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Network Ambivalence

Patrick Jagoda

Abstract

The language of networks now describes everything from the Internet to the economy to terrorist organizations. In distinction to a common view of networks as a universal, originary, or necessary form that promises to explain everything from neural structures to online traffic, this essay emphasizes the contingency of the network imaginary. Network form, in its role as our current cultural dominant, makes scarcely imaginable the possibility of an alternative or an outside uninflected by networks. If so many things and relationships are figured as networks, however, then what is not a network? If a network points toward particular logics and qualities of relation in our historical present, what others might we envision in the future? In many ways, these questions are unanswerable from within the contemporary moment. Instead of seeking an avant-garde approach (to move beyond networks) or opting out of networks (in some cases, to recover elements of pre-networked existence), this essay proposes a third orientation: one of ambivalence that operates as a mode of extreme presence. I propose the concept of "network aesthetics," which can be tracked across artistic media and cultural forms, as a model, style, and pedagogy for approaching interconnection in the twenty-first century.

The following essay is excerpted from *Network Aesthetics* (Forthcoming from University of Chicago Press).

About the Author

Patrick Jagoda is Assistant Professor of English and an affiliate of Cinema and Media Studies at the University of Chicago. He is also co-editor of Critical Inquiry and a co-founder of the Game Changer Chicago Design Lab. His first monograph, Network Aesthetics, is forthcoming from University of Chicago Press. Professor Jagoda delivered the keynote address at the symposium, Debating Visual Knowledge, University of Pittsburgh, October 4, 2014.

Network Ambivalence

Patrick Jagoda

After art comes the logic of networks where links can cross space, time, genre, and scale in surprising and multiple ways.

David Joselit

*After Art*¹

Myriad books written about networks, especially since the beginning of the twenty-first century, regularly naturalize their form. Network scientist Albert-László Barabási celebrates that researchers are “shedding new light on our weblike universe” and “all the complex networks that surround us.”² Indeed, it is not only scientists who make such claims. Manuel Lima, a visual artist and information visualization designer, observes that networks “are, in essence, the fabric of life.” Lima subsequently posits an even stronger version of this claim, speculating about what fields such as empirical aesthetics or neuroaesthetics might teach us about the essential nature of network form. He suggests, “perhaps we have a propensity for structures similar to our own brain—at its most basic cellular level—turning us into victims of a dopaminelike neurotransmitter every time we view systems that roughly resemble a neural network.”³ Lima locates such intrinsic structures in the artistic movement of “networkism” that includes the paintings of Sharon Molloy and Emma McNally and installations pieces from Tomás Saraceno and Chiharu Shiota. These types of claims, whether coming from scientists or artists, demonstrate an indistinction between model and world, and between a sense of interconnection—an experience often conceived as belonging to the network imaginary — and a claim that reality itself is structured as a network.

In contrast to a view of networks as the universal, originary, or necessary form that promises to explain everything from neural structures to collective animal behaviors to online traffic, my forthcoming book, *Network Aesthetics*, emphasizes the contingency of those imaginaries. Knowledge, as Foucault has demonstrated, always depends on a particular historical a priori, an episteme, which shapes it and makes it possible.⁴ Networks are arguably a dominant episteme and ubiquitous form of our time, rather than an intrinsic property of the universe. There are, after all, formal precursors that signal an outside to networks. Lima himself identifies the tree as a crucial epistemological form that predates networks and enables representations of complex systems. Throughout the disciplines, trees have served as a basis for figures such as the tree of knowledge, classificatory metaphors such as the “branches of science,” and genealogical representation such as Darwin’s diagram

¹ David Joselit, *After Art* (Princeton, NJ: Princeton University Press, 2013), 89.

² Albert-László Barabási, *Linked: The New Science of Networks* (Cambridge, Mass: Perseus, 2002), 5 and 6.

³ Manuel Lima, *Visual Complexity: Mapping Patterns of Information* (New York: Princeton Architectural Press, 2011), 69 and 224-226. In setting up this claim, Lima foregrounds physicist Richard P. Taylor’s work on the fractal patterns that appear in Jackson Pollock’s paintings. For more, see for example: RP Taylor, B Spehar, Donkelaar P. Van, and CM Hagerhall, “Perceptual and Physiological Responses to Jackson Pollock’s Fractals,” *Frontiers in Human Neuroscience* 5 (2011): 1-13. Here, Taylor et. al. speculate that fractal patterns may “trigger” a “resonance” in the act of viewing when “the eye sees a fractal pattern that matches its own inherent characteristics” (6). Such discourse, however speculative and even mystical it may be, begins to naturalize fractal aesthetics in a parallel fashion to Lima’s discussion of network forms in art.

⁴ Michel Foucault, *The Order of Things: An Archeology of the Human Sciences* (New York: Vintage Books, 1970).

of evolutionary divergence in *The Origin of Species*.⁵ Famously, in their 1980 book *A Thousand Plateaus*, Deleuze and Guattari declare, “We are tired of trees,” arguing instead for the value of networked rhizomes. Despite its overuse, this formal precursor to the network might serve as a cautionary reminder that while networks (whether they take the form of metaphors, figures, visualizations, or infrastructures) can help us apprehend various types of complexity, they are nonetheless grounded in the scientific, political, social, and aesthetic preferences of our time (Fig. 1).

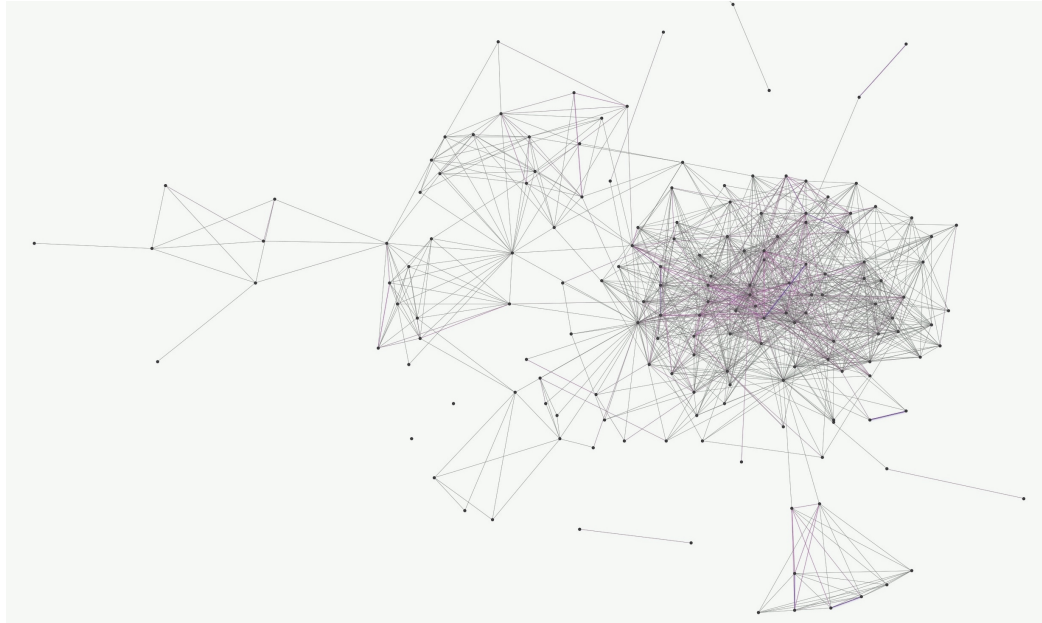


Figure 1

Mickaël Denié, *Mon réseau: Facebook, mes amis et moi (blanc)*, August 22, 2009 (photo: Flickr Commons).

Network aesthetics appear across a wide range of cultural production, including the novel, film, television serial, digital game, transmedia narrative, and new media artwork. Such works are by no means opposed to scientific appropriations of networks, which are themselves inseparable from a network imaginary. Aesthetic works are not merely enhancements to or illustrations of scientific knowledge but are themselves a way of thinking and knowing. A television series like *The Wire*, for example, both relies upon and complicates social network analysis.⁶ But whereas scientific work often seeks to solve problems and to clarify knowledge, aesthetic works present networks to us in ways that put existing problems in a new light, without necessarily resolving them.

⁵ Manuel Lima explores trees in *Visual Complexity*, 21-41. Also, see: Franco Moretti, *Graphs, Maps, Trees: Abstract Models for a Literary History* (London: Verso, 2005), 67. Moretti takes up Darwin as his opening example of how a tree diagram might be used to map changes in literary form.

⁶ Patrick Jagoda, “Wired,” *Critical Inquiry* 38 (2011): 189-199.

Network form, in its role as our current cultural dominant, makes scarcely imaginable the possibility of an alternative or an outside uninflected by networks. This raises a series of questions: If so many things and relationships are figured as networks, what is *not* a network? And then, if, as David Joselit observes in the epigraph, the paradigm of networks comes “after art,” what comes after networks? In many ways, these questions are unanswerable from the position of the present. They inspire speculative reflections that may resonate more fully with network aesthetics than with network science. Contemporary cultural works, from novels such as Don DeLillo’s *Underworld* to thatgamecompany’s videogame *Journey*, convey knowledge about networks. But also, at times, they defamiliarize the omnipresent form of the network that we believe we know so well, transforming it into something unknown that animates the difficulty of thinking through our world, in all of its layers of past retentions and future protentions.

Though the realm of the unknown may suggest a future orientation, the problem of an outside to network form has more to do with the challenge of thinking about an immanent historical present that in different ways appears to be, feels as if it is, and is in fact complex. In the early twenty-first century, complexity is not some sublime phenomenon, as it still appeared in the cyberpunk aesthetic of the 1980s. It arrives in a variety of ordinary scenes. Complexity becomes more apparent and present through the omnipresence of digitally networked technologies. Various devices make available complex phenomena, whether through ambient exposure or stumbling into endless internet k-holes. We encounter global climate change, financial markets that exceed human monitoring, and the proliferation of terrorist groups—all of which are figured in network terms that mark a present teeming with historical residue. This is a present characterized, in Lauren Berlant’s terms, by an “affective experience not of a break or a traumatic present, but of crisis lived within ordinariness.”⁷ That “crisis” need not be anything as apparent as systemic injustice against disadvantaged populations or an identifiable event like the 2008 subprime mortgage market collapse. The scene of such crisis can be the thick atmosphere of affects that opens up as soon as one picks up a smart phone or signs into Google hangouts to communicate with a distant friend or family member who might not have, even a few decades earlier, been so readily accessible. Even our most casual networked technologies or normalized software may evoke what Harry Harootunian describes as our present’s “constant concourse of mixed temporalities mingling and coexisting with each other— the historical uncanny that has always remained in the shadow of capital and ‘our’ modernity.”⁸ Indeed, an ordinary smart phone may connect us to electronics producers who distribute networked devices using tantalum capacitors created from coltan that is mined in the Democratic Republic of Congo, amidst human rights abuses, including forced child labor. Network form, as it appears through numerous imaginaries and everyday experiences, situates us within and shapes our historical present, without necessarily yielding a grasp on it.

How is it possible, then, to gain any perspective or critical distance from within a world in which everything is figured as a network? In the closing pages of his book *The Interface Effect*, Alexander Galloway considers two possible responses to networks that seem to lack any outside.⁹ The first proposition is the avant-garde approach of discovering new political

⁷ Lauren Berlant, “Thinking About Feeling Historical,” *Emotion, Space and Society* 1 (2008): 5.

⁸ Harry Harootunian, “Remembering the Historical Present,” *Critical Inquiry* 33 (2007): 490.

⁹ Alexander Galloway also takes up this problem in “Network Pessimism,” *boundary 2*, January 29, 2015, <http://boundary2.org/2015/01/29/network-pessimism/>. Galloway ends this piece by asking, “What would a non-net look like?”

tactics and aesthetic forms that may challenge the totality of networks, especially as they are commonly constituted through discussions within network science, digital communications, and global finance. Of this approach, Galloway concludes, “No politics can be derived today from a theory of the new.”¹⁰ Novelty, in other words, is the logic of capitalist accumulation, not political rejuvenation. Indeed, the “newness” of so-called new media — including networks — too often becomes assumed, fetishized, celebrated, and assimilated by market forces. It frequently takes the form of innovation that must contribute, even if indirectly, to progress.

More promisingly, Galloway puts forward a second proposition for reaching an outside to networks that falls under the keyword of the “whatever,” a concept that he draws most directly from philosophers Gilles Deleuze and Giorgio Agamben. In place of the supercession of the “post” inherent in the search for new possibilities, Galloway suggests the negation of the “non.” “Seek not the posthuman, but the nonhuman,” he declares. “Be not post identity, but rather subtractive of it.”¹¹ He contends that within a culture that encourages perpetual speech—even forces it within the digital class through social media posting, user generated content, and network participation—a promising stance is one of disengagement and indifference via the “whatever.” It is worth emphasizing, however, that fatigue, whether with social media or other types of networks, may not be a universal position, even as it is becoming increasingly more common; it is a privileged stance available primarily to people (myself included) with sufficient technological access and leisure time to develop such weariness.

Though Galloway arguably has in mind a more comprehensive political and aesthetic strategy, we see something of the “whatever” at play in everyday discussions about “opting out” of social media.¹² Certainly, many people around the world cannot or choose not to “opt in” to services such as Twitter or Facebook in the first place. However, those who use these networks often accrue numerous reasons for leaving them behind. People may want to withdraw from a culture of publicized narcissism; combat their addictions to the high of instant gratification that comes with likes, upvotes, comments, and check-ins; minimize the loneliness, alienation, or envy associated with social comparison on such networks; eliminate the affective uncertainties associated with posts that arrive on one’s stream or wall according to an unknown logic of proprietary algorithms; challenge the threat of corporate surveillance that undermines any semblance of privacy; resist fantasies of political participation that alleviate guilt through low-touch interactions with questionable efficacy; and so on.¹³ For people who opt out, or wish to do so, social media networks offer too much connection or connection of the wrong kind. Though opting out of social media may be a last resort for some, even that tactic may feel unsatisfying given the ubiquity of contemporary communication networks. Choosing not to participate may run counter to the dominant ideology of our time but it may simultaneously entail the sacrifice of digital literacy and critical thought about the present. At the same time, subtraction, opacity, and disappearance

¹⁰ Alexander R. Galloway, *The Interface Effect* (Cambridge, UK: Polity, 2012), 138.

¹¹ *Ibid.*, 138.

¹² See, for instance: Woodrow Hartzog and Evan Selinger, “Quitters Never Win: The Costs of Leaving Social Media,” *The Atlantic*, February 15, 2013. Also, see: Jose van Dijck, *The Culture of Connectivity: A Critical History of Social Media* (Oxford: Oxford University Press, 2013).

¹³ See, for instance: Beth Anderson, Patrick Fagan, Tom Woodnutt, and Tomas Chamorro-Premuzic, “Facebook Psychology: Popular questions answered by research,” *Psychology of Popular Media Culture* 1 (2012): 23-37. Also, see: Hanna Krasnova, Helena Wenninger, Thomas Widjaja; and Peter Buxmann, “Envy on Facebook: A Hidden Threat to Users’ Life Satisfaction?” *Wirtschaftsinformatik Proceedings* (2013), Paper 92.

may be indispensable tactics in certain sociopolitical struggles—for instance, as realized in artist Zach Blas’s queer mask-making actions, *Facial Weaponization Suite*, which oppose networked surveillance and biometric facial recognition (Fig. 2).¹⁴



Figure 2

Zach Blas, *Facial Weaponization Suite: Fag Face Mask* – October 20, 2012, Los Angeles, CA (photo: Christopher O’Leary).

¹⁴ For a parallel articulation of Galloway’s position, see: Zach Blas, “Informatic Opacity,” *The Journal of Aesthetics and Protest* 9 (2014). Also, see: Irving Goh, “Prolegomenon to a Right to Disappear,” *Cultural Politics* 2 (2006): 97-114.

Instead of adopting novel avant-garde aesthetics or opting out of networks, I would like to propose a third orientation: one of *ambivalence*, which operates instead as a mode of extreme presence. Ambivalence is a crucial critical position from which to think within an uncertain present that is also ongoing. It is in some respects contrary to the always-on, perpetually-available mode encouraged by communications networks. It also departs from the critical certainty of negation suggested by the “whatever.” The type of response to networks that I have in mind more closely resembles the one that Berlant evokes in her description of Eve Sedgwick’s work as preparation for bearing ambivalence that cannot be dispersed or repaired. Such uncertainty, which does not require an evacuation of one’s passions and convictions, requires being present to an unsatisfying present. It demands risking absence, uncertainty, boredom, complexity, and disconnection—without promises of instant gratification, certainty, discovery, closure, or reconnection. As Berlant observes, difficult though this stance may be, “without allowing for ambivalence, there is no flourishing.”¹⁵ Though “flourishing” betrays floral roots, perhaps a concept that is more proper to trees than to networks, it nonetheless offers room to maneuver beyond what may seem the stalemate of the present, making available opportunities to think, feel, and act in unanticipated and unhabituated ways.

Ambivalence is not a variety of opting out. If anything, it suggests a process of opting in completely. Going all in, however, need not be reduced to naïve complicity or the hyperbolic extremism of strategies such as accelerationism. The problem of network totality can be approached through ambivalence without yielding to apathy, cynicism, disengagement, or hopelessness. Rather, it takes the form of a deliberate intensity, patience, and willingness to forgo quick resolution or any finality at all. Ambivalence, then, is a process of slowing down and learning to inhabit a compromised environment with the discomfort, contradiction, and misalignment it entails.¹⁶ This stance need not be radical or romantic. It becomes tangible, for instance, through the humanities (digital or otherwise) and arts (new media and old) that dwell in traces of histories, memories, and possible futures. Such work becomes more difficult and, to me, more precious amidst networked technologies that encourage greater speeds of information processing and communication. In this present, thoughtful reflection is too rare.

Thinking alongside and through networks encourages thought that is ambivalent in its openness to numerous disciplines, methods, forms, and affects. A network paradigm and its imaginaries, for all of their dominance, do not yield any one thing. Instead of an “either-or,” network aesthetics more often yield a “both-and” and a “what else?” Networks are not absolutely determinate either of dystopia or utopia, corporate networking or human contact, technological disconnection or relational connection. Nevertheless, networks do offer a robust language for thinking through ambivalence via processes of decentralization, simultaneity, proliferation, complexity, and emergence. Networks suggest constant change and reconfiguration that exceeds any individual’s imagination and leaves open possibilities.

¹⁵ Lauren Berlant and Lee Edelman, *Sex, or the Unbearable* (Durham: Duke University Press, 2014), 61 and 12.

¹⁶ For an exploration of ways that art can open up an understanding of slowness, see: Lutz P. Koepnick, *On Slowness: Toward an Aesthetic of the Contemporary* (New York: Columbia University Press, 2014).



Figure 3

Screenshot from *Speculation*, 2012-2014, N. Katherine Hayles, Patrick Jagoda, and Patrick LeMieux.

The mode of ambivalence that I have been sketching out can play a role not only in theory but also in concrete humanities practice. Between 2012 and 2014, I co-created and ran an alternate reality game called *Speculation* with N. Katherine Hayles and Patrick LeMieux (Fig. 3). This game was a transmedia production that was distributed across HTML pages, Unity games, PDF documents, PHP forum software, and live performances. This large-scale game responded in myriad ways to the 2008 financial crisis and the Occupy movement that began in 2011, but it took as its primary political scene contemporary digital networks and the social collectives they might or might not make possible. The game served simultaneously as a pedagogical exercise that included students at multiple universities, a new media art project, and a form of practice-based research about serious games. *Speculation* put forward several critiques of the gender and race discrimination of Wall Street banks, the lack of regulation of complex derivatives, and forms of high frequency trading in which faster fiber optic cables that shave mere milliseconds off an exchange can lead to annual profits in the billions. However, instead of simply condemning such practices, both the designers and players of *Speculation* began to reflect on parallels between the technological logics of the game and the financial logics it explored. Players juxtaposed varied complicities (their own and those of the game designers) without settling for the

paralysis or passivity that sometimes accompanies critique. Networked collaboration, exploratory metagaming, and shared production emerged as ways of inhabiting and experimenting with the ambivalent situation of networks that the game foregrounded.¹⁷

Projects such as *Speculation* lead to a place of humble dwelling within uncertainty. Such works emphasize that there is a great deal that we do not yet (and may never) know about networks, while also emphasizing that we can still aspire to go beyond the way of thinking they instantiate. It is worth noting that the network paradigm may have triumphed since the late twentieth century, for the time being, but its cultural discourses often remain astoundingly individualistic and consumer-oriented. As Jodi Dean observes, "Media, even smaller and more integrated, are not just many-to-many, as early internet enthusiasts emphasized, but me-to some-to me."¹⁸ Social media networks cater to individual expression, minimizing circulation and maintaining homogeneous groups that limit exposure to cross-ideological content.¹⁹ Moreover, as Jonathan Zittrain argues, contrary to the early promise of the Internet as "a generative network," an increasing number of technologies such as computers, smart phones, and videogame consoles are closed to user experimentation and tethered to particular companies.²⁰

Even as network metaphors so frequently smack of tired clichés, we may be a long way off from coming to terms with networks, aesthetically, technically, and politically. Older frameworks of individualism and consumption frequently overshadow the profound implications that networks suggest for ontology and epistemology, politics and ethics. Networks may make individuals obsolete or irrelevant. They also help us better understand, without ever wholly comprehending, the behavior of nonhuman superorganisms like ant colonies. And, then, networked interactions defamiliarize human behavior, as with the phenomenon of upwards of 121,000 participants collaborating, in real-time, to complete a single videogame together in "Twitch Plays *Pokémon*." A great deal remains unknown, and perhaps even unknowable, about how and why such networked collaborations can yield emergent order rather than utter chaos.

As I elaborate in my forthcoming book, network aesthetics multiply the possible forms that thought itself might take. Thought need not be put in the service of perpetuating progress through innovation or yielding negation through critique. It can also be a state of experiencing, negotiating, affecting, inhabiting, and playing with the mixed feelings inherent in ambivalence. Ambivalent thought, it is important to specify, does not necessarily belong to a divided individual. It can also unfold through collectives. Rather than paralyzing an individual in indecision, collaboration changes not only how we think but also how we work

¹⁷ For a fuller account of the *Speculation* alternate reality game and its outcomes, see: N. Katherine Hayles, Patrick Jagoda, and Patrick LeMieux, "Speculation: Financial Games and Derivative Worlding in a Transmedia Era," *Critical Inquiry* 40 (2014): 220-236. As a game, *Speculation* encouraged participants to play with networks. In her writing about the digital humanities, Bethany Nowviskie characterizes an algorithmic black box as "a dark game, in many cases, a rigged game, maybe, but a game nonetheless, in which we are invited to interpret, perform, respond, and even compose a kind of countering ludic algorithm" ("a game nonetheless," March 15, 2012, <http://nowviskie.org/2015/a-game-nonetheless/>). Following Nowviskie's characterization of algorithms, we might imagine a ludic orientation toward networks that emerges from methods and techniques taken from the humanities and the arts.

¹⁸ Jodi Dean, *Democracy and Other Neoliberal Fantasies: Communicative Capitalism and Left Politics* (Durham: Duke University Press, 2009), 4.

¹⁹ Itai Himelboim, Stephen McCreery, and Marc Smith, "Birds of a Feather Tweet Together: Integrating Network and Content Analyses to Examine Cross-Ideology Exposure on Twitter," *Journal of Computer-Mediated Communication* 18 (2013): 40-60.

²⁰ Jonathan Zittrain, *The Future of the Internet and How to Stop It* (New Haven, Conn.: Yale University Press, 2008), 3.

and act in groups. Such collectively ambivalent thought may surface in heated seminar discussions (in physical or online classrooms) during which conflicting voices cannot draw nearer to resolution but nonetheless begin to better describe the coordinates of a shared problem. It may give shape to decentralized political groups, as with the Occupy movement, which was organized through an email list, a blog, and social media. It may also emerge in more casual contexts, such as raids or large group campaigns in virtual worlds or coordinated activity in long duration alternate reality games.

For me, network aesthetics model a pedagogy and analytic style of ambivalence. Such a stance is not meant to encourage political quietism. Admittedly, I am wary of claims of political heroism—of analytic subversion, opposition, and resistance—that are common among scholars and critics writing primarily for an established in-crowd within the humanities. At the same time, I believe that scholars have much to offer in a world of high-speed networking, rapid oscillation among media, and proliferation of opinions from anyone with laptop or smart phone access. Aesthetic works encourage us, despite the discomfort the process may entail, to slow down thought, oscillate among divergent perspectives, inhabit complex contradictions, and enter into uncertain collective configurations. If network aesthetics have something crucial to contribute to ongoing thought, feeling, and play with networks from an immanent inside that promises no outside, it is the patience, modesty, dissatisfaction, empathy, and thoughtfulness that are necessary, if never wholly sufficient, conditions of politics in the early twenty-first century.

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