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"Concretion. (noun, ?1541 AD - now)"

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Concretion.

(noun, ?1541 AD - now)[1]

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Pathologically speaking, the act of growing together or uniting in one mass (from Latin *concretionem,* the nominative *concretio,* or French *concrétion*)[2] starts with something disgusting: granular matter joining forces intra-actively to condemn a living animal in one form or another. "[They] do crud & make concrecyon in y^{e} partyes of the bulke or oesophage."[3] Encountering the word in the wild must have felt (or at least that is how it feels today) like chancing upon a gaping wound oozing with creeps and crawls and death and decay and despair. Bend down to examine this putrid scene and you might find yourself looking at the problem of concretion: some *thing* has coagulated and become solid, and it is precisely this unnatural state of affairs that reeks of morbidity. A state change at the heart of it all; what should be liquid is now solid, and you – the putative 16th century pathologist in this narrative you never asked for – are left perplexed.

It is my contention here that much like this dollar-store diorama that I just dimensionalized, media studies today has a state change problem. We

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Memo initially prepared for the 'What is Critical Now?: Media Studies between Crisis and Critique' workshop at the Digital Studies Institute, University of Michigan, Ann-Arbor on the 2nd of April, 2025.

[1] "Concretion, n.," in *Oxford English Dictionary*, 3rd ed. (Oxford University Press, 2023), https://doi.org/10.1093/OED/5807717178.

[2] "Etymology of Concretion by Etymonline," accessed March 11, 2025, https://www.etymonline.com/word/concretion.

[3] Via *R. Copland, Galen's Fourth Boke of Terapeutyke sig. Hj, in Guy de Chauliac's Questyonary of Cyrurgyens*.

don't encounter liquid to solid changes enough to perturb us,[4] but we do encounter process to product changes all the time. And it is these changes that media studies should be, but is not, prepared to reckon with in any substantial fashion. Which is precisely why I recommend concretion – not concrete, but concretion – as a critical term for media studies today. Quite simply, my polemics[5] lead me to argue that media studies has a fundamental issue contending with concretion-al, concretizing observations, for as I hope to show, we see it but do not notice it. Worse yet, under the epistemological frameworks of our milieux,[6] we *can* not notice it.

I. A Thumbnail History of Concretion: after Guattari[7]

There is no large-scale historical periodization (or worse yet, retelling) that is good, but some in this genre may be useful. Here, with that caveat, is one. We can start with[8] tectonic plates or ice ages, but either way, we face to see the longstanding elemental embedding of the *bios*, writing itself on the surface of the planet and saturating itself throughout the dirt, dust and water,[9]

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[4] Some (possible) exceptions: Nicole Starosielski, *Media Hot and Cold* (Duke University Press, 2021), https://doi.org/10.1215/9781478021841; John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago, [Illinois] London: The university of Chicago press, 2015); Melody Jue and Rafico Ruiz, eds., *Saturation: An Elemental Politics*, Elements (Durham London: Duke University Press, 2021), https://doi.org/10.1515/9781478013044.

[5] This polemic-ity, after all, is partially what I am tasked with here, whence I seek no apology. Or perhaps only the tiniest possible.

[6] Weihong Bao, Jacob Gaboury, and Daniel Morgan, "Introduction: Medium/Environment," *Critical Inquiry* 49, no. 3 (March 1, 2023): 301–14, https://doi.org/10.1086/723667; Florian Sprenger, "Surrounding and Surrounded: Toward a Conceptual History of *Environment*," trans. Erik Born and Matthew Stoltz, *Critical Inquiry* 49, no. 3 (March 1, 2023): 406–27, https://doi.org/10.1086/723676.

[7] Inspired by Félix Guattari, "Regimes, Pathways, Subjects," in *Incorporations*, ed. Jonathan Crary and Sanford Kwinter, 2. print, Zone 6 (New York, NY: ZONE, 1995), 16–35.

[8] This whole piece is partially self-critical, I should note, including, but not limited to, this section. For a texture of this self-critique, the reader can imagine me reading Geroulanos and violently shaking my head all the time so everyone around me knows I am disagreeing with my own tendencies here. Stefanos Geroulanos, *The Invention of Prehistory: Empire, Violence, and Our Obsession with Human Origins* (New York, N.Y: Liveright Publishing Corporation, 2024).

[9] Melody Jue, *Wild Blue Media: Thinking through Seawater*, Elements (Durham: Duke University Press, 2020).

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notably with the grass (and not trees) at first.[10] Among the many entanglements of life and not-yet-life lie the slowly-forming humans,[11] who slowly learn to regularize the inscriptional tendencies, inscribing not unto media as we know it today but instead unto the world that would then be mediatized.[12] Distinction-making, that rudimentary operation which would be much later understood by Derrida, begins with boundary work; the rhythmic building and checking of fences and gates for livestock management, for example, not only nudges the bios towards zoē but also the human towards-and-against other lifeforms (in domestication and cultivation).[13] Let us stop here and call this the ground zero of concretion: the building-infrastructure of socialities, which I have elsewhere called (the material of) thought in-action.[14] Irregularities of life, in this framework, congeal into regular

[10] Julia Rosen, "Trees Are Overrated," *The Atlantic* (blog), July 25, 2022, https://www.theatlantic.com/science/archive/2022/07/climate-change-tree-planting-preserve-grass-grasslands/670583/; Joseph W Veldman et al., "Toward an Old-growth Concept for Grasslands, Savannas, and Woodlands," *Frontiers in Ecology and the Environment* 13, no. 3 (April 2015): 154–62, https://doi.org/10.1890/140270.

[11] Not man, mind you, but humans. *Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation--An Argument," CR: The New Centennial Review 3, no. 3 (September 2003): 257–337, https://doi.org/10.1353/ncr.2004.0015; Michel Foucault, Les mots et les choses: une archéologie des sciences humaines*, Bibliothèque des sciences humaines (Paris: Gallimard, 1989).

[12] Bernard Stiegler, *Technics and Time* (Stanford, Calif: Stanford University Press, 1998); Walter J. Ong, *Orality and Literacy: The Technologizing of the Word, 30th anniversary ed.*; 3. ed, New Accents (London: Routledge, 2012); Tim Ingold, *Lines: A Brief History* (London New York: Routledge, 2016), https://doi.org/10.4324/9781315625324.

[13] Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 2016); Bernhard Siegert, "Ater the Wall: Interferences among Grids and Veils," *Graz Architektur Magazin*, 2012; Thomas F. Gieryn, *Cultural Boundaries of Science: Credibility on the Line* (Chicago London: The University of Chicago Press, 1999); Jacques Derrida, *The Animal That Therefore I Am*, trans. David Wills, Perspectives in Continental Philosophy (New York: Fordham University Press, 2010).

[14] Ranjodh Singh Dhaliwal, "The Material (Studies) of Thought: ⌊Fire⌋Walls, ≒Network≒Bridges, and other infrastructural philosophies (in)action" (work in progress, currently under review). Previously in the form of Ranjodh Singh Dhaliwal, "The Material of Thought: [Fire]Walls, Network Bridges, and Other Infrastructural Philosophies (In)Action" (Public Lecture, Mit allemrechnen: Ökologien von Rechen- bzw. computationalen Praktiken [Reckoning with Everything: Ecologies of Computational Practices] colloquium, Bauhaus-Universität, Weimar, June 14, 2023). Relatedly, see also, Mal Ahern and Ranjodh Singh Dhaliwal, "Introduction: Images and (Infra)Structures," *Journal of Cinema and Media Studies* 65, no. 1 (2025); Ranjodh Singh Dhaliwal, "An

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practices, but the first order of business in this myth of concretion is a bringing together of the world into one life-sustaining solid, carrying[15] this pebble of a planet in an unbranded epistemological bag.

Lean forward a little and we find a kind of material focus. Across zones of this pebble where indentations fill with periodical flows congregate the human-animal assemblages that seem to be in the business of concretizing their environs. Copper, Bronze, and Iron can be observed melting and reforming, hardening like stone precisely because these so-called ages follow the stone age.[16] Acts of extraction, mining, and refining un-earth a whole world of organization, bureaucracy, power, economic relationships, and little saplings of convenience.[17] Toddlers today can count on their digits the number of 'great ancient civilizations,' tied as these possibilities of

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Anti-Racist Camera?: On Politics and Practices of Computational Photography," ed. Ranjodh Singh Dhaliwal and Mal Ahern, *Journal of Cinema and Media Studies* 65, no. 1 (2025); Ranjodh Singh Dhaliwal, "The Infrastructural Unconscious: Do Computers Dream of Carbo-Silico Pipelines?," in *Reckoning with Everything*, ed. Bernhard Siegert and Benedikt Merkle (Lüneburg, Germany: meson press, 2025); Ranjodh Singh Dhaliwal, "The Legality of Logistics: On Techno-Orientalism and Geopolitics in Semiconductor Production," *IEEE Annals of the History of Computing* 47, no. 2 (2025): 1–23, https://doi.org/10.1109/MAHC.2025.3559418.

[15] Ursula K. Le Guin, *The Carrier Bag Theory of Fiction* (Cosmogenesis, 2024); Yijun Sun and Bernard Dionysius Geoghegan, "8. Carried Away: The Carrier Bag Theory of Media," in *Technics*, ed. Nicholas Baer and Annie Oever (Amsterdam University Press, 2024), 169–86, https://doi.org/10.1515/9789048564569-011. See also, Marie-Luise Angerer et al., eds., *Containment: Technologies of Holding, Filtering, Leaking* (Lüneburg, Germany: meson press, 2024).

[16] Roger Caillois, *The Writing of Stones* (Charlottesville: University Press of Virginia, 1985). One wonderful exception to this tale would be the Norte Chico archaeologies, where instead of the mining of metals, we notice a fantastical state-change of marine life, with processes of working on blue whale vertebrae, for example, generating furniture such as stools. It should not be surprising, then, that the organizations that emerged there were largely devoid of militaristic valences we see elsewhere in the world. Ruth Shady Solís and Christopher Kleihege, *Caral: la primera civilización de América* (Lima: Logicorp SA Proyecto Especial Arqueológico Caral-Supe / INC Universidad de San Martin de Porres, 2008); M. Edward Moseley and Gordon R. Willey, "Aspero, Peru: A Reexamination of the Site and Its Implications," *American Antiquity* 38, no. 4 (October 1973): 452–68, https://doi.org/10.2307/279151; Daniel H. Sandweiss et al., "Environmental Change and Economic Development in Coastal Peru between 5,800 and 3,600 Years Ago," *Proceedings of the National Academy of Sciences of the United States of America* 106, no. 5 (February 3, 2009): 1359–63, https://doi.org/10.1073/pnas.0812645106.

[17] Harold Adams Innis, *Empire and Communications*, ed. Alexander John Watson, Voyageur Classics : Books That Explore Canada (Toronto [Ont.]: Dundurn Press, 2007).

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emergence were to solid, hard stuff hardening in certain parts of the planet where the soft-rock could be cut by the flows of melting water.

Continuing the trajectory from these metal ages would lead us towards hegemonies of the imperial-emporium, or the circulations of empires. Centralization yielded clashes of dominion in the contiguous landmass of Eurasia-Africa, with empires spanning several river-civilizations in-forming and dissolving over time.[18] A further narrowing of the material scope can be observed in the emergence of power centers, and then conflicts between these power centers. Rituals and beliefs became concrete in themselves as lithic expressions (*Darstellung*) of power – which themselves predate this period in my miserable attempt at periodization – that are now intermingled and co-joined into fewer-theistic iterations, with the production of more[19] standard-ish re-presentations[20] of fewer-and-fewer Gods being an aesthetico-political prehistory of the mechanical reproduction to come later.[21] And here already, I come to a knot of my own making that I cannot escape. Periodizations falter because any further history of the concrete[22] must not only

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[18] Once again, an exception must be made for Olmec, Chorrera, Mimbres (or more generally, Mogollon), Dorset, and Zapotec cultures in the Americas, where empires did not emerge in the same pattern, and where materials were not mined in the same fashion as on the Eurasian-African landmass. This bifurcation of accounting (and further division, perhaps, owing to Oceania and island lives elsewhere), one already practiced by the discipline of archaeology proper, can actually be a case for further reflection, as I note later in this piece.

[19] Caroline Walker Bynum, *Dissimilar Similitudes: Devotional Objects in Late Medieval Europe* (New York (N.Y.): Zone Books, 2020); Caroline Walker Bynum, Christian Materiality: *An Essay on Religion in Late Medieval Europe*, First paperback edition (New York: Zone Books, 2015).

20 Bruno Latour and Peter Weibel, eds., *Iconoclash: Beyond the Image Wars in Science, Religion, and Art* (Exhibition Iconoclash - Beyond the Image Wars in Science, Religion, and Art. On the occasion of the exhibition "Iconoclash - Beyond the Image Wars in Science, Religion, and Art", Zentrum für Kunst und Medientechnologie Karlsruhe (ZKM) Karlsruhe, 4 May - 4 August 2002. ZKM, Center for Art and Media, Karlsruhe., MIT Press, 2002).

[21] Walter Benjamin, "The Work of Art in the Age of Its Technological Reproducibility [First Version]," trans. Michael W. Jennings, *Grey Room* 39 (April 2010): 11–37, https://doi.org/10.1162/grey.2010.1.39.11.

[22] Any further history that is not, of course, *Adrian Forty, Concrete and Culture: A Material History* (London: Reaktion Books, 2012); Eli Elinoff and Kali Rubaii, eds., *The Social Properties of Concrete*, 1st ed. (Earth, Milky Way: punctum books, 2025), https://doi.org/10.53288/0405.1.00. See also, in a very unrelated vein, Hans-Jörg Rheinberger,

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account for the missing worlds[23] and landmasses in these temporal formations – a precondition for any responsible reckoning, which this memo certainly isn't[24] – but also for what Alex Galloway calls the increased "periodicity of periodization,"[25] the fact that periodizing cuts become more and more frequent in our recent inscripto-historical (even if it remains insufficiently historicizingly-historical) times. Put simply, to make further cuts that spawn from enlightenment, renaissance, modernity, industrialization, nationalism, neo/liberalism, globalization, or technologization (whatever your drug of choice might be) would be, consciously or otherwise, to be convinced, beyond a doubt, that your vision is ontic and not epistemological, that history as it appears is exactly as it was, is, and will appear.[26] Thus, I shall venture no further, not for the fear of being wrong but instead for the fear of being right (about the need for atleast one further cut around the early-middle last millennium). So, here is a quick recap of our journey so far: instead of the usual narrative of expansion, be it capital or technology or

An Epistemology of the Concrete: Twentieth-Century Histories of Life (Duke University Press, 2010), https://doi.org/10.1215/9780822391333.

[23] Frantz Fanon, *Black Skin, White Masks*, 1st ed., new ed (New York : [Berkeley, Calif.]: Grove Press ; Distributed by Publishers Group West, 2008); Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (Wivenhoe New York Port Watson: Minor Compositions, 2013); Christina Sharpe, *In the Wake: On Blackness and Being* (Duke University Press, 2016), https://doi.org/10.1215/9780822373452.

[24] Much more responsible instead might be Bernhard Siegert, Benedikt Merkle (ed.), *Reckoning with Everything* (meson press, 2025), (forthcoming) and Bernhard Siegert, "The Map Is the Territory – Dissolving the Barrier between Media and Nature.," *Spark Magazine*: A NOMIS Foundation Publication, 2022.

[25] Alexander R. Galloway, "Computers and the Superfold," *Deleuze Studies* 6, no. 4 (2012): 513–28.

[26] "'In relation to the history of organic life on Earth,' notes a recent biologist, 'the miserable fifty millennia of homo sapiens represents something like the last two seconds of a twenty-four hour day. The entire history of civilized humanity would, on this scale, take up only one fifth of the last second of the last hour.' The here-and-now, which as the model of messianic time summarizes the entire history of humanity into a monstrous abbreviation, coincides to a hair with the figure, which the history of humanity makes in the universe." Walter Benjamin, *Über den Begriff der Geschichte*, 1. Aufl. (Berlin: Suhrkamp, 2010). This translated version can be traced through Walter Benjamin, *Illuminations*, ed. Hannah Arendt and Harry Zohn (New York: Schocken Books, 1986).

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machines[27] or power or control or media or communications[28] or complexity or culture, concretional histories offer a counternarrative of contraction, where starting with the widest possible domain, we see scars of collection, of materials joining and accumulating in specific extractivizing geographical zones, accumulative tissue that can be seen from temporal/spatial infrastructural zoom-outs.[29] In other words, first through qualitative shifts and then quantitative, more and more things port, come together, solidify and accumulate over time. But the fact my very brief, sketchy history of concretion is grinding to a halt may point out a genre problem in media studies.

II. Meta-media(ology): after White[30]

What kinds of arguments can media studies make or sustain? Or perhaps an even better formulation (directly arising out of my limitations in the last section): Could we imagine what kinds of arguments media studies can not

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[27] Lewis Mumford, *Technics and Civilization* (Chicago ; London: The University of Chicago Press, 2010); Lewis Mumford, "*The Myth of the Machine. 1: Technics and Human Development*" (New York, NY: Harcourt, Brace, Jovanovich, 1967); Lewis Mumford, *The Myth of the Machine. 2: The Pentagon of Power* (San Diego (Calif.) New York London: Harcourt Brace Jovanovich, 1970).

[28] Michel Serres, *La communication*, Nachdruck, Hermès / Michel Serres 1 (Paris: Éd. de Minuit, 2016); Sybille Krämer, *Medium, Messenger, Transmission: An Approach to Media Philosophy*, Recursions: Theories of Media, Materiality, and Cultural Techniques (Amsterdam: Amsterdam university press, 2015).

[29] World-system analysis comes close to this model, even if the framing isn't the same. Giovanni Arrighi, *The Long Twentieth Century: Money, Power, and the Origins of Our Times*, New updated ed. (London: Verso, 2010); Immanuel Wallerstein, "The Rise and Future Demise of the World Capitalist System: Concepts for Comparative Analysis," *Comparative Studies in Society and History* 16, no. 4 (September 1974): 387–415, https://doi.org/10.1017/S0010417500007520; Jason W. Moore, "Environmental Crises and the Metabolic Rift in World-Historical Perspective," *Organization & Environment* 13, no. 2 (2000): 123–57; Jason W. Moore, "The Modern World-Systemas Environmental History? Ecology and the Rise of Capitalism," *Theory and Society* 32, no. 3 (June 1, 2003): 307–77, https://doi.org/10.1023/A:1024404620759; Jason W. Moore, "Ecology, Capital, and the Nature of Our Times: Accumulation & Crisis in the Capitalist World-Ecology," *Journal of World-Systems Research*, February 26, 2011, 107–46, https://doi.org/10.5195/jwsr.2011.432.

[30] Inspired by Hayden V. White, Metahistory: *The Historical Imagination in Nineteenth-Century Europe*, paperback ed., 11. [print.], A Johns Hopkins Paperback (Baltimore, Md.: Johns Hopkins Univ. Press, 2000). Call it a (poor man's) poetics of media studies, if it pleases you.

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imagine? Now, an obvious answer, *pace* Donald Rumsfeld, would be "no." But to expand, borrowing from Hayden White's magisterial analyses of historical writing, I will hastily attempt a characterization of the extant modes of media thinking.[31] This bears further elaboration and investigation, of course, but it seems to me that media studies has largely followed three of the four argumentative pathways laid out by White: the formist (wherein individual objects are found to be worthy precisely because of their unique characteristics, with this uniqueness being the point), the organicist (wherein individual objects and events are found to have actually integrated and generated something greater than the sum their parts), and perhaps the one to have most widely ruled the roost over the last few decades, the contextualist[32] ("wherein events" and objects "can be explained by being set within the context of their occurrence,"[33] with the focus being on the interrelations and linkages instead of integration). The one mode of explanation to have gone missing[34] – though it might be better described as an extrajudicial academic abduction – between the nineteenth century history and twenty first century media studies history is the mechanistic one (wherein individual events/objects are gathered to elucidate general, or even universal, laws that can then be applied back unto the individualities to provide us with the effects of the aforementioned laws). It is my hypothesis here that the generally prevalent forms of argumentation in media studies today – largely identifiable as those belonging to the three explanative tendencies of formist, organicist, and contextualist kind – necessarily fall within the

[31] White, *Metahistory*. Relatedly, see also, Ranjodh Singh Dhaliwal, "What Do We Critique When We Critique Technology?," *American Literature* 95, no. 2 (June 1, 2023): 305–19, https://doi.org/10.1215/00029831-10575091.

[32] Nick Seaver, "The Nice Thing about Context Is That Everyone Has It," *Media, Culture & Society* 37, no. 7 (October 1, 2015): 1101–9, https://doi.org/10.1177/0163443715594102.

[33] White, *Metahistory*, 17. A contextualist follows 'threads,' as White notes, and this tendency can be noted in our para-disciplinary frameworks too. For example, see, Joseph W. Schneider, *Donna Haraway: Live Theory* (New York: Continuum, 2005); Joseph Dumit, "Writing the Implosion: Teaching the World One Thing at a Time," *Cultural Anthropology* 29, no. 2 (May 19, 2014): 344–62, https://doi.org/10.14506/ca29.2.09. For more on the state of relations between STS and media studies, see Dhaliwal, "The Material of Thought: [Fire]Walls, Network Bridges, and Other Infrastructural Philosophies (In)Action."

[34] A proper accounting of this historical issue and its implications are a task for another day.

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general proclivities of historically-inflected fields today to accelerate periodization.[35] To fold this conversation back on to the grand-sad history of concretion in my first section, we can notice that the narratives of material transformations at a scale clearly fall apart not only because the historical field is vast and complex but also because our tools for the analysis (or concepts) are now technologies,[36] or to put another way, we have now been (if we were not always) so tightly enmeshed with the limited templates we have for argumentation that it hampers our ability to imagine what we cannot imagine.[37]

And as evidenced by the fact that historical timelines I drew (and drew upon) diverged across landmasses and parts of the world, a related issue here is that of geographical complexity. I am reminded here of this shtick I deploy when I teach media theory to undergraduates; on day one, I build a caricatures club – a cacophonous collective of sock puppets – of media studies scholars from different parts of the world: the Canadian (communication studies), the British (cultural studies), the German (technical

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[35] This, in some ways, is understandable for a field that needed to emerge. Who would allow this or that media to emerge—and emerge it had to, so as to satisfy our administrative neoliberal needs for novelty—without strong claims to novelty by the likes of McLuhan, Hayles, Mitchell, or Kittler (or even its round two, with the likes of Manovich, Nakamura, Hansen, Grusin and Bolter, Gitelman, and Friedberg further (having to) cut within novelty cuts). If these names do not form the canon for my reader, it is perhaps because (and this further proves one of my points in this text) my own entry point here into the field is only one, one that may be marked as 'media technology studies.' See also, John Durham Peters, "'You Mean My Whole Fallacy Is Wrong': On Technological Determinism," *Representations* 140, no. Fallacies (Fall 2017): 10–26.

[36] I am referring here to one of the classical ways of distinguishing between tools and technologies. Tools presume a unified subject, technologies resist that clarity. Ranjodh Singh Dhaliwal and Bernhard Siegert, "Knowing, Studying, Writing: A Conversation on History, Practice, and Other Doings with Technics," in *Technics. Media in the Digital Age*, by Nicholas Baer and Annie Oever (Amsterdam: Amsterdam University Press, 2024), 125–50, https://doi.org/10.5117/9789048564552_ch06. The corollary here would be that we sadly haven't been able to mount a culturaltechnical charge on our own selves. Bernhard Siegert, *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real*, trans. Geoffrey Winthrop-Young (New York, NY: Fordham University Press, 2015), https://doi.org/10.1515/9780823263783.

[37] Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London New York: Verso, 2007); Fredric Jameson, *The Geopolitical Aesthetic: Cinema and Space in the World System*, 1st paperback ed., 5th [pr.], Perspectives (Bloomington, Ind: Indiana Univ. Press, 2008).

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philology), the Japanese (reception studies), to take a few – alongside their French (philosopher gone wild) and Italian (sociologist gone mild) cousins – would form this non-exhaustive list,[38] in which the American (erstwhile film studies, now new media, next whatever-line-the-dean-provides), in a perpetual identity crisis, brings up the rear. Now this shtick is a shtick only because it is then, over the course of the academic term, first elaborated, then nuanced, and finally dismantled by my students. But what its trajectory offers is an opportunity to realize how different media studies look across the world[39] and that bringing the world into media studies necessarily breaks up our geographical and geophysical sensibilities where simpler taxonomies start to show cracks.[40] And if these cracks are understood as the precondition of the visibility of concretion, then geographic and epistemological differences can be brought into relief, not to produce a field of perpetually formist distinctions but towards contextualized singularities.[41]

In sum, I am arguing that the world hypotheses[42] of media studies have a problem. The problem isn't (just) that they are missing this or that mode of argumentation – which is arguably true of every single disciplinary formation *ab initio ad infinitum* – but that our explanatory apparatuses do not reflect *per se*, since historico-cultural argumentation (and not always reflection) has been the bulwark of our (temporal and spatial) disciplinary

[38] I have trialed, for example, the idea of introducing modules from Korean, Indian, Chinese, Nigeria, Australian, Iranian, Brazilian, and Colombian realms, to mixed success(es).

[39] And perhaps even they would have been framed that way if we were in another age of the millennium-plus old edifice that is the university. This is not only evident from the already existing differences in departmental and disciplinary and professorial naming—culture appears somewhere, communication elsewhere, mass media in some cases, modern in others, and perhaps mediums (per Kittler, via Siegert (or vice versa), see Dhaliwal and Siegert, "Knowing, Studying, Writing.") in yet others—but also in the fact that even when the same terms are used, they may mean very different things.

[40] This can also be seen as an originary problem for/of media studies in some ways. I am reminded here of McLuhan's insistence on understanding Canadian media as a timeshifted version of the American one, for example.

[41] Fredric Jameson, *A Singular Modernity: Essay on the Ontology of the Present* (London: Verso, 2012).

[42] Stephen C. Pepper, *World Hypotheses: A Study in Evidence*, Reprint 2020 (Berkeley, CA: University of California Press, 2020), https://doi.org/10.1525/9780520341869.

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bounds and thus our primary epistemic virtue.[43] More specifically, this translates towards the 'why' of concretion I am after; the state change I identified as a conceptual lacuna for the field at large is difficult because none of the explanatory modes we currently have can handle two different *kinds/registers* of epistemic things (quite simply understood, following and modifying Rheinberger,[44] as things that are worked on precisely because they keep generating questions). For the formist media scholars, the distinction of things is nevertheless only workable because the epistemic things occupy the same register (which is to say they are all objects or events or movements or ideas); for the organicist media scholars, the things surely collect into a different register (for example, media objects giving rise of nationalism or communal creativity or feminist politics) but the narrative ends right when, and precisely because, the collection is deemed to be finished; interestingly enough, for the contextualist, there is more of a reason to move between registers, but the focus on explaining 'how' something happened means that the epistemic object itself cannot shift registers, for it has to stay stable if the context is to be truly carved into a plausible explanation. The result is that we simply cannot deal with state changes: changes between matter, between structures, between frameworks, between epistemologies, between processes, etc. I know, I know, the middles, the media, the mediums,[45] the transitional states are scary, even for scientists; but sometimes the old is truly dying and the new cannot be born. I am arguing here instead that we simply *must*. We simply cannot *not* afford to.

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[43] Lorraine Daston and Peter Galison, *Objectivity*, First paperback edition (New York, NY: Zone Books, 2010).

[44] Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*, Writing Science (Stanford, Calif: Stanford University Press, 1997). See also, Katherine Buse and Ranjodh Singh Dhaliwal, "Science Fiction, Simulation, Code: Transmedia and Translation in the Foldit Narrative Project," in *Imagining Transmedia*, ed. Ed Finn et al. (The MIT Press, 2024), 279–308, https://doi.org/10.7551/mitpress/14609.003.0016.

[45] Alexander R. Galloway, "Love of the Middle," in *Excommunication: Three Inquiries in Media and Mediation*, by Alexander R. Galloway, Eugene Thacker, and McKenzie Wark, Trios (Chicago, Ill. London: The University of Chicago Press, 2014), 25–76.

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III. Concepts are often stories, retold stories: after Haraway.[46]

What I am calling concretion here is, for me, the product of a thought experiment where I attempt to transcode what I have called rendering elsewhere on to a different substrate,[47] a different medium.[48] Rendering has many valences – and a proper engagement with all the renderings is beyond the scope of this text[49] – but what it denotes, for the purposes of this conversation, is the conversions between ideology and materiality. I cannot claim to be successful at actually thinking with this, but what interests me is how ideas and relations – or more precisely, to think across registers, a) sets of ideas and subjectivities and b) sociocultural/politico-economic relations – become materialized into the metallic-electronic "stuff"[50] of computation, and

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[46] Donna Haraway, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980's," *Socialist Review* 80 (1985): 65–108.

[47] Ranjodh Singh Dhaliwal, "Notes on the Medium of Computation: Biology, Logistics, and Epistemic Re-Actions," ed. Thomas Lamarre and Adam Nocek, *Configurations*, 2026. (forthcoming)

[48] For a more detailed engagement with rendering, see Ranjodh Singh Dhaliwal, "Rendering the Computer: A Political Diagrammatology of Technology" (Ph.D., United States -- California, University of California, Davis, 2021), https://www.proquest.com/docview/2562796506/DB239305712D40E1PQ/32. Relatedly, see also, Ranjodh Singh Dhaliwal, Théo Lepage-Richer, and Lucy Suchman, *Neural Networks, In Search of Media* (Minneapolis, USA; Lüneburg, Germany: University of Minnesota Press; meson press, 2024). For transcoding, see Fredric Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (Ithaca, NY: Cornell University Press, 2015), https://doi.org/10.7591/9780801471575; Alexander R. Galloway, "Language Wants To Be Overlooked: On Software and Ideology," *Journal of Visual Culture* 5, no. 3 (December 1, 2006): 315–31, https://doi.org/10.1177/1470412906070519. In other parts of my work, I have further elaborated on the exact relationships between rendering and transcoding.

[49] Some places to start could be, for example, Gilles Deleuze, Francis Bacon: *The Logic of Sensation*, trans. Daniel W. Smith (Minneapolis: Univ. Minnesota Press, 2005); Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times*, Posthumanities 6 (Bristol: University Presses Marketing [distributor], 2009); Natasha Myers, *Rendering Life Molecular: Models, Modelers, and Excitable Matter* (Duke University Press, 2015), https://doi.org/10.1215/9780822375630; Joel McKim, "Into the Universe of Rendered Architectural Images," *The Photographers' Gallery: Unthinking Photography*, June 20, 2019, https://unthinking.photography/articles/into-the-universe-of-rendered-architectural-images; Zeynep Çelik Alexander and John May, eds., *Design Technics: Archaeologies of Architectural Practice* (Minneapolis; London: University of Minnesota Press, 2020).

[50] Paul Dourish, *The Stuff of Bits: An Essay on the Materialities of Information* (Cambridge, Massachusetts: The MIT Press, 2017); Lisa Parks, "'Stuff You Can Kick': Toward a Theory of Media Infrastructures," in *Between Humanities and the Digital*, ed. Patrik Svensson and David Theo

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in turn, how this "stuff" (both technical and technique-al) runs up against, or turns into/towards, the ideational, subjective, and relational that composes our lives and histories.[51] Ultimately, rendering helps me think with the continuities and divergences between these relations, subjectivities, and ideas on one hand and techno-logics, infrastructures, and *techniken*[52] on the other. "How X became Y" is one of the most common subtitle formulations today in academic work,[53] but the 'how' is, more often than not (for valid reasons of publishing SEO tbf), a way to truly *just* say X became (or led to or made or some other relationship) Y, not actually elucidate the mechanisms of becoming/making;[54] rendering helps me (or so I hope) sidestep that.

Goldberg (The MIT Press, 2015), 355–74, https://doi.org/10.7551/mitpress/9465.003.0031; Susan Leigh Star, "The Ethnography of Infrastructure," *American Behavioral Scientist* 43, no. 3 (November 1999): 377–91, https://doi.org/10.1177/00027649921955326; Paul N. Edwards et al., "Introduction: An Agenda for Infrastructure Studies," *Journal of the Association for Information Systems* 10, no. 5 (May 2009): 364–74, https://doi.org/10.17705/1jais.00200.

[51] For example, see Ranjodh Singh Dhaliwal, "The Cyber-Homunculus: On Race and Labor in Plans for Computation," *Configurations* 30, no. 4 (September 2022): 377–409, https://doi.org/10.1353/con.2022.0028; Ranjodh Singh Dhaliwal, "On Addressability, or What Even Is Computation?," *Critical Inquiry* 49, no. 1 (September 1, 2022): 1–27, https://doi.org/10.1086/721167.

[52] I use *techniken* to denote the always already simultaneously dual sense of technique and technology that the German word captures. Looking at the metal and calling it technology is a red herring as far as I am concerned. Relatedly, see Eric Schatzberg, "'Technik' Comes to America: Changing Meanings of 'Technology' before 1930," *Technology and Culture* 47, no. 3 (2006): 486–512; Leo Marx, "'Technology': The Emergence of a Hazardous Concept," *Social Research* 64, no. 3 (1997): 965–88; Dhaliwal, "What Do We Critique When We Critique Technology?" Shaoling Ma's fantastic work also deserves a special mention here. Shaoling Ma, *The Stone and the Wireless: Mediating China, 1861–1906* (Duke University Press, 2021), https://doi.org/10.1215/9781478013051.

[53] After all, so much of media studies today is in the business of being media history which in turn is itself being a bastard child of narrative history and object fetishism (for critique of this in just one register of code, see Wendy Hui Kyong Chun, "On 'Sourcery,' or Code as Fetish," *Configurations* 16, no. 3 (September 2008): 299–324, https://doi.org/10.1353/con.0.0064.; see also Rita Raley, "Code. Surface|| Code. Depth," *Dichtung Digital. Journal Für Kunst Und Kultur Digitaler Medien* 8, no. 1 (2006): 1–24; N. Katherine Hayles, "Traumas of Code," *Critical Inquiry* 33, no. 1 (September 2006): 136–57, https://doi.org/10.1086/509749.). (Again, I plead guilty to these charges myself, as I so often find myself doing anatomical, object-based moves and not enough of the inter/intra-facial ones to my liking. Alexander R. Galloway, *The Interface Effect* (Cambridge, UK; Malden, MA: Polity, 2012).)

[54] Marilyn Strathern, *Relations: An Anthropological Account* (Duke University Press, 2020), https://doi.org/10.1215/9781478009344.

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I offer concretion as a critical term for media studies precisely because it is already here (and because there is nothing new under the sun). So, here is the current state of the bigger world of concretion through some terms/senses used/invoked/evoked more or less widely by us and our colleagues/friends/comrades.[55] Object-ification.[56] Crystallization.[57] Reification.[58] Congealing. Colligation. Formatting.[59] Solidification.[60] Hardening.

[55] I must not forget, in the middle of all that is solid, that the one glorious and glaring exception to the trends in media studies I am reflecting on is Melody Jue's work, which calls into question the very epistemological conditions of media studies, and in doing so, quite brilliantly shows us the stakes of reconfiguring our templates. Jue, *Wild Blue Media*; Jue and Ruiz, *Saturation*.

[56] Tim Van Der Heijden and Aleksander Kolkowski, *Doing Experimental Media Archaeology: Practice* (De Gruyter, 2022), https://doi.org/10.1515/9783110799767; Siegfried Zielinski, *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means*, trans. Gloria Custance, Electronic Culture--History, Theory, Practice (Cambridge, Mass: MIT Press, 2006).

[57] Jacob Gaboury, Image Objects: *An Archaeology of Computer Graphics* (MIT Press, 2021).

[58] Timothy Bewes, *Reification, or, The Anxiety of Late Capitalism* (London ; New York: Verso, 2002). A more precise Marxist genealogy of concretion (as opposed to abstraction) can be traced, among other routes, via concepts such as 'Gedankenkonkretum,' 'concrete universal,' 'real abstraction,' 'concrete totality,' and of course 'reification'). Georg Wilhelm Fredrich Hegel, *Georg Wilhelm Friedrich Hegel: The Science of Logic*, ed. George Di Giovanni, 1st ed. (Cambridge University Press, 2010), https://doi.org/10.1017/9780511780240; Georg Wilhelm Friedrich Hegel, Hegel: *The Phenomenology of Spirit*, trans. M. J. Inwood (Oxford: Oxford University press, 2018); Karl Marx, *Grundrisse: Foundations of the Critique of Political Economy*, Penguin Classics (London: Penguin books, 1993); Georg Lukács, Rodney Livingstone, and Georg Lukács, *History and Class Consciousness: Studies in Marxist Dialects*, Nachdr. (Cambridge, Mass: MIT Press, 2013); E. V. Ilyenkov and Sergei Syrovatkin, *The Dialectics of the Abstract and the Concrete in Marx's Capital*, 1st Indian ed (Delhi: Aakar Books, 2008); Theodor W. Adorno, E. B. Ashton, and Theodor W. Adorno, *Negative Dialectics*, Transferred to Digital Printing 2006- [im Kolophon: Milton Keynes: Lightning Source, 2010] (London: Routledge, 2010); Henri Lefebvre and Donald Nicholson-Smith, *The Production of Space*, Reprinted (Oxford: Blackwell, 1997); Moishe Postone, Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory (Cambridge: Cambridge University Press, 1993), https://doi.org/10.1017/CBO9780511570926; Alfred Sohn-Rethel, *Intellectual and Manual Labour: A Critique of Epistemology*, trans. Martin Sohn-Rethel (Chicago, IL: Haymarket Books, 2021).

[59] Jonathan Sterne, *MP3: The Meaning of a Format* (Duke University Press, 2012), https://doi.org/10.1215/9780822395522.

[60] Jussi Parikka, "The Alchemic Digital, The Planetary Elemental - Journal #65," *E-Flux*, accessed March 12, 2025, https://www.e-flux.com/journal/65/336442/the-alchemic-digital-the-planetary-elemental/.

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Condensation. Stiffening. Connecting.[61] Clotting. Compression.[62] Lithification.[63] Fossilization.[64] Ossification.[65] Rendering. And maybe mediation?[66] Which is to say, perhaps media[67] itself.

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[61] Tung-Hui Hu, *A Prehistory of the Cloud*, First MIT Press paperback edition (Cambridge, Massachusetts London, England: MIT Press Ltd, 2016); N. Katherine Hayles, "Metaphoric Networks in 'Lexia to Perplexia,'" *Digital Creativity* 12, no. 3 (September 1, 2001): 133–39, https://doi.org/10.1076/digc.12.3.133.3226; Wendy Hui Kyong Chun, "Networks NOW: Belated Too Early," *Amerikastudien / American Studies* 60, no. 1 (2015): 37–58; Cajetan Nwabueze Iheka, *African Ecomedia: Network Forms, Planetary Politics* (Durham London: Duke University Press, 2021); Friedrich A. Kittler, *Discourse Networks 1800/1900* (Stanford, Calif: Stanford University Press, 1990); Patrick Jagoda, *Network Aesthetics* (Chicago, Ill.; London: University of Chicago press, 2016).

[62] Alexander R. Galloway and Jason R. LaRivière, "Compression in Philosophy," *Boundary 2* 44, no. 1 (February 1, 2017): 125–47, https://doi.org/10.1215/01903659-3725905.

[63] Kyle Stine, "Critical Hardware: The Circuit of Image and Data," *Critical Inquiry* 45, no. 3 (March 2019): 762–86, https://doi.org/10.1086/702614; Kyle Stine, "The Logistics of Labor and Life at Signetics," *IEEE Annals of the History of Computing* 46, no. 2 (April 2024): 52–64, https://doi.org/10.1109/MAHC.2024.3379939; Axel Volmar, *Media Infrastructures and the Politics of Digital Time: Essays on Hardwired Temporalities*, ed. Kyle Stine, *Recursions* (Amsterdam: Amsterdam University Press, 2021); Shannon Christine Mattern, *Code + Clay ... Data + Dirt: Five Thousand Years of Urban Media* (Minneapolis, [Minnesota] London: University of Minnesota press, 2017).

[64] Jussi Parikka, *A Geology of Media, Electronic Mediations*, volume 46 (Minneapolis ; London: University of Minnesota Press, 2015); W. J. T. Mitchell, "Romanticism and the Life of Things: Fossils, Totems, and Images," *Critical Inquiry* 28, no. 1 (October 2001): 167–84, https://doi.org/10.1086/449037.

[65] I have previously used variants of many of these terms, alongside rendering and transcoding, mentioned here. See Dhaliwal, "Rendering the Computer." Here, I use the term concretion instead of rendering not for any self-serious reason but solely as a fresh thinking exercise to extend and tenderize the valences of rendering (that have been long animating my desk) which may have been otherwise missed by my previous observations. Which is to say that a hopefully theoretically stronger engagement with these thoughts can be found elsewhere in my work. As just one example, I think of miniaturization as being a subset of practices in which not only do ideas become concrete but also become 'smaller' in Dhaliwal, "The Cyber-Homunculus"; Ranjodh Singh Dhaliwal, "Organic Division of Labor — Ergonomics/Cybernetics of Labor — Inorganic Division of Labor," in *Informatics of Domination*, ed. Zach Blas, Melody Jue, and Jennifer Rhee (Duke University Press, 2025), 136–45, https://doi.org/10.1215/9781478060581.; relatedly, see Colin Milburn, *Mondo Nano: Fun and Games in the World of Digital Matter, Experimental Futures* (Durham, N.C: Duke university press, 2015). I borrow ossification via Karl Marx and Friedrich Engels, *The Communist Manifesto: A Modern Edition*, Pbk. ed (London: Verso, 2012); Marx, *Grundrisse*.

[66] Alexander R. Galloway, Eugene Thacker, and McKenzie Wark, *Excommunication: Three Inquiries in Media and Mediation*, Trios (Chicago, Ill. London: The University of Chicago Press,

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Our very own artisanal media studies polycrisis[68] (itself a terrible formulation[69] fwiw) is perhaps a good occasion for some reflection on our objects – not necessarily (just) things, but more vitally goals – of critical inquiry. Already there is uncertain talk of what might media and media studies even *be* today.[70] These can be seen as end-times symptoms, sure, but perhaps

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2014); Richard Grusin, "Radical Mediation," *Critical Inquiry* 42, no. 1 (September 2015): 124–48, https://doi.org/10.1086/682998; Jameson, The Political Unconscious; Giles Deleuze, "Mediators," in *Incorporations*, ed. Jonathan Crary and Sanford Kwinter, 2. print, Zone 6 (New York, NY: ZONE, 1995), 280–95; Siegfried Zielinski, *Variations on Media Thinking*, Posthumanities 52 (Minneapolis: University of Minnesota Press, 2019); Ma, *The Stone and the Wireless*; William John Thomas Mitchell and Mark B. N. Hansen, *Critical Terms for Media Studies* (Chicago, Ill. London: The University of Chicago Press, 2010); Matt Tierney and Mathias Nilges, "Introduction: Medium and Mediation," *Postmodern Culture* 25, no. 2 (January 2015), https://doi.org/10.1353/pmc.2015.0001. See also, Ranjodh Singh Dhaliwal, "The Two Mediations, or When is Media Theory a Theory of Mediation?" (paper manuscript, work in progress, some of which is in collaboration with Moritz Hiller; a short solo talk prepared from this was presented at SCMS 2025 in Chicago on a roundtable titled 'Technics and Media' with Nicholas Baer, Yijun Sun, Shaoling Ma, Tom Gunning, and Jeffrey Sconce.)

[67] John Guillory, "Genesis of the Media Concept," *Critical Inquiry* 36, no. 2 (January 2010): 321–62, https://doi.org/10.1086/648528; Anna Shechtman, "The Medium Concept," *Representations* 150, no. 1 (May 8, 2020): 61–90, https://doi.org/10.1525/rep.2020.150.1.61; Anna Shechtman, "Command of Media's Metaphors," *Critical Inquiry*, June 1, 2021, https://doi.org/10.1086/714512; John Durham Peters, *Speaking into the Air: A History of the Idea of Communication* (Chicago: University of Chicago press, 2000).

[68] David Henig and Daniel M. Knight, "Polycrisis: Prompts for an Emerging Worldview," *Anthropology Today* 39, no. 2 (April 2023): 3–6, https://doi.org/10.1111/1467-8322.12793.

[69] Mack Penner, "The Paradox of Polycrisis: Capitalism, History, and the Present," *Journal of History* 58, no. 2–3 (December 1, 2023): 152–66, https://doi.org/10.3138/jh-2022-0022.

[70] For example, see Shannon Mattern, "In Focus Introduction: Media Study beyond Media Studies: Pandemic Lessons for an Evolving Field," *JCMS: Journal of Cinema and Media Studies* 62, no. 4 (June 2023): 156–60, https://doi.org/10.1353/cj.2023.a904631. And then there is the forthcoming JCMS special issue on 'What is media?,' to say nothing about recent questions posed by/with AI (or more generally, automation), regarding what might its object of analysis be. See, for example, Fabian Offert and Ranjodh Singh Dhaliwal, "The Method of Critical AI Studies, A Propaedeutic" (arXiv, 2024), https://doi.org/10.48550/ARXIV.2411.18833; Dhaliwal, "What Do We Critique When We Critique Technology?"; Lucy Suchman, "The Uncontroversial 'Thingness' of AI," *Big Data & Society* 10, no. 2 (July 2023): 20539517231206794, https://doi.org/10.1177/20539517231206794; Matteo Pasquinelli, *The Eye of the Master: A Social History of Artificial Intelligence* (London New York: Verso, 2023); David F. Noble, *Forces of Production: A Social History of Industrial Automation* (New Brunswick, N.J: Transaction Publishers, 2011), https://doi.org/10.4324/9780203791806; Aaron Benanav, *Automation and the*

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something else too. An interregnum?[71] Walls will close in, as they are wont to do[72] in this stage of whatever this is (a nominative problem plaguing all presents).[73] Perhaps, it is a coming together, a *con cre(a)tion*, a joining of forces, like grains becoming granularly potential-coalitional,[74] like uniting,

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Future of Work (London ; New York: Verso, 2020). For another version of this, rolling back a few years, with the term 'algorithms' (and one can make similar moves with software or interface, among others), see Claudia Aradau and Tobias Blanke, *Algorithmic Reason: The New Government of Self and Other* (Oxford: Oxford University Press, 2022); John Cheney-Lippold, *We Are Data: Algorithms and the Making of Our Digital Selves* (New York: New York University press, 2017); Hannes Bajohr, "Algorithmic Empathy: Toward a Critique of Aesthetic AI," *Configurations* 30, no. 2 (March 2022): 203–31, https://doi.org/10.1353/con.2022.0011; Jean-Luc Chabert and E. Barbin, eds., *A History of Algorithms: From the Pebble to the Microchip* (Berlin New York: Springer, 1999); Elena Esposito, *Artificial Communication: How Algorithms Produce Social Intelligence* (The MIT Press, 2022), https://doi.org/10.7551/mitpress/14189.001.0001; Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York University Press, 2020), https://doi.org/10.18574/nyu/9781479833641.001.0001; Louise Amoore, *Cloud Ethics: Algorithms and the Attributes of Ourselves and Others* (Duke University Press, 2020), https://doi.org/10.2307/j.ctv11g97wm; Florian Jaton and Geoffrey C. Bowker, *The Constitution of Algorithms: Ground-Truthing, Programming, Formulating, Inside Technology* (Cambridge, Massachusetts London: The MIT Press, 2020); Nick Seaver, "Seeing like an Infrastructure: Avidity and Difference in Algorithmic Recommendation," *Cultural Studies* 35, no. 4–5 (2021): 771–91, https://doi.org/10.1080/09502386.2021.1895248; Nick Seaver, "Algorithms as Culture: Some Tactics for the Ethnography of Algorithmic Systems," *Big Data & Society* 4, no. 2 (December 1, 2017): 2053951717738104, https://doi.org/10.1177/2053951717738104; Nick Seaver, *Computing Taste: Algorithms and the Makers of Music Recommendation* (Chicago: University of Chicago Press, 2022).

[71] Antonio Gramsci, *Selections from the Prison Notebooks of Antonio Gramsci*, ed. Quintin Hoare and Geoffrey Nowell Smith, Repr. (London: Lawrence & Wishart, 2012), 276.

[72] Oliver H. Creighton and Robert Higham, *Medieval Town Walls: An Archaeology and Social History of Urban Defence*, 1. publ (Stroud: Tempus, 2005); David Frye, *Walls: A History of Civilization in Blood and Brick* (New York: Scribner, 2018); James D. Tracy, ed., *City Walls: The Urban Enceinte in Global Perspective*, Studies in Comparative Early Modern History 4 (Cambridge: Cambridge University Press, 2000); Victoria Vernon and Klaus F. Zimmermann, "Walls and Fences: A Journey Through History and Economics," in *The Economic Geography of Cross-Border Migration*, ed. Karima Kourtit et al., Footprints of Regional Science (Cham: Springer International Publishing, 2021), 33–54, https://doi.org/10.1007/978-3-030-48291-6_3; Siegert, Cultural Techniques.

[73] McKenzie Wark, *Capital Is Dead: Is This Something Worse?*, Paperback edition (London New York: Verso, 2021); Jodi Dean, *Capital's Grave: Neofeudalism and the New Class Struggle* (London New York: Verso, 2025); Cédric Durand, *How Silicon Valley Unleashed Techno-Feudalism: The Making of the Digital Economy*, trans. David Broder (Brooklyn: Verso, 2024).

[74] Matthew Kirschenbaum, "Granular Worlds: Situating the Sand Table in Media History," *Critical Inquiry* 50, no. 1 (September 1, 2023): 137–63, https://doi.org/10.1086/726299; Ingrid

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forming (of) one mass, even growing together (*con crescere*, from *ker-*, to grow). This is not just a story of brutalism but also of poetics and art. This is not a story of progress,[75] but of inquiry into how (no, truly *how*) and why anything changes, and what is (at/in/on) the middle of that trans-[76]formation? This is a call to attend to, to stay with, to care for, to vociferously respond to, the state changes around us, and to learn to notice how/why/where/when things come together, when they become material (or lose their materiality), when processes and thoughts and techniques become naturalized technicities. Because only through the *hard* work of concretion shall we get at the phase-based understandings of how/when/where all that is solid melts into air.[77] Instead of media (object/event/genre) studies, a study of mediations.

Burrington, "From War Crystals to Ordinary Sand: Excavating Silicon Supply Chains," *IEEE Annals of the History of Computing* 46, no. 2 (April 2024): 13–23, https://doi.org/10.1109/MAHC.2024.3378121.

[75] I say this not just as a general, generic tirade against milquetoast progressivist visions, but because concrete itself has a non-progressive history of technical and material development. In other words, concrete was once much more concrete (in intensity) than it is today even if concrete today is quantitively more concentrated. (tldr; did you know that Roman concrete was much better than our concrete?) See David L. Chandler, "Riddle Solved: Why Was Roman Concrete so Durable?," MIT News | Massachusetts Institute of Technology, January 6, 2023, https://news.mit.edu/2023/roman-concrete-durability-lime-casts-0106; Marie D. Jackson et al., "Unlocking the Secrets of Al-Tobermorite in Roman Seawater Concrete†," *American Mineralogist* 98, no. 10 (October 1, 2013): 1669–87, https://doi.org/10.2138/am.2013.4484; Linda M. Seymour et al., "Hot Mixing: Mechanistic Insights into the Durability of Ancient Roman Concrete," *Science Advances* 9, no. 1 (January 6, 2023): eadd1602, https://doi.org/10.1126/sciadv.add1602. What might today's concretizations do? Ted C. Fishman, "The AI Boom Rests on Billions of Tonnes of Concrete," *IEEE Spectrum*, October 30, 2024, https://spectrum.ieee.org/green-concrete. Then there is also the fact that concrete can often be used as a symbolic marker of development of the world in one way of another. For example, see David Harvey, *Abstract from the Concrete* (Berlin: Sternberg Press, 2016). I am especially grateful to Sahana Srinivasan for helping me figure out this last point.

[76] Aren Z. Aizura et al., "Thinking with Trans Now," *Social Text* 38, no. 4 (December 1, 2020): 125–47, https://doi.org/10.1215/01642472-8680478.

[77] Marshall Berman, *All That Is Solid Melts into Air: The Experience of Modernity*, New edition (London New York: Verso, 2010).

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