

**JOHN DURHAM PETERS (2015) *THE MARVELOUS CLOUDS: TOWARD A PHILOSOPHY OF ELEMENTAL MEDIA*. CHICAGO AND LONDON: UNIVERSITY OF CHICAGO PRESS. ISBN-13: 978-0-226-25381-1.**

Chris Russill

**The Media Without Us**

The question of the relationship of media and environment has received considerable attention in recent years. Calls to ‘green’ media studies, to recognize its toxicity, and to imagine sustainable forms of data processing are proliferating – and for good reason – as scholars urge us to think ecologically about the material conditions in which media are processed, distributed, and decomposed. The ‘greening’ turn is obviously long overdue, yet a curious indifference persists regarding the genealogy of the concept of environment it invokes. Calls to heed the environment remain stubbornly ecological in the mid 20<sup>th</sup> century style. It is tempting to suggest that the theoretical reifications and contradictions Ursula Heise (2002) identified in media ecology have spread more widely. In brief, Heise observed how a series of interchanges between media theory and scientific ecologies were facilitated by the impress of 20<sup>th</sup> century environmentalism on popular culture, a constitutive moment generating ‘a broad metaphorical vocabulary of links, interrelations, local and global webs and networks that facilitates the terminological transfer from one sphere to another’ (162). Ecological conceptions of information networks and lived environments resulted from these transfers, notions sometimes figured in the language of complexity theory and other times in the terminology of localized or insurgent agency, yet in all cases oriented towards *biological* traditions of ecological understanding.

The renewed interest in environment within media theory reflects the popularity and wide circulation of earth science over the last

decade, particularly as existential warnings of global crises have emerged. The conception of the planetary these sciences convey is deeply unsettling and it is not surprising that environmental crisis has moved to the forefront of media and cultural theory. It is important to recognize, however, that the earth sciences now encompass a much wider range of environments than the terrestrially oriented ecologies of the mid-20<sup>th</sup> century, particularly with respect to atmospheric and oceanographic space. Biological ecologies have been relativized by the synthetic ambitions of an earth system science that aspires to include all relevant fields of planetary study. By retweeting existential alarm to call for renewed emphasis on the ecological, scholars risk occluding the necessity for deeper engagement with the conception of the planetary authorizing such concerns. The planetary is a figuration of the Earth emanating most intensely from contemporary earth science, but anticipated in cosmologies, theologies, and some philosophical and science fiction traditions. Fortunately, there are promising indications of a media studies approach that is willing to reach beyond the ecological to address the planetary, and a growing willingness to reconsider the central figures, objects, and stakes of media theory in the process.

John Peters' *The Marvelous Clouds* is a major boost to this latter tendency and a welcome addition to the heathen crew of materialists defining it. Peters' genius is to place the usual fascinations of media theory within a set of questions and frameworks that are highly unusual. The frameworks, in brief, treat media as environments, yet a much fuller range of environments are included and theorized than is usual. Peters' approach is developed through historical, analytical, and imaginative modalities, and the classical elements (water, fire, air, earth, aether) are understood as media and as having deep significance for our conceptions of materiality, agency, meaning, inhabitation, and much besides. The defamiliarization produced by Peters' examples – often offered as thought experiments – is delightful, at least for those accepting media theory as the beautiful mess that it is. Yet, even those blessed souls will eventually wonder at the extraordinary plasticity of Peters' conception of media; less evolved creatures will grow anxious at depriving the field of its familiar contexts, figureheads, and methods.

The question of what media are is raised repeatedly throughout the book. The answers are interesting extensions of the relational sensibilities found in elemental, network, and infrastructural approaches to media, and they reflect a deep knowledge of contemporary debates in the evolution of technology (particularly

the anthropotechnics tradition). The answers, however, are less significant than the method of inquiry they express. The definitions of media are best understood as experimental forays that extend Peters' broader goal of reattaching media theory to what Hannah Arendt (1958) once called 'the human condition.' The human condition, of course, is the earthbound condition, and by bringing together the diverse figurations of the planetary afforded by cosmology, theology, philosophy, literature, and science, and by moving these notions of planet to the forefront of media theory, the objects, themes, and thinkers of the field emerge in strange contexts and odd interrelation with one another.

It is media theory for the maelstrom. If Arendt worried primarily about the aspirations and effects of a universalizing science, Peters lends his voice to those anticipating civilizational wreckage in the Anthropocene. In mediating the earth sciences with cosmology, theology, and philosophy, and in establishing media theory as a trading zone for our emergent conceptions of the planetary, Peters invites us to reconsider media and nature in ways less determined by the historical fusions identified by Heidegger. The scope of his work is overwhelming at first glance, but like the capsized sailor of Poe's famous story, elemental pattern emerges when one releases to the storm. Notably, the constitutive tension informing Peters' (1999) *Speaking into the Air* is palpable in this work as well, with American Pragmatism and the poststructural echoes of Heidegger brought into various alignments. Despite the still broader range of theoretical coordinates found in *The Marvelous Clouds*, the book tilts firmly to the Heideggerian side of things this time, although one finds frequent nods to American transcendentalism and Latour's ecology-friendly pragmatism.

The book is full of surprises and unanticipated turns, yet two stand out as particularly significant.

### **Kittler**

The first is the claim that Kittler's work launched the 'next evolutionary step' for media theory (24). Kittler, of course, could not be more distant from the ecological and environmental concerns that animate the contemporary humanities, and his conception of nature is buried firmly within a technical discourse that many find off putting. The idea that Kittler's work might take priority in constituting the next trading zone between media and environment

during the Age of Latour seems an instance of experimental remixing gone mad. Yet, this is not your hipster's Kittler. Peters' version is free of the anti-human technophilia that hangs like an anchor on the comp-lit version of Kittler, and the use of a Heideggerian frame to situate Kittler's work with respect to contemporary debates in anthropotechnics produces interesting effects.

In positive terms, Peters brings Kittler's insights regarding time-axis manipulation (the anticipated evolutionary step for media scholars) together with the history of the recording of nature through an idiom of elemental mediation. In this respect, we are invited to think with "the pre-eminent theorist of the elements" (Peters, in Kittler, 2010, 2) rather than the "prince of networks" (Latour).

Kittler, of course, pushed literary studies to become a subset of a media theory that was subsumed by digital forms of computation, yet for all his insistence on a technical discourse for figuring the categories of our ontological condition, it is clear that Kittler understood computation as natural and as a part of the world that was irreducible (and often inaccessible) to the human sensorium (Kittler, 2009). While it may seem odd to naturalize Kittler's conception of computation, it helps put media theory in contact with a fuller range of the temporalities defining our planetary condition. The ubiquity of digital computing is a problem not simply because its dominant imaginary elides a toxic and energy-intensive legacy, but because the digital imposes a narrow temporality as a condition of programmability. In this respect, Kittler's conception of nature remained firmly submerged by a conception of the digital until his later fleeting anticipations of quantum computing licensed a more ecstatic vision.

Peters situates this naturalistic view of computation within a broad conception of writing that has its historical origins in data processing (289). Peters offers a less unsettling approach for scholars committed to hermeneutic traditions, yet he is no less inclined to a positive valuation of calculation than Kittler. This is not to say the differences are insignificant. Peters situates computation in terms of a civilizational account of the significance of writing, while Kittler emphasizes the radical alterity of computational processing to previous media and their connections to the human sensorium. Quantum computing permits a unique access to nature for Kittler – it is nature calculating nature – whereas Peters is more likely to amplify the hermeneutic challenges of the natural world. At any rate,

developing Kittler's work as Peters does brings the computationally intense nature of the contemporary earth sciences into a rather interesting relationship with the relational ontologies that animate current humanistic interests in environment.

### **Clouds**

The second surprising claim involves the significance accorded to clouds. Despite the expectations raised by the book's title and frontispiece, references to clouds are occasional, fleeting, and dissipate quickly before reconstituting later in the book. The idea of using the long and varied history of efforts to depict clouds as the basis for developing the categories and concerns of media analysis is an inspired one. It lets Peters associate media theory with visions of nature emphasizing semiotic plenitude and an open-ended hermeneutics. It also elicits the dominant metaphor for computer storage to encourage theoretical engagement with the extraordinary genealogy of cloud representation – not simply as ideology critique but as a means of reinvigorating the conceptual interchanges between media and nature. In this respect, we might take seriously Peters' claim that clouds are 'the ultimate test' (255) for his conception of media. Clouds offer one of the most temporally fickle, epistemologically uncertain, and dynamical of processes to take the form (however fleetingly) of objects, and so using clouds to raise questions of the hermeneutics of non-human inscription and of interpreting natural 'texts' (if that is the correct term) pushes an especially vexed indeterminacy to the forefront of media theory.

The surprise, however, is not that Peters' identifies yet another fecund field for media theory that few of his contemporaries have considered, nor that he confronts corporate ideologies of 'cloud' computing with natural referents, but his reliance on Hubert Damisch's (1972/2002) magisterial work to challenge the received terminology, history, and problems of media theory. In brief, Damisch's approach to art history emphasized the challenges posed by the indeterminacy of clouds to its main concepts, historical interpretations, and traditions. Clouds, in a sense, are dynamic agents, and a series of innovations in the assembly of the elements of landscape painting are evident among painters struggling to depict clouds in the centuries since the Renaissance. The challenge posed by the fluid dynamics of clouds scrambles the elements of visuality by frustrating the dominant conventions of art history and the

history of art appears as a series of struggles to incorporate such profoundly vague abstractions.

Peters invites us to let this approach resonate through media theory. The clouds, on this account, drive innovations in the recording of abstract processes more generally: 'Clouds were thus among the first abstract objects to be depicted, and in this they are a critical step in the prehistory of recording media' (259). The dynamic hydrology of clouds forces a series of innovations not just in painting (as Damisch discusses), but in photography, off-planet imaging, and the computer modeling of atmospheric dynamics (clouds long posed a frustration to general circulation models of atmosphere). It is almost as if the dynamism of environmental churn has driven media innovation.

It is a fascinating thesis to think with. Our received accounts of the abstraction of vision tied developments in technical media to 19<sup>th</sup> century physiological experimentation, as bodily processes were externalized in conjunction with the differentiation of recording processes (Crary, 1990; Kittler, 1999/2010). Scholars raided the archives of research labs to portray bodily fallibility as both a condition and consequence of technical innovations that differentiated and externalized the senses and nervous system. What of those natural recordings that predate or exceed the bodily? Does the study of air, water, and light displace the priority of the endless tensions between organisms and technical artifacts that have long occupied media theory? Peters hints cryptically at an alternative history in linking the off-planet imaging of clouds to a transcendence of the tensions that Damisch claims have plagued earthbound efforts to date (260).

### **The Planetary**

The image of the planetary that emerges by the close of the book is less important than the fact of its centrality in such a bold, intelligent, and ambitious work of media theory. The clouds are not simply a proving ground for Peters' conception of media, but exemplary of his deep hermeneutic interest in what we might call, 'the media without us,' or of natural inscriptions that precede humans and (spoiler alert!) will remain long after humanity disappears from the planet. The notion of a nature superabundant with meaning is at its most unrestrained in Peters' conclusion and in the mashup of Dante's *Inferno* and Alfonso Cuarón's *Gravity*. Dante

and Virgil descend from the inhuman hell of outer space (escaping a failed Elon Musk venture perhaps) and regain their world by looking to a variable atmosphere given legible form in clouds, not by gazing through the Earth's sky to stars fixed in the cosmos, as Dante's cosmology would have it. In this example and elsewhere, the impress and urgency of earth science is felt not by making its concepts the key categories of our existence, but by mediating its significance through cosmology, philosophy, theology, literature, and popular culture all at once.

Peters' mediatory impulse is on full display throughout the book and it might be his most important message. The upheavals in our planetary condition have brought the natural sciences to the forefront of our attention and Peters demonstrates how their concerns are irrevocably shaped by cosmological, theological, philosophical, and medial systems that precede and orient their inquiries. The methodology for integrating media theory and natural science isn't formal and perhaps not very consistent, yet the willingness to engage earth science as an inspiration and fellow traveller is crucial.

There is the question of Peters' proposal to revive geocentrism (386). It is puzzling because Peters has reached an assessment of our situation similar to that of Dipesh Chakrabarty (2014) and appeared to draw the opposite conclusion. Peters, like Chakrabarty, sees how anthropogenic climate change creates rifts in our thinking; our present situation is riven by the different temporalities of human history, biological evolution, and earth system dynamics, the last of which precede, reshape, and might well endure beyond history, humanity, and life more generally. By bringing a bigger slice of the earth sciences than is usual to debates in anthropotechnics, particularly an appreciation for their wider temporalities, Peters does media theory an immense service. Yet, in Chakrabarty's (2014) account, our situation is disclosed only by engaging the conception of the planetary emerging from the interplanetary perspective of climate science: 'The science is not even specific to the planet; it is part of what is called planetary science. It does not belong to an earth-bound imagination' (22).

Peters' geocentric position puts him in good company yet the cosmology underwriting his way of circumscribing the interplanetary nature of 'earth' science is unclear. Arendt worried over the dynamics of a natural science that was driving us from our earthbound condition by integrating humanity into universal frames

of reference that were abstracted from and alienating to our earthbound condition. Sputnik, in this respect, gave technological expression to our deepest possible alienation; it was a repudiation of our earthbound condition and an indicator of our desire to escape the planet. This is not the basis for Peters' concerns. Peters' engagement with the natural sciences refuses to associate its advances with an epochal critique of modernity or instrumental rationality run amok.

The closest analogue to Peters' geocentrism of which I am aware is Hans Blumenberg's remarkable work. Blumenberg worked through concerns like Arendt's by suggesting that our experience of the abyss would generate gratitude for our planet. Those working in a phenomenological tradition, like Arendt and Heidegger, were deeply anxious about the ways that a universalizing science violated the horizons that embodied beings usually relied upon to inhabit the world. Our earthbound condition situates us with respect to the earth and sky and this was annulled – or so it seemed – by the horizonless conceptions of the planetary afforded by satellites and spacecraft that depicted the Earth in a cosmic void or abyss (Lazier, 2011). Blumenberg accepted the terms of the contrast yet suggested that our investigation of the void could only result in growing appreciation for the Earth. 'A decade of intensive attention to astronautics has produced a surprise that is, in an insidious way, pre-Copernican. The Earth has turned out to be a cosmic exception' (Blumenberg, 1966: 679). The abyss is tough to navigate, not all that interesting, and hell to inhabit. Hence, Peters' remix of *Gravity* and pre-modern travellers that steady themselves to the experience of hell by settling back into the horizons afforded us by the earth and sky.

Peters' book is a brilliant contribution to media theory and offers an essential contrast to the usual ways that environmental questions are raised. Still, on this point, I find Chakrabarty's articulation of the planetary more compelling, and I wonder if the clouds might as well. Venus, our sister planet, is entirely clouded and permits no starry gaze from its incinerating ground. It is a constant reminder of the dangers involved in remixing the elements of planetary atmosphere. One might even say (as Chakrabarty does) that contemporary concerns with climate change originate in the interplanetary contrast of Earth and Venus.

The point is significant because this conception of the planetary nullifies the contrast that frightened Heidegger, raised anxieties in



Arendt, and motivated Blumenberg's surprising twist. The earth is not a point spinning precariously in a cosmic abyss. It is not a globe adrift in the infinite void. The origins and history of planetary imaging have always belied such tropes as a fabrication of those 'whole earth' visualizations that insistently picture our 'home' as precariously positioned in empty space.

To me, the real surprise is that the Earth is a medium, though to my knowledge no one has offered this suggestion. The Earth's inhabitability hinges on its mediation of light, not its exceptionalism in a surrounding abyss. It wanders a cosmic light show, a solar system, not an empty void or pre-Copernican alternative. Our contemporary planetary crises – the ozone hole and anthropogenic climate change – are effects of an industrial fiddling with the sky that has resulted in regulatory systems for observing and reprogramming how the atmosphere processes sunlight. *The Marvelous Clouds* is indispensable because its idiom allows for this surprise and attunes us to our condition, earthbound and planetary as it is.

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