sup> With negativity, I mean to capture the generalised and minor, but nevertheless significant ill-feeling and antagonism that's become so characteristic of contemporary online culture. Moreover, negativity's grammatical function as a mass noun also conveys the quantity-less nature of this ill-feeling and its lack of an object. It's this quality that makes it particularly amenable to circulation.

Generalising these feelings as negativity allows us to apprehend the process by which bad feeling shades into worse politics. Negativity seems to taint all platforms, targeting no-one in particular. At the same time, it seems always to be on the verge of spilling over into the kind of focused enmity that

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<sup>10</sup> Sianne Ngai. *Ugly Feelings*. Harvard: Harvard University Press, 2009.

<sup>11</sup> Ngai. *Ugly Feelings*. 11.

characterised Gamergate and the scapegoating of Zoë Quinn. Ngai argues that ugly feelings “mediate between the aesthetic and the political in a nontrivial way.”<sup>13</sup> By engaging with negativity, we can pick apart the processes by which ill-feeling intensifies into targeted, intense emotion. Negativity’s ambiguity is productive because it denotes a pessimism or ill-intent that can manifest as a politics of negation. This negation might take an object, like Quinn. In a minor key, however, it describes the new culture wars’ more diffuse and abstract negation of an opposing politics that’s construed as non-specifically antithetical; whose motto might be, “whatever it is, we’re against it.” The ambiguity of negativity is intentional, finally, because it captures ugly feelings’ capacity to conjoin “predicaments from multiple registers”, as Ngai puts it.<sup>14</sup> To understand the Pepe, “punch a Nazi”, and the “Fuck 2016” memes, we need to understand the context from which they have emerged. To understand this context, we need to peel back the layers of irony and the political-emotional registers conjoined by the new online culture wars. Put otherwise, we need to apprehend negativity as feeling, politics, and, finally, as circulatory *tactic*. The new culture wars mobilise negativity by putting it in to circulation. To analyse these memes, I want to propose that we have to apprehend how negativity is both entered in to circulation by internet memes in the new online culture wars and, reciprocally, how its circulation holds these wars’ participants together in mutual antagonism.

Negativity can only articulate—that is, both separate and join, after *artus*, or joint—online culture when it’s entered into circulation. This invites a counter-question: how is negativity specifically, and feeling in general, constitutive of the capacity for internet memes to be in circulation? To answer this question, we have to go beyond Ngai’s incisive work by focusing on how political feeling is mediated in circulation and, further, by determining political feeling’s constitutive role in facilitating the circulation of internet memes for political-cultural ends. That is, we have to explicate how negativity is afforded by the

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<sup>12</sup> Ngai. *Ugly Feelings*. 11-12.

<sup>13</sup> Ngai. *Ugly Feelings*. 3.

technological ensembles that constitute our indeterminate postdigital media situation. I want to turn now to the “punch a Nazi” meme to explore the circulatory politics of internet memes, myth, and their technologies.

### 8.3 “WHO MAKES THE NAZIS?”

The ostensible topic of this section is the internet meme created from the footage of one of the Alt-Right’s figureheads, Richard Spencer, being punched at Donald Trump’s inauguration whilst giving a live interview. But the punch that launched a thousand memes is entangled in a rather complex knot of other, offline and online, threads. We can use this meme to unspool how negativity works in and through the circulation of memes that creates what I want to identify as an antagonistic, technically-mediated, and, ultimately, mythic mode of politics. I also want to use this meme to analyse how online culture attempts to challenge this politics’ pernicious ambivalence on its own terms: not through pure political contestation, whatever we might take that to mean, but through techniques of counter-circulation.

There’s a lot that could be said about Spencer. He came to prominence as the editor of AltRight.com and claims to have coined the term.<sup>15</sup> He’s the director of the National Policy Institute, a quasi-think-tank that organises conferences and publications.<sup>16</sup> His first noteworthy moment in the public eye came in late November 2016 when, in the wake of Steve Bannon’s appointment as election strategist to Trump in August, 2017, he finished his speech at his institute’s national conference with a Nazi-style salute, earning international notoriety.<sup>17</sup> What needs stressing is that Spencer is a white supremacist. Between late

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<sup>14</sup> Ngai. *Ugly Feelings*. 12.

<sup>15</sup> For context, see: Shuja Haider. “Safety Pins and Swastikas.” *Viewpoint Magazine*, January 4 2018. Accessed September 28 <https://www.viewpointmag.com/2017/01/04/the-safety-pin-and-the-swastika/>.

<sup>16</sup> Graeme Wood. “His Kampf [a Profile of Richard Spencer].” *The Atlantic*, June 2018. Accessed September 28 <https://www.theatlantic.com/magazine/archive/2017/06/his-kampf/524505/>

November and Trump's inauguration on January 20<sup>th</sup>, Spencer became something of a figurehead for the burgeoning Alt-Right movement. It's unclear how large this movement really is or how much traction it really gained. It has nevertheless exercised an outsized hold on the imagination of a traumatised post-Trump polity, in the U.S. and abroad.

So, the punch. The dynamics of negativity that I want to unpick converge in the meme of Spencer being punched. The resultant meme was created in the wake of the inauguration of Donald Trump on January 20<sup>th</sup>, 2018. Spencer was at the inauguration and, whilst in the crowd, was seen giving an interview to CNN. Whilst Spencer was explaining to the interviewer what the badge on his lapel meant—incidentally, depicting Pepe the frog in profile—a passing protestor rushed at him and punched him in the face. This footage later became a meme. This punch and its memefication are a violent act and its recuperation, respectively. This punch is also illustrative of the particular brand of negativity that Spencer came to represent as an antagonist and that its memefication came to be positioned against within the logic of the new online culture wars. To think through the way that negativity is deployed by its antagonists, we need to identify how online culture's generalised atmosphere of antagonism operates. To do so, I'd like to suggest that negativity is operationalised through contemporary techniques of myth-making.

The internet meme invites us to update an old adage for online media: when legend becomes fact, we might say, post the legend. By myth, though, I don't mean primitive thought. Nor do I mean to connote irrationality. Rather, I mean a contemporary technique that's central to politics and that renders feelings workable. Besides being puerile, offensive and often *bathetic*, internet memes can be productively conceptualised as a technology of contemporary myth. This punch is interesting because it can be treated as a hinge point in the articulation of a contestatory politics that is mythic in character. Following

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<sup>17</sup> Joseph Goldstein. "Alt-Right Gathering Exalts in Trump Election With Nazi-Era Salute." *The New York Times*, November 20 2016. Accessed September 28  
<https://www.nytimes.com/2016/11/21/us/alt-right-salutes-donald-trump.html>

Ernst Cassirer, we can understand myth as something that binds collectivities through “sympathy”, or feeling, rather than “causality”, or objective concerns.<sup>18</sup> It gives us what Cassirer calls a “unity of feeling”,<sup>19</sup> mixing the abstract and the real in a workable complex not *as* emotion, but as what Cassirer calls an “expression of emotion” that turns what we feel into an “image”, a determinate and apprehensible thing.<sup>20</sup> Transposed into the mediatic specificities of our indeterminate postdigital media situation, negativity is made apprehensible *in* circulating media. For Cassirer, myth makes feelings real and making them workable through techniques of “ritualisation”, which we might think of as the various modes of collective production through which myth is articulated.<sup>21</sup> This term smacks of collective modes of worship, like religion and devotion, as much as of darker, more irrational forms of collective participation. Writing in 1946 as a Jewish emigré to the United States, Cassirer had a specific political context in mind. Updated for new concrete mediatic realities, his language of myth and ritual is apposite to the new online culture wars because online culture in general and the internet meme in particular have increasingly been discussed, at least semi-ironically, using terms like “magic.” I’ll return to this in depth in the section on Pepe. For now, I want to flag that the internet meme can be treated as a technique of myth.

The Alt-Right updates the ignominious tradition of posting the fact when it becomes legend for our clickbit present. It uses negativity in a particular way: as a tool to propagate a contestatory, mythic politics predicated upon antagonism. This politics can be further conceptualised using Chantal Mouffe’s notion of “agonistics.”<sup>22</sup> For Mouffe, politics is, at base, antagonistic: it involves decisions between alternatives that cannot be reconciled through reasoned deliberation. Antagonism constitutes collectivities, or a “we”, by constituting friend/enemy distinctions in the confrontation between adversaries. Mouffe

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<sup>18</sup> Ernst Cassirer. *The Myth of the State*. New Haven: Yale University Press, 1946. 38.

<sup>19</sup> Cassirer. *The Myth of the State*. 38.

<sup>20</sup> Cassirer. *The Myth of the State*. 43.

<sup>21</sup> Cassirer. *The Myth of the State*.



also distinguishes between a state of antagonism and a state of *agon*, familiar in democracies, in which a hegemonic situation codifies the relation between adversaries. Mouffe's version of politics suggests that the moment of adversarial struggle is key to challenging—and, its partisans hope, in establishing—new hegemonic relations and alternate politics. Moments of decision in which exclusions and inclusions are generated are crucial to her conception of antagonism, and affect plays a central role in this process. As Mouffe puts it in a recent article, “refusing to provide democratic channels for the expression of collective affects lays the terrain for antagonistic forms of their mobilisation.”<sup>23</sup> This is not to say that not providing an outlet for particular forms of expression is the direct cause of the antagonistic politics I'm outlining. Rather, it's to note that the irreconcilability between this antagonism online and more mainstream forms of politics creates conditions in which negativity thrives, because it *feeds on* this very irreconcilability. This is how online cultures leverage their subcultural status to outsize effect. Affects articulate language and feeling in specific practices. What I'd like to suggest is that this notion of contestation can be used to analyse how a complex of negativity—or, of bad vibes and worse politics—gets mobilised to political ends.

To return to the punch again, we can treat this moment and its subsequent memeification as one in which negativity's antagonistic framing and contestatory politics become visible. Like any important moment, it has to be unfolded in both temporal registers of the before and the after. The before component of the punch can be unpacked using one of the Alt-Right's now-infamous memetic avatars, Pepe the Frog. I want to turn to Pepe, now, to give the punch more context, to specify the antagonistic contestatory politics within which its memeification operates, and to illustrate how the logic of the new online culture wars informs contemporary online culture.

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<sup>22</sup> Chantal Mouffe. *Agonistics: Thinking the World Politically*. London and New York: Verso, 2013.

#### 8.4 FROG-FACED MOBS

The most representative manifestation of the Pepe the Frog meme depicts a version of a cartoon frog with garish green skin, bulbous eyes, distended red lips, and a liverish cast. Like most memes, its story is contingent and a little bit “idiotic”, which is to say that it emerges out of online modes of performative idiocy.<sup>24</sup> Pepe began as a character in a comic strip created by an illustrator called Matt Furie in 2005.<sup>25</sup> In this original iteration, Pepe and a bunch of his friends would get into scenarios that were supposed to elicit what can only be described as a kind of puerile, frat boy humour. In 2008, a pane from this comic featuring the phrase “feels good man” became a reaction meme—a specific kind of internet meme that’s usually posted in reaction to a comment or post made by another user in a bulletin board, a thread, or a chat. In the years between 2008 and 2014—Gamergate’s watershed year—the Pepe meme continued to circulate, going through the iterations and reiterations characteristic of any meme. Along the way, meme-making subcultures situated in online fora, most notably 4chan, decided that use of Pepe by celebrities like Katie Perry and Nicki Minaj meant that the meme had gone *too* mainstream. So, they decided to recuperate it, tarnishing its reputation and associating it with hateful ideas by making it as offensive as they possibly could.<sup>26</sup> The Pepe meme became a vehicle for the expression of ideas and images that tried to push the boundaries of what one could use a cultural product to express, from violent forms of misogyny and homophobia to ableism and racism and anti-semitism of all stripes. Perhaps because of its offensiveness—perhaps for other, entirely-contingent reasons—the Pepe meme was enlisted in the new online culture wars.

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<sup>23</sup> Chantal Mouffe. “By Way of a Postscript.” *Parallax* 20, no. 2 (2014): 156.

<sup>24</sup> Olga Goriunova. “New Media Idiocy.” *Convergence: The International Journal of Research into New Media Technologies* (2012): 223-235.

<sup>25</sup> For an overview of the emergence of the Pepe meme, see my primer: Scott Wark. “Does This Meme Prove Donald Trump is a White Supremacist?” *Public Seminar* October 6, 2016: Accessed 28 September, 2018, <http://www.publicseminar.org/2016/10/does-this-meme-prove-donald-trump-is-a-white-supremacist/>.

After Gamergate, Pepe became a symbol of the Alt-Right. In the process, it also became a symbol of support for Donald J. Trump's candidacy during the 2016 Primaries—when he ran for nomination as the Republican Party's candidate for the U.S. Presidential Election—and his subsequent Presidential campaign.<sup>27</sup> This association appeared to be explicitly endorsed when Trump and, later, his son Donald Trump Jr. retweeted Pepe memes featuring Trump Sr. Pepe would later be named a symbol of hate by two influential anti-discrimination organisations, the Anti-Defamation League and the Southern Poverty Law Centre, around the time that Trump Jr. retweeted his meme.<sup>28</sup> Its association with Trump and with the rancorous 2016 election allowed it to become symbol of the Alt-Right and its new reactionary politics. In the wake of these events and after the crystallisation of the new online culture wars, it has become obligatory to talk about Pepe if one wants to talk about internet memes. But this meme is also a particularly good example of how a meme can express what Ngai identifies as the “special relationship between ugly feelings and irony.”<sup>29</sup>

As Ngai points out, irony is not a feeling per se; rather, it invests our feelings about something with reflexiveness, allowing us to form feelings *about* feelings we might have towards something.<sup>30</sup> Irony is a key rhetorical register in online culture. With Pepe, it takes on both distance and ambivalence. Early on in the evolution of the Pepe meme, meme producers flipped the content of the reaction image, “feels good man”, to make it read “feels bad man”, without changing the image itself. This image of Pepe seemed capable of expressing a contradictory feeling; or, to put it another way, this image seemed invested with a constitutive ambivalence. This ambivalence expresses one of the

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<sup>26</sup> See: Wark. “Does this Meme...”; Matt Applegate and Jamie Cohen. “Communicating Graphically Mimesis, Visual Language, and Commodification as Culture.” *Cultural Politics* 13, no. 1 (2017): 81–100.

<sup>27</sup> Nagle. *Kill All Normies*.

<sup>28</sup> Wark. “Does this Meme...”

<sup>29</sup> Ngai. *Ugly Feelings*. 10.

<sup>30</sup> Ngai. *Ugly Feelings*. 10.

features that best defines irony online: its constitutive reciprocal relation to its seeming-opposite, earnestness. Pepe is not only the avatar of online negativity, but one of its exemplars. Negativity stretches across online culture's seemingly-opposed registers as it stretches across the seemingly-opposed emotional registers of feeling itself. This ambivalence provides us with a key point of leverage for thinking the politics of circulation in online culture, because it opens up beyond its putative *content* on to a set of techniques that allow Pepe to become the means by which feeling can be circulated *and* manipulated. Pepe can help us to illustrate the technical predicates of feeling's online circulations and the role it plays in holding online culture together by allowing us to demonstrate how the circulation of negativity operates as the propagation of myth.

In an interesting appropriation of the work of Antonio Gramsci, amongst others, some of the proponents of the new reactionary right-wing politics have defined these contests as fights over cultural hegemony.<sup>31</sup> Alongside the antagonistic and invocatory dynamics of "shitposting" that undergirds the new culture wars, this suggests that these contests are as much about positioning one's opposing combatant as they are about making substantive political claims. This is how Nagle understands the new online culture wars in her recent, influential book on them. However, Nagle arguably takes the antagonistic positions that each side occupies in these new online culture wars at face value. They arguably make more sense if they're conceptualised as battles over the control of the means of circulation. On the level of the meme, techniques of circulation can be inferred, after the fact, from what circulates. On the level of a broader online politics, they can be inferred from those claims that garner the most visibility. But at the point at which negativity is to be put in to circulation, producers of online culture arguably use a different set of techniques that are best understood as *mythic*.

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<sup>31</sup> Nagle. *Kill All Normies*. 40-53; see also Haider. "Safety Pins and Swastikas."

## 8.5 MEME MAGIC

The Pepe and “punch a Nazi” memes converge in the technics of myth. Producers of Pepe memes and proponents of the Alt-Right alike have referred to the Trump-Pepe saga as “the great meme war”, arguing that the production of Pepe memes worked as a kind of “meme magic” to win the election for Trump.<sup>32</sup> Taken at face value, this claim is indefensible and, perhaps, even unhinged. But it’s also somehow compelling. This term, “magic”, is arguably best understood as an antagonistic tactic that uses the indeterminacy in which circulation operates and its capacity for massive distribution to manifest antagonists. It’s “magical” not because Pepe won an election, but because it managed to set the antagonistic terms in which online politics and online interaction could be understood. What comes after the circulating internet meme has to be made sense of by what came before. Rather than understanding the agent of this before as the collection of acts in which users put internet memes in to circulation, as though these operate in causal connection—or, after Cassirer, “objectively”—my claim is that it should be understood as the circulating conjunctions of feeling and politics that I’ve been calling negativity.

We can further substantiate this tactic of invoking antagonists by drawing on a semiotic term posited by Roman Jakobson: the “conative” mode of address.<sup>33</sup> Conative modes of address take no object, instead referring to an attempt to do something or to a generalised “you.” They can be used to invoke an antagonist. This “you” is also a “them” who we, the audience to whom an address is really targeted, are against. Online, these modes of address are also, fundamentally, technical—they are mediated by the platforms that make them possible. What the Pepe the frog meme circulates, alongside hate, is a conative mode of address—it outlines a swathe of identities which it, and by extension those who circulate it, are putatively against. The conative address

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<sup>32</sup> McKenzie Wark and I write at length on the dynamics of meme magic and circulation. See: “Circulation and Its Discontents,” In *Post Memes: Seizing the Memes of Production*, edited by Alfie Brown, and Francis Russell, Forthcoming. Santa Barbara: punctum books, 2019.

encompasses a number of typical online cultural techniques, including trolling, or deliberately antagonising online; “shitposting”, or posting an excess of nonsense in order to prompt a response in a discussion; “derailing”, or undermining conversations by posting material that’s irrelevant; and “swarming”, or overwhelming an online space or community with unwanted material.<sup>34</sup> These tactics and others like them turn conative modes of address into the techniques by which the “magic” of memes manifests antagonists by using the circulation of internet memes to manifest a generalised atmosphere of antagonism, or negativity, that not only establishes the contestatory politics that has come to define the new online culture wars, but also establishes the *positions* that this culture wars’ antagonists occupy. Like the older political contests from which they derive their name, these new online culture wars are fought over the means of circulation, because these means of circulation are also the means to define the terrain of political contestation. The claim that internet memes are the agents of “magic” is one of this contest’s tactical sorties.

Returning to the “punch a Nazi” meme can help us to explicate this claim. Spencer was punched as he was explaining the Pepe lapel pin he was wearing to his interviewer. If Pepe is part of the before of this meme, its actual memeification is the after. This moment is one that’s repeated: literally, in that it was later learned that Spencer was punched a second time that day by another protestor; and technically, in the creation and variation of a series of memes. Its transition into circulation is smoothed, in this case, by the antagonistic position of the people who most likely shared and propagated it: anti-Alt Right partisans of the new online culture wars. The—causal—explanation of why it might have circulated is less compelling, however, than

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<sup>33</sup> Roman Jakobson. “Linguistics and Poetics,” In *Style in Language*, 350–78. Cambridge, M.A.: MIT Press, 1960.

<sup>34</sup> On trolling, see: Whitney Phillips. *This is Why We Can’t Have Nice Things: Mapping the Relationship Between Online Trolling and Mainstream Culture*. Cambridge, Mass.: MIT Press, 2015; on swarming explained through an ethnography of Anonymous, see: Gabriella Coleman. *Hacker, Hoaxer, Whistleblower, Spy: The Many Faces of Anonymous*. London: Verso, 2014.

the emotional one. In circulation, this internet meme responds to the negativity generated by Pepe and to the politics it instantiates in kind. Spencer's political platform is carefully calibrated to antagonise a particular kind of political subject: the much-maligned practitioner of identity politics. He often refers, for example, to the plight of the self-identified "white male." He also refers to the Ethno-states he advocates as "safe spaces." He is, in other words, a consummate antagonist.<sup>35</sup> This is how the Pepe meme could be taken up as the Alt-Right's symbol: because it operates within the same logic of antagonising a conflict in to being.

In one sense, the Alt-Right is, itself, a myth that circulates online thanks to fear, misunderstanding, and our contemporary political context. With Cassirer and Mouffe, we can understand myth as something that isn't antithetical to political discourse, but rather a constituent of it. Myth is mobilised through techniques: that it, its antagonists or its publics *don't exist as such outside of the techniques of circulation that bind them*. The internet meme is in circulation; it puts myth, antagonism, and politics in to circulation. To mistake the content of the memes as mythical, irrational, and, finally, inexplicable is to replicate a misunderstanding of media *and* circulation. This mistake is analogous to assuming that content is the content of circulation, or that content is the content of what platforms present. To accord the meme mythical-magical, rather than mythical-political, qualities, finally, is to take the ambivalence of the technically-mediated conative address's ironic rhetorical mode far too literally. It is, in the end, to fail to theorise mediation.

We can identify the punch's memetic counter-punch as the moment that the mediation of the myth of the Alt-Right could be circulated otherwise. Insofar as this meme was promulgated by partisans on the other side of the online culture war divide, it demonstrates an attempt to circulate memes for the sake of a competing form of negativity: a joy in the violence perpetrated against Spencer. In saying this, I don't mean to condone or to condemn this violence

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<sup>35</sup> Wood. "His Kampf."

either way or to establish an equivalence between the two sides of this culture war, which would simply reproduce its logic. I mean to demonstrate two things. First, the new online culture wars turn the *bodying* of internet memes into a political-technical expedient. Second, the content of these online culture wars is important; but their means operate in excess of their often-deplorable memetic instances or political claims. The new online culture wars subsist in circulation, resuscitating mythic-political modes to invoke antagonists where none previously existed and to goad those that now exist into perpetuating its logic.

In circulation, instantial-plural internet memes express qualities of “placefulness” and of “everywhereness”—a sense of constituting circulations as apprehensible *body* and of circulating as an excess of concrete instances. Their concrete circulations trace the lineaments of our postdigital media situation, making parts of it manifest. In epistemological terms, this might go some way towards explaining why we can use exemplary forms of online cultural production to understand online culture at large. But it also helps us to understand that indeterminacy itself can be weaponised along with platform-based technics of myth and negativity. In their placefulness and their everywhereness, internet memes also possess the often-frightening capacity to circulate as though from nowhere. In its massive distribution, the internet seems indeterminate; or, boundless and, so, difficult to both apprehend and to think. At the same time, this indeterminacy can also be turned against the internet’s constituent users, particular subcultures, or even offline publics. Negativity isn’t what defines internet memes caught up in the new online culture wars as media. Rather, their own capacity for reinvention and their capacity to body and, so, in some sense *manifest* the internet does. What negativity *is*, in the ontological sense—as affect, feeling, politics, mediation, or all of these—only makes sense *after* circulation.

As that for the sake of which internet memes are made to circulate by the new online culture wars’ antagonistic logic, negativity becomes thing as much as



feeling, a felt thing by which the internet itself seems to obtrude on online culture and its users. After the new online culture wars and after negativity's *bodying*, this antagonistic logic marks out the horizon of contemporary online culture. Above, I said it's not possible to talk about internet memes without talking about Pepe. This is another way of saying that it's no longer possible to think online culture without thinking negativity. After negativity, circulation itself becomes a threat.

#### 8.6 I'M GLAD IT'S NEARLY OVER

The events of 2016 were so unexpected to many of the users that constitute contemporary online culture that the year itself became the subject of a meme: variations on the theme of "Fuck 2016" became commonplace on social media, in bulletin boards, even further afield. We could read these memes as expressions of a general sentiment that's not specific to online culture or the internet. But it's not too much of a stretch to conceive of it as an expression of online culture's own conception of itself. If 2016 was the year of Trump's election, it was also the year that the new online culture wars turned into a conflagration vicious enough to cross the screen. "Fuck 2016" expresses a political-emotional sentiment that both reacts to and feeds the negativity bodied by circulating internet memes. It also expresses a sense in which the internet was no longer the same. The imagery we associate with the internet—blue-hued abstractions meant to convey frictionless computing, or pastel-tinted visions of start-up culture—must now share mental space with Pepe's corpulent green likeness and the Neo-Nazi symbolism of newly-emergent far-right movements. After the advent of the new online culture wars, the internet *felt* different. I want to conclude with a brief reflection on what this might mean.

The internet has never been a neutral space. But its platforms and online communities at least had the illusion of allowing its users to participate in the constitution of the cultures they consumed. I've not mentioned the user too much in this thesis. This has been deliberate: my goal has been to theorise the

internet meme and, in order to do so, to reconstruct the concept of circulation; there's only so much space. Along the way, I posited a critique of the concept of participation—in the third chapter—that I want to pick up on now. Users obviously make memes. But to say that online culture is participatory or to say that the internet meme *is in* circulation is to make two radically different claims about the role that users play in online culture. In circulation, the internet meme is in excess of itself. More than this, in circulation, the internet meme circulates for the sake of itself. My engagement with the new online culture wars above provides us with the means to further qualify what this means. Reduced to participatory culture, the internet meme is reduced to its instance—and subsumed once more by the problem of thinking its ambiguous double status. As plurality, the internet meme is irreducible to either its instance or to the instance of its production by a user. Moreover, overlooking the role that media technologies play in putting media in to circulation also overlooks the possibility that the users who contribute to meme culture might not be humans at all, but rather bots, automated programmes, or computational processes performing the same role.

This role is what Benjamin H. Bratton calls the “user position” to convey that users occupy a technically-constituted role within the technical ensembles that constitute the internet.<sup>36</sup> Untangling the implications of this “user position” in relation to the internet meme would take several more chapters. The point I want to make now is that the user is *also* indeterminate.<sup>37</sup> The question of what a user is or what it is that they can do online is subject to the epistemological indeterminacy and the media-theoretical necessity for an approach that's able to think *in indeterminacy*. “Meme theory” responds to this necessity. After the new online culture wars, this much is clear: when internet memes are used to *body* negativity, they are no longer merely the property of

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<sup>36</sup> Benjamin H. Bratton. *The Stack: On Software and Sovereignty*. Cambridge, MA: The MIT Press, 2015. 251.

<sup>37</sup> I write more about this elsewhere. See: Scott Wark. “The Subject of Circulation: On the Digital Subject's Technical Individuations.” *Subjectivity* 12 (2019): 65–81.

online culture; in fact, they represent an online culture turned against itself and sunk in to antagonism.

Recalling my earlier engagement with *Jennifer in Paradise* will help us to contextualise these reflections. If the Jennifer image was never a meme, the “Fuck 2016” meme imagined a future beyond the 2016 Presidential election and, by extension, the new online culture wars. If Jennifer could never have an afterlife, this meme expressed a collective wish for Pepe and its ilk to enter theirs. But the difference between this meme and Pepe is as stark as the difference between wishing and willing. Online, circulation is able to *body* negativity because it institutes a gap between the meme-instance and its plurality; or, between the meme produced by a user and entered in to circulation and the meme that circulates for the sake of something more than itself. If there’s a conclusion to draw from this, it might be that we produce online culture; but once online culture enters circulation, what it does and who it targets is no longer up to us. “Meme theory” has to deal not only with the meme’s perpetual redundancy and with our postdigital media situation’s indeterminacy, but with negativity: a circulating, concrete-epistemological excess in which online culture and circulating media become even less palatable and even harder to think. “Fuck 2016”, indeed.

// CONCLUSION



Figure 1, "Distracted Boyfriend"-*Angelus Novalis* meme

#### 9.0 BEFORE AFTER

My favourite internet meme of 2018 is a niche take on what's known as "Distracted Boyfriend".<sup>1</sup> The Distracted Boyfriend meme typically uses a base image, originally taken from a stock photo database, that normally shows a man walking alongside a woman whilst turning back to look at another at the front of the frame. Their expressions tell an equally stock story: the man is looking at the other woman with a caricatural expression of desire on his face; his putative girlfriend is looking at him with an equally overwrought expression of disgust on hers; and the out-of-focus object of his gaze is walking away with a soft and seemingly-self-satisfied smile. In the particular instance that I like, someone's pasted a poorly-cut-out image of the angel from Paul Klee's *Angelus Novus* over the top of the titular boyfriend. No doubt reflecting my own interests and tastes, this example reflects everything that I find compelling in internet memes.

There are many things that might be said about this meme. Iterations on the Distracted Boyfriend meme usually use what's known as an object-label

format, which is characterised by the placement of labels over objects in an image. A typical Distracted Boyfriend might label its titular character with an agent and the other two with a pair of conflicting interests, using its crude and overt dramatisation of desire to reduce rational choice to impulse—ironically, of course. On the face of it, this meme is misogynistic. In typical online culture style, though, it's also often used to ironically deride sexism. As a popular example of the object-label meme format, Distracted Boyfriend has led to the production of numerous incongruously funny instances. As an aesthetic object, there's something compelling about its composition, with the lines traced by its unmet gazes, its forward-backward, cross-purposes motion, and its (mis)use of focus, with the frontmost character blurred in the foreground. It's crass and a little gross. It's not that I *like* this meme's base image. But, it's compelling because it's complex. The cropped-in *Angelus Novus* adds a whole extra layer to this complexity. In the relationship between the angel and what's caught their gaze, we might read a number of things: crass desire; banal *bathos*; a bad philosophy joke. But we also see something of the possibility inherent in meme culture. *This* internet meme contains an entire epistemology of before and after—and of a speculative future of the internet meme.

I want to conclude this thesis by contextualising the claims that I have made throughout it about the internet meme, circulation, and media theory. By framing it using this particular internet meme, though, I also want to signal my intention to reflect on broader questions that has shadowed many of the discussions in this thesis, but which I've yet to tackle head-on: What's at stake in the practice of theorising media, in the present? And, What utility do the methods and theoretical practices I've introduced in this thesis have for other media? I want to conclude this thesis by suggesting that the media-theoretical practice I've called "meme theory", the concept of circulation that I derived from it, and the theory of the internet meme I used this concept to formulate operate in the registers of the before and after. It's in both of these registers

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<sup>1</sup> For more on this meme, see: Know Your Meme. "Distracted Boyfriend." I sourced the above image from this site, but its original provenance is unknown. Accessed September 28, 2018 <https://knowyourmeme.com/memes/distracted-boyfriend>

that we'll find the means to extrapolate this concrete and specific practice of theorising media to other media. It's in both of these registers, moreover, that media-theoretical practice must operate if it's to be able to grapple with the overwhelming profusion of circulating media that characterises this present.

This strange take on the Distracted Boyfriend meme makes these registers manifest. To frame a response to these questions, I want to start by providing a brief overview of this thesis as a whole. This overview will help us to understand both how this thesis approached the internet meme and how it conceived the stakes of practicing media theory in the present. After responding to these questions, I want to finish by briefly returning to this meme and using it to reflect on some of the broader stakes of contemporary meme culture.

## 9.1 EPISTEMOLOGICAL MEANS

The aim of this thesis—as its title, “meme theory”, no doubt suggests—was to formulate a theory of the internet meme. In the introduction, however, I argued that this was no straightforward task, because the internet meme confronts media theory with a problem. This problem emerges out of the internet meme's double status as instance and plurality. I argued that we could resolve this problem by thinking the internet meme in circulation, but that when we're confronted with the question of what the circulation of media actually is, we produce a tautology: we understand circulation to be the circulation of media. I used these assertions to frame this thesis's extended engagement with circulation and to qualify its aim: to formulate a theory of the internet meme, we need to think it in circulation. However, I also argued that this task of reconceptualisation was further complicated by the concrete conditions in which we must theorise media today. In a reworking of Friedrich Kittler's infamous phrase, I argued that the ubiquity and massive distribution that characterise contemporary media have generated what I called an indeterminate postdigital media situation. To theorise media like the internet

meme, I argued that we had to take account of the influence that they exerted over our concepts of them. Together, this problem and this media situation constitute the context in which we have to theorise media like the internet meme. Any such theory, I argued, had to not only address its object, but to be able to remain reflexively responsive to media's circulating indeterminacy.

Rather than treat this proliferation of paradoxes as prohibiting theoretical practice or allowing our theories of media to be determined by media themselves, I drew upon the historical epistemological work of Gaston Bachelard, Georges Canguilhem, and Hans-Jörg Rheinberger to recast this set of issues as using their concept of the "problem". For these philosophers, the "problem" isn't just an issue; it plays a specific, organising epistemological role in a mode of enquiry that investigates how knowledge is concretely produced. In their usage, problems are tied to particular concepts, which are only ever posited in order to resolve particular problems. Using this concept, I argued that the internet meme could be conceived of as presenting us with a particular problem: *how we think media in excess of themselves*. Positing this problem changed the aim of this thesis. In order to formulate a theory of the internet meme, I argued that we needed to posit a concept of circulation. But in order to posit a concept of circulation given my claim that media inform our concepts of them, I also argued that we needed to work on media theory itself to make it capable of apprehending the internet meme *in* circulation and the influence of the circulating internet meme *on* media theory. The internet meme confronted us with what I described as a "nested problem". This thesis's task became finding this problem's resolution using epistemological means.

This brief outline helps us to apprehend the stakes that this thesis set itself. The analyses that I've presented in the previous chapters don't exactly follow standard media-theoretical practice. This thesis has proceeded as an extended attempt to think through the internet meme's corresponding problem. This problem necessitated a shift in focus from the internet meme, its theoretical context, to its epistemological cause: our lack of a media-theoretical concept of



circulation. Rather than establishing a theoretical framework and applying it to a series of cases, it turned the analysis of media theory itself in to a method for generating propositions derived from a modified version of historical epistemology that I called media-historical epistemology. Acknowledging that circulation does actually get invoked in discussions of media, this thesis used this approach to construe circulation as a “commonplace” term, or one that does conceptual work in media theory without being articulated as a concept. Because of its commonplace status, I argued that circulation is particularly prone to accruing “filiations”, or what Canguilhem conceptualises as occluded, persistent influences that are drawn from prior contexts, theoretical frameworks, or objects and that continue to inform our media-theoretical practices. Across a series of chapters that engaged with the platform’s capacity to put media in to circulation, the residual influence of the anatomical body on our usages of circulation, and the role that the category of materiality plays in media theory through concepts like infrastructure, this thesis used engagements with technical ensembles, theoretical frameworks, and the discipline itself to identify the commonplace work that circulation does and the persistent filiations that it activates in our media-theoretical practices. It used these chapters to demonstrate what we invoke circulation to think, in its role as a commonplace, thereby generating the “epistemological materials”—the media qualities—that circulation must be able to address.

The analyses in these chapters culminated in Chapter 7, which used them as the basis for a series of propositions: after platforms, circulation is technical; in circulation, media’s materiality is a *technical*-epistemological product rather than an ontological predicate; circulation *bodies* media as milieu; and in circulation, media can be expressed as instance and/or plurality. In sum, these propositions constitute my reconstructed concept of circulation. And yet to use this concept to formulate a theory of the internet meme would be to hew against the epistemological grain that this thesis had spent an introduction and 7 chapters establishing. Any workable theory of the internet meme, I argued, had to emerge in and through engagements with concrete circulating

examples. Using these propositions, the next chapter adopted a mode of theoretical practice that I called “meme theory” to theorise the internet meme through engagements with what I termed the new online culture wars. Drawing in particular on the proposition that internet memes *body* media as milieu, this chapter argued that its three examples each contribute to the circulation of “negativity”, a complex of feeling, politics, and antagonistic negation characteristic of these new online culture wars. Whilst these engagements drew on other theoretical resources to conceptualise “negativity”, they nevertheless attempted to allow our conception of what internet memes are and what they do in these examples to emerge *in circulation*.

What’s crucial to note about this engagement with the new online culture wars is that it adopted what I’ve been calling circulation’s before-and-after status. One of the key claims I made during the series of chapters that analysed circulation was that circulation functions as an “organising concept”. The conceptual work that circulation does as a commonplace, I argued, is just as essential to our understanding of what media are and what they do—or, the media concept and the concept of mediation. So, circulation is *before* media insofar as media’s concrete circulations inform media theory and insofar as the concept of circulation informs the media concept. It’s *after* media, however, because circulation takes media as its object and because it articulates how we understand media in excess of themselves. These claims, which I made in Chapter 7, arose out of in-depth analyses of circulation and of media theory. They are nevertheless what make the concept of circulation I’ve proposed in this thesis applicable to other media, other contexts, and other problems.

## 9.2 CIRCULATION IN GENERAL

If our indeterminate postdigital media situation is defined by anything, it’s defined by the fact that media circulate in excess. The internet meme isn’t the only example of these media, even if I claimed that it was the definitive one for

online culture. The present is populated with a number of other media that must also be apprehended *in* circulation. The most obvious examples of these other media include viral media, spam, fake news, or clickbait. If we were to stretch what we mean by media, we might also think of botnets or Distributed Denial of Service (DDoS) attacks, for instance, as operating in and through circulation. The propositions I've made in this thesis about circulation, media-historical epistemology, and "meme theory" have been grounded in a reciprocal relationship to their objects. Throughout this thesis, I've consistently argued that the theoretical practice of "meme theory" is specific to the internet meme. I've said quite overtly that this practice can't be ripped from its epistemological context and applied to other media. Nevertheless, the methods, media-theoretical practices, and concepts I've introduced in this thesis *can* be adapted to the study of other circulating media types, if they're adopted as epistemological frameworks rather than readymade, transposable media-theoretical propositions.

The component of this thesis that's most easily transposed to other areas of media theory is the method I derived from media-historical epistemology. By adapting historical epistemology to the epistemological specificities of media, I have demonstrated throughout this thesis how methods originally formulated to study science and its objects can profitably be applied to media. This method grows out of particular strains of recent German media theory, like the work of Claus Pias and Joseph Vogl. It is also heavily inspired by some of the less-often-cited writing of Friedrich Kittler and some of the work of James W. Carey, whom I engaged with at length, and Harold A. Innis, who occupies this thesis's theoretical background. This approach also shares something of the spirit of Jacques Derrida's deconstructive engagements with philosophical concepts, though my emphasis on the concrete nature of knowledge production is not at all compatible with his deconstruction of presence. The method I derived from media-historical epistemology can be seen as contributing to a minor tendency in media theory to analyse media's epistemologies. It can also be seen as complementing other recent methods

that historicise media, like media archaeology. As with media archaeology, media-historical epistemology reaches back in to the history of media to enrich our conception of media in the present. Only, where media archaeology studies media themselves, media-historical epistemology studies how they've been thought. I conceive of this method as one of a number that we might adopt in our media theoretical practices, rather than one that displaces all others. Which of these methods we might adopt to analyse particular media depends on the particularities of the *problems* they pose.

The media-theoretical practice that I'm calling "meme theory" is less easily transposed to other media objects. As with this thesis's structure and its decision to treat analyses of media theory as the means for making theoretical propositions, "meme theory" emerged in response to the problem posed by the internet meme. However, the theoretical practice I've developed here *can* be used to think other media if what we adopt are its epistemological precepts. "Meme theory" responded to the internet meme's ambiguous double status and the need to be able to think it in circulation. But it also responded to the indeterminacy that characterises our postdigital media situation and the concreteness I accorded to epistemology. It began by positing a problem around which the concept of circulation and, indeed, media theory itself had to be reassembled. Some of these precepts can be used as the basis for other theoretical practices applied to other media. What "meme theory" tacitly asserts is that in the present, it's sometimes necessary to begin with problems in order to orient media theory in the interrogative, by questioning how we might formulate theoretical practices that are adequate to our object. The problem is particularly crucial to this kind of practice, because it reorganises the hierarchical relationships between theory, concepts, and objects that typically govern media theory. In lieu of privileging theoretical frameworks, the practice I adopted in this thesis advocates for starting in an epistemological mode that welcomes the influence media exert over our theories of them. We could generalise this as thinking *in indeterminacy*—an exigency that will only become more acute as media's circulations intensify.

Much of this thesis has been given over to circulation. As I keep claiming, this thesis has consistently asserted that circulation ought to be treated as an “organising concept”. How, then, might this concept be adapted to other media theoretical questions and practices? As an organising concept and as I’ve posited it in this thesis, what defines circulation is that it becomes *before* and *after* media. This is meant as both an epistemological proposition and a methodological premise. The content of the concept of circulation that I posited is specific to the internet meme. Per this thesis’s major claims, what media are *in* circulation is dependent on the relationship between their concrete circulations and our media-theoretical practices, as mediated by their “problem”. So, what *circulation* is can only be determined in relation to the media it takes as its objects. But this concept’s premises are not specific to the internet meme. Circulation is a concept that enjoins us to think media in context, through what comes before them—the platforms that put media in to circulation, say—and what comes after—for instance, a capacity to exceed themselves. The concept of circulation I proposed collapses the methods and theoretical practices I adopted in this thesis and rearticulates them in the form of propositions that allow us to think media as instances and pluralities simultaneously and to acknowledge how pluralities inform our conceptions of what media are and what they do. Taken up in other projects, the concept of circulation that has been so central to this thesis would necessarily become something else. Of course, that’s the point.

If the aim of this thesis was to formulate a theory of the internet meme, what it ended up producing was a method, a theoretical practice, and a concept adequate to an object whose central characteristic is its own capacity for reinvention. In the introduction to this thesis, I claimed that the internet meme is online culture’s definitive media. I want to repeat that claim now with a different inflection. The internet meme is online culture’s definitive media because by demonstrating that media are not converged but are, rather, in perpetual divergence, it forces us to come up with a way of doing media

theory *in indeterminacy*. We can only do so by making media theory as specific as the ubiquitous media that surround us—whilst also acknowledging that its context is as massively-distributed as these media themselves.

### 9.3 A POSTERIORI

Alongside all that's funny and all that's vile, what I find in meme culture is a set of challenges—to propriety, to culture, to one's friends or one's (imagined) enemies, to media theory, to thinking itself. What I find internet memes constantly confronting me with is a sense of history and a sense of possibility. There's no doubt that this is to be expected of a media type that is defined in relation to an already-existing plurality, yet which persists in—invites—its own reinvention. I want to conclude now by returning to the Distracted Boyfriend meme I cited above to tease out a parting thought on thinking with the internet meme in the present.

In the passage on Klee's *Angelus Novus* from Walter Benjamin's seminal essay "On the Concept of History", Benjamin says this:

This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing in from Paradise; it has got caught in his wings with such a violence that the angel can no longer close them. The storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.<sup>2</sup>

Alongside this iteration of the Distracted Boyfriend meme, we might echo the first line of this oft-quoted passage: *this* is how one pictures the angel of history. Perhaps this stock imagery is even how one might picture the debris

hurled forward by the storm we call progress, massively distributed media and the online culture it affords. But perhaps the time for Benjamin's rhetoric has also passed, crumbled, become the epistemological debris of theory past. In consonance, what Benjamin's essay and this meme capture is not a lament for history swept up by progress, but a mediation on how before relates to after and after to before.

Elsewhere in this essay, Benjamin says this: "[t]he true picture of the past flits by. The past can be seized only as an image which flashes up at the instant when it can be recognized and is never seen again."<sup>3</sup> In another oft-quoted essay, Benjamin says something related, but with wholly different implications: "in the fields with which we are concerned, knowledge comes only flashlike. The text is the long roll of thunder that follows."<sup>4</sup> The past will flash up and be lost; knowledge is only produced after the event. Before what's before will be after and after what was after passes in to the before—this is the complexity I think this idiotic internet meme captures and makes available to us. Sigrid Weigel identifies this conception of epistemology as a form of *nachdenken*, or a form of thinking that comes "afterward."<sup>5</sup>

In circulation, internet memes might be hard to think, but this doesn't mean that they're without thought. They're caught up in a mode of constant cultural production that generates enough circulating media that images like this occasionally grab our attention. This is by way of saying that Benjamin's characterisations of the epistemology of the past and of epistemology under conditions of modernity find their echo on our indeterminate postdigital media situation—if not, perhaps, their proper epistemological home. That media

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<sup>2</sup> Walter Benjamin. "On the Concept of History," In *Selected Writings Vol. 4, 1938-1940*, edited by Howard Eiland, and Michael W. Jennings, 389–400. Cambridge, Mass. and London: The Belknap Press of Harvard University Press, 2003. 392.

<sup>3</sup> Benjamin. "On the Concept of History." 390.

<sup>4</sup> Benjamin. *The Arcades Project*. Translated by Howard Eiland, and Kevin McLaughlin. Cambridge, Mass.: Harvard University Press, 1999. 456.

<sup>5</sup> Sigrid Weigel. "The Flash of Knowledge and the Temporality of Images: Walter Benjamin's Image-Based Epistemology and Its Preconditions in Visual Arts and Media History." *Critical Inquiry* 41, no. 2 (2015): 366.

contribute to the conditions in which we take them as objects of theorisation, that they produce their own epistemologies, that they make their own ontological distinctions—this is all a constituent part of the indeterminacy that characterises our postdigital media situation. That it's built on top of the debris of a self-obsolescing culture makes thinking it difficult, but that thinking it necessitates thinking in its indeterminacy and after media's circulations is no bad thing.

As the before, internet memes snap in to frame. As an after, we can only assume that they'll define themselves differently and anew. Media theory finds its necessity in the crossing of these temporal frames—if we can't keep pace with media's constant change, the turning of the new in to debris, why try? "Meme theory" rides in the angel that's online culture's wake. It's not always pleasant—it often feels futile—but there's no lack of inventiveness that we can use as the epistemological grist for the reinvention of media theory.



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