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Research article

Material Agency, 4E Cognition, and Kant's Invisible Printing Press: Regarding Foucault's Trip to Iran

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Abstract

In order to help dispel a stubborn Enlightenment myth that continues to warp understandings of political speech, this analysis draws on developments in theories of “4E” cognition (theories of the embodied, embedded, extended, and enacted mind). Here I treat the ideal Kantian figure of the individual political actor who exercises public reason, the famous “scholar” of “What Is Enlightenment?”, as a myth that has already in effect decomposed from the inside. It has been undermined by academic developments across fields including Foucauldian genealogy in the humanities, social-constructivist philosophy of science, and 4E theories of mind in cognitive science. It has also been undermined in common practice by complications of authorship, literacy, and publicity in current digital media. Yet its theoretical trouble persists as the Kantian model remains a dominant conception of political speech, and subsequently of freedom and reason. I use the example of Foucault's engagement with the Iranian revolution, much-critiqued, to show how the persistence of this myth precipitates a major theoretical obstacle for a project committed to overcoming the transcendental themes of Kant, such that they re-emerge through an idealization of a spiritual dimension of the revolution. This episode indicates that Foucauldian genealogy did not complete its rejection of Kantian transcendental idealism, and more specifically that the issue lies in its concept of subjectivity. Introducing Andrew Pickering's theory of the mangle, from his work in philosophy of science, in conjunction with 4E theories of cognition provides a supplement to genealogy that allows it better to address the still-clinging root of the Enlightenment myth of the ideal actor, namely Kant's own theory of cognition, particularly in its relationship to Newtonian physics and the basic conception of reason as “internal.” The introduction of these supplementary theoretical elements can help conceive political speech beyond outmoded strictures – possibly helping to make it newly effective.

Keywords: Material agency; 4E Cognition; Embodied cognition; Material engagement theory; Foucault; Iran; Printing press

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Научная статья

Материальная агентность в познании и невидимый печатный станок Канта: О поездке Фуко в Иран

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Аннотация

Чтобы помочь развеять стойкий миф о Просвещении, который продолжает искажать понимание политической речи, этот анализ основан на разработках теорий познания “4Е” (embodied, embedded, extended, and enacted mind – воплощенного, внедренного, расширенного и задействованного разума). Здесь я рассматриваю идеальную кантовскую фигуру индивидуального политического деятеля, воплощающего общественный разум, знаменитого “ученого” из книги “Что такое просвещение?”, как миф, который, по сути, уже разложился изнутри. Он был подорван научными достижениями в различных областях, включая генеалогию Фуко в гуманитарных науках, социально-конструктивистскую философию науки и 4Е теории сознания в когнитивной науке. В обычной практике он также подрывается сложностями, связанными с авторством, грамотностью и публичностью в современных цифровых средствах массовой информации. Однако теоретические проблемы сохраняются, поскольку кантовская модель остается доминирующей концепцией политической речи, а впоследствии и свободы и разума. Я использую пример участия Фуко в иранской революции, подвергшейся резкой критике, чтобы показать, как устойчивость этого мифа создает серьезное теоретическое препятствие для проекта, направленного на преодоление трансцендентальных тем Канта, так что они вновь возникают благодаря идеализации духовного измерения революции. Этот эпизод указывает на то, что генеалогия Фуко не завершила свой отказ от кантовского трансцендентального идеализма, и, более конкретно, на то, что проблема заключается в ее концепции субъективности. Представление теории жерновов практики Эндрю Пикеринга из его работы “Философия науки” в сочетании с “теориями познания 4Е” представляет собой дополнение к “генеалогии”, позволяющее лучше понять все еще сохраняющийся корень мифа Просвещения об идеальном акторе, а именно с собственной теорией познания Канта, особенно в её связи с ньютоновской физикой и базовой концепцией разума как “внутреннего”. Введение этих дополнительных теоретических элементов может помочь осмыслить политическую речь вне устаревших рамок и, возможно, сделать ее по-новому эффективной.

Ключевые слова: Материальная агентность; Познание 4Е; Воплощенное познание; теория материального взаимодействия; Фуко; Иран; Печатный станок

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There comes a moment when words must either become incarnated or the words, even if literally true, are rendered false.

–William Stringfellow (1973), *An Ethic for Christians and Other Aliens in a Strange Land*

INTRODUCTION

Adopting the basic framework of 4E cognition as a working theory of mind, as many current theorists of material agency do, foregrounds a crisis in the rationalist conception of political speech rooted in Kant. It is particularly disruptive to the idea of the individual political actor who exercises public reason, the famous “scholar” of “What Is Enlightenment?” This Kantian figure has lost coherence as the logic of representation of which it is an expression has collapsed in at least three senses taken up here: in a Foucauldian-genealogical sense, the Kantian transcendental has collapsed as an ideal model of subjectivity and a basis for discursive knowledge in the sciences (see e.g. Foucault, 1971/1994; Gutting, 1989; Han, 1998/2002); in the sense of Andrew Pickering’s (1995) theory of the mangle, representation has collapsed as the dominant idiom of scientific and technological practice, replaced by a performative idiom; and in the sense of 4E theories from cognitive science (that is, theories of the embodied, embedded, extended, and enacted mind) representation has collapsed as a model of cognition (see e.g. Malabou, 2008; Malafouris, 2013; Thompson, 2007; Varela et al., 1991). Yet this same work offers the opportunity to formulate a new idea of political speech, particularly as it facilitates new accounts of material agency. This becomes especially clear when that work is applied back to one of Kant’s most widely-known expositions of a theory of political effort, “Answering the Question: What Is Enlightenment?” in regard to the invisible but indispensable technology at work in that account, the printing press. A new, strategically posthumanist perspective informed by an understanding of material agency grounded in 4E would not rely on an idealization of political speech as an exercise in ratiocination between the individual author and the reading public, but rather more effectively describe political speech in its historical, techno-scientific, and material aspects. Rather than drawing an absolute border around the individual as the origin of public reason, it allows the sub-individual constituents of social life to appear. Speech becomes their matter as well.

Today, this move is all the more urgent as the real conditions of political speech are more obviously entangled with algorithmic sorting, anonymous or otherwise obscure authorship, and engagement with artificial intelligence systems. Literacy, as well, has become a more complex matter. My analysis begins from a determination that the approach to public reason on which Kant grounds his political vision in “What Is Enlightenment?” is no longer viable. This does not mean necessarily adopting a fatalistic attitude about the significance of political speech, nor does it dismiss the potential effectiveness of the kind of speech Kant elevates to ideal status, but it does leave even a theorist of the collapse of the logic of representation like e.g. Foucault without an obvious place to turn. In my understanding, the example of Foucault’s engagement with the Iranian revolution demonstrates this predicament, leading him to speculate about its



spiritual aspects precisely because he lacks recourse to accounts of material agency available today – these, in turn, rely on 4E frameworks. Here, I want to show how recent research into material agency from the direction of continental philosophy can offer a way to understand political speech beyond the quintessentially Kantian paradigm of public reason, helping navigate pitfalls like the one that ensnared Foucault in regard to Iran. Philosophers and theorists of material agency today like Pickering, Catherine Malabou, and others offer resources, drawing on 4E theories of cognition, that allow one to decompose the Kantian myth in a way Foucault could not completely. This move accomplishes a few things. It can help generate a new understanding of political action, even a principle that some discuss in terms of an “experimental ethos” that can break free from the inertia of the regime of representation (see e.g Barad, 2007, Lemke, 2021). It can help develop a genealogy of political agency beyond Foucault, more closely in dialogue with the natural sciences and technological fields. The reevaluation of the conditions of political speech can also prove useful generally in any context in which purely narrative engagement proves futile, or in which technological processes are central – that is to say, generally, our current context.

PRELIMINARY DEFINITIONS

I start with a preliminary definition of political effectiveness provided by Foucault (1971/1998), the bridge figure in this analysis, in “Nietzsche, Genealogy, History”:

History becomes “effective” to the degree that it introduces discontinuity into our very being--as it divides our emotions, dramatizes our instincts, multiplies our body and sets it against itself. “Effective” history deprives the self of the reassuring stability of life and nature, and it will not permit itself to be transported by a voiceless obstinacy toward a millennial ending. It will uproot its traditional foundations and relentlessly disrupt its pretended continuity. This is because knowledge is not made for understanding; it is made for cutting.

In this light, I understand politically effective speech to deliberately introduce discontinuity into “life,” “nature,” and/or “our very being.” Foucault writes specifically in terms of genealogy, i.e. a particular historical practice, but here I generalize it to a definition of effectiveness in a broader political sense. I turn to Pickering to do so, and I use his concept of the mangle to suggest that a concept already at work in Foucault – the “sub-individual” – can serve as the focal point of this expansion. Doing so accomplishes two things: it addresses a clear issue in Foucauldian genealogy, made apparent by his quixotic engagement with Iran, and in turn it offers a means to re-conceive political speech beyond its highly compromised position today.

This move initiates the departure of my analysis from the more typical sense of “effectiveness” in the post-Kantian rationalist understanding of political speech. Habermas, for example, has a different understanding of what “effectiveness” means in the context of political discourse. This informs his fundamental separation of technology and the “lifeworld,” which theories of material agency in fact combine. In this analysis, my use of Foucault, Pickering, and 4E theories all serve the end of describing the inseparability of technology and the lifeworld. As regards an established rationalist like



Habermas, even before his later writings on technology, the point of departure lies in the domain of theory of mind. In the first volume of his *Theory of Communicative Action*, Habermas (1981/1984) identifies a “theoretical weakness” shared in common by Marx, Weber, Horkheimer, and Adorno (who form a kind of Mt. Rushmore of sociology in his account). That is, they all have a vague notion of *an encompassing societal rationality* ... But this encompassing concept of rationality would have to be confirmed at the same level as forces of production, sub-systems of purposive-rational action, totalitarian carriers of instrumental reason. This does not happen. (p. 144).

To Habermas (1981/1984), the problem there is twofold, that their action concepts are too basic, and that besides they confuse “basic action-theoretic and systems-theoretic concepts” (p. 145). The ostensibly encompassing social rationality is not confirmed; even if it were, that would be another problem. As a result, these thinkers become carriers or vectors of a kind of philosophy of history that Habermas aims to put to rest, namely its “speculative heritage” that traces back through the 19th century to the Enlightenment. Habermas identifies a fatal flaw in Marxism that results from the problematic ambiguity of that vague encompassing societal rationality. By uncritically adopting the “dialectical conceptual apparatus” from Hegel, “the unity of theory and practice was inserted into the basic concepts of the critique of political economy in such a way that the normative foundations of Marxian theory have been obscured until today” (p. 150).

This perhaps explains the antipathy of Habermas towards what exists at the level of forces of production, as it bears repeating that he characterizes them as “totalitarian carriers of instrumental reason.” The suspicion still poses a valid concern for any theory of material agency – does it not risk a kind of materialist reduction that nullifies concepts like freedom or will? Keeping this worry in view, nevertheless my analysis approaches the level of forces of production much differently, by way of first conceiving of the effectiveness of rationality, specifically political speech, differently. Interestingly, effectiveness is an immediate concern of Habermas in his diagnosis of the ills of Marxian sociological theory. He traces a line back to Condorcet, emphasizing an Enlightenment presupposition on his philosophy of history that Marx inherits and transmits: “Every interpretive approach that places historical phenomena in the perspective of rationalization is committed to the view that the argumentative potential of cognitions and insights becomes *empirically effective*” (Habermas, 1981/1984, p. 150) While my analysis might tentatively concur with Habermas on this specific point, and even further on his assertion that such a commitment would be fatally mistaken were it to rely on “an automatic efficacy of the mind,” I do not believe that the latter is the only possibility. Whereas Habermas sees vectors of totalitarianism on the level of forces and subsequently avers them, I prefer to meet them and let them speak. Again, it seems clear that they play a constitutive role in public reason and political speech. I also believe the commitment to effective thinking is both a valuable principle and a pragmatic goal, and not necessarily a dead end.

In brief, then, while my analysis finds common concern with Habermas in the problematic ambiguity of discourse and matter, including the role of a Newtonian trace in it, I move in a contrary direction by choosing Pickering’s theory of the mangle as a reference. The main utility of Pickering’s theory is not merely in generalizing a condition



of effective genealogy to a condition of effective politics. Foucault (1980) himself subordinates the aims of genealogy to a general political aim explicitly, e.g. in “Questions on Geography.” More importantly, Pickering facilitates a departure from Habermas and rationalist theories of communication more generally, by proposing an alternative conception of the relationship between theory and practice, discourse and matter, or thoughts and things more broadly. Where Habermas commits to separating lifeworld from economy or lifeworld from technology, Pickering's concept of the mangle embraces their inextricable co-constitution. The question of effectiveness gets to the heart of the matter – adopting a concept of material agency informed by 4E cognition redefines the very boundaries of theory and practice that so concern Habermas. This is in part because the move redefines the relationship between discourse and matter and changes the terms of the historical analysis of rationality. One could note, for example, how differently Pickering discusses Marx, when compared to Habermas. To Pickering (2002), Marx is “the first great modern alchemist” (p. 201), whereas to Habermas (1981/1984), Marx is ultimately another normative rationalist in disguise (p. 150).

The goal here is not generalization for the sake of it – rather, it is to suggest specifically that introducing 4E cognition and its corresponding theories of material agency can help overcome a critical impasse of Foucault's genealogy, which in turn can help rethink political speech in the face of a crisis of effectiveness. On this more granular level of analysis, I am following after Pickering's generalization of his concept of “the mangle” from a theory of scientific and technological practice to a general theory of action. I turn towards Pickering both for his own gestures back to Foucault (e.g. 1995, 20) and also because of his focus on technological practice, which in turn can help decompose the Kantian myth of politically effective speech, the purely rational speech of the ideal scholar. Pickering's general theory of action and Foucault's general theory of effective knowledge meet at material agency and 4E cognition. Contrary to Habermas, this can show that something other than an inherited, flawed presupposition of an automatic efficacy of mind is possible. Ultimately, this is about overcoming the bifurcation of the internal and the external in Kant, itself rooted in a Newtonian separation of space and time.

The question of how precisely to determine what is or is not a discontinuity, especially insofar as it raises ontological issues, is another area where introducing this new theoretical material can prove useful. Rather than focus purely on discursive shifts – i.e. as Foucault began to do in the earlier, archaeological stage of his career before moving towards genealogy – accounts of material agency can articulate changes in relations through which the public itself was constituted. The way philosophers of science including e.g. Pickering, or actor-network theorists including Latour, or anthropological and archaeological theorists discuss material agency and the history of cognition likewise adopts an active political principle regarding its own work that depends on, and reaffirms, the collapse of representation and the general insufficiency of the exercise of public reason through writing to effect discontinuity on its own, by force of intrinsic rationality. In simplest terms, the idea is that, as Karen Barad (2007) puts it: “Language has been given too much power” (p. 132). Other critical readers of Kant like Catherine Malabou similarly offer accounts of the collapse of the logic of representation that raise new



political questions (e.g. “what should we do with our brain?”). Beyond any particular belief or position, it is abundantly clear that adopting a view of material agency based in 4E necessarily changes one’s view of politics *per se*. The relationships constituted through political speech cannot adequately be described in Kant’s terms.

In the above-quoted passage regarding genealogy, Foucault is concerned with effective knowledge insofar as it looks “backwards” at history; still, there is a corresponding principle of political effectiveness active in his writing, for example as he explicitly states in his 1976 interview with the geographers of *Hérodote*.¹ Foucault can be taken as a bridge between, on the one hand, a Kantian understanding of political effort as an exercise in “appearing to the reading public as a scholar,” i.e. through rational disquisition printed and distributed to the appropriate audiences, and on the other a broadly post-Kantian understanding that is based in surpassing the logic of representation underlying Kant’s ideal political communication.

Foucault begins to impel considerations of political speech towards a more comprehensive engagement with material agency, that is, the role of relations between the individual and their environment, technologies, and scientific discourses in constituting these relationships, but he never quite arrives there. While able to offer a critique of the logic of representation – revealing its transcendental dimension to be a merely “quasi-transcendental” abyss (see e.g. Foucault, 1971/1994, p. 251) – Foucault does not claim to replace it with a substitute logic; rather, through archival work, he tracks instances of rupture and change in it. This is what genealogy promises for him; perhaps not coincidentally, his methodological interest in genealogy coincides with his involvement with the Iranian revolution, through which he considers the “spiritual dimension” of revolutionary practices in a way that has prompted some scholarly controversy over his possibly fetishizing or otherwise doing colonial violence against the revolution (see e.g. Ghamari-Tabrizi, 2016). Regardless of where one falls on that debate, it seems that Foucault is looking at Iran for a way to account for the effectiveness on which his own efforts are ostensibly based, especially given his contemporaneous methodological struggles with genealogy. Whether one is inclined more towards the “spiritual” or the “material,” neither or both, it seems this crucial juncture in Foucault’s own methodological and political efforts anticipates Barad’s admonition that language has been given too much power – accounts of the transformations of discourse prove insufficient, and genealogy demands more. It therefore can serve this analysis as a hinge.

This is where Pickering’s work readily applies. Parallel to Foucault’s shifts, a new, consciously post-Kantian conception of political speech corresponds to what Andrew Pickering (1995) discusses as the shift from a representational to a performative idiom in science. Like Foucault, Pickering derives a motivating principle from this shift—in his case fully normative, that one *should* seek a shift towards an expanded conception of

¹ “Now this role of referee, judge and universal witness is one which I absolutely refuse to adopt, because it seems to me to be tied up with philosophy as a university institution. If I do the analyses I do, it’s not because of some polemic I want to arbitrate but because I have been involved in certain conflicts regarding medicine, psychiatry and the penal system. I have never had the intention of doing a general history of the human sciences or a critique of the possibility of the sciences in general.” (Foucault, 1980, p. 65)



scientific and technological practice that precipitates an entirely new sense of agency even beyond those practices, extending to the entirety of what he calls “the mangle.” The mangle, to Pickering (1995), is on the one hand “a convenient and suggestive shorthand for the dialectic” (p. 23), that dialectic specifically being the “dance of agency,” a dialectic of resistance and accommodation by which agents, human and material, co-constitute each other. “Thus I say that the contours of material and social agency are mangled in practice, meaning emergently transformed and delineated in the dialectic of resistance and accommodation” (p. 23).

This impulse towards an expanded conception of agency as the basis for a new conception of political effort is shared likewise with contemporary figures like Malabou and others. Pickering's (2010) own work on cybernetics deals with its longer political history, as does recent work by e.g. Eden Medina (2011). This concern for the material conditions and constituents of speech, rooted in thinking about material agency and the extended mind, is especially useful in dealing with a situation of media technologies radically different from Kant's printing press and its corresponding reading public, e.g. the ubiquity of computers, the attention economy of screens, and the systems in which they are enmeshed.

I want to focus on these two significant shifts since Kant's essay that a 4E-informed account of material agency can help address. The first is that indicated by Foucault, which traces the end of representational logic. The second is that indicated by Pickering, from representational to performative science, which changes the character of expert knowledge and undermines the connection between free public reason and the logic of representation. These two theoretical shifts mark the collapse of the Kantian ideal subject, and open the terrain for a new political principle based in a logic of material agency. This entails a new concept of political speech.

FOUCAULT, IRAN, AND THE SUB-INDIVIDUAL CONSTITUENTS OF AGENCY

In a genealogical sense, “raising awareness” is a characteristic myth of European Enlightenment, not unlike the “state of nature.” Again, this is something even Habermas identifies. One manifestation of a quintessentially Kantian conception of political effort is the proliferation of “awareness campaigns.” Examples of the limited effectiveness of “raising awareness” are not hard to find – one could point to familiar spectacles in American history like Live Aid, Kony 2012, the War on Cancer, the War on Drugs, Mental Health Awareness Month, and others that have fallen far short of their stated aims, though proving politically useful and even lucrative in other regards. “Raising awareness” can easily enough be framed as an example of the Kantian political myth at play—this is, in a literal sense, what the enlightened scholar is supposed to do for the reading public. It can also be understood as shorthand for a moral economy of absolution that raises representations of problems as a means of expiating guilt without thereby effecting solutions – this is well-tread ground for critics like Susan Sontag (2003), for example. It is another myth that 4E cognition can readily decompose – that is, in changing the senses of both “raising” and “awareness” by fundamentally altering the terms of the relationship.



This is ultimately the problem that I believe confounds Foucault in Iran, where he finds a “spiritual” awareness among the people absent from modern European revolutions and societies. Lacking an analysis in terms of material agency, Foucault falls back into the logic of representation and skirts close to the language of Orientalism, for which he continues to take flak. I argue that this is a function of a methodological impasse in his genealogy that the introduction of the new theoretical elements of 4E cognition and material agency can help surpass.

I want to be cognizant of how Foucault (1984/1998) himself reads Kant, particularly his admonition about humanism and the Enlightenment in his own “What Is Enlightenment?”, published on the bicentennial of Kant’s:

Humanism serves to color and to justify the conceptions of man to which it is after all obliged to take recourse... [it] can be opposed by the principle of a critique and a permanent creation of ourselves in our autonomy: that is a principle that is at the heart of the historical consciousness that the Enlightenment has of itself. From this standpoint I am inclined to see Enlightenment and humanism in a state of tension rather than identity. ... In any case it seems to me dangerous to confuse them; and further it seems historically inaccurate. ... In any case I think that just as we must free ourselves from the intellectual blackmail of being for or against the Enlightenment we must escape from the historical and moral confusion that mixes the theme of humanism with the question of the Enlightenment.

Foucault is not interested in resolving this tension, nor in exorcising this recurring theme. However, Iran proves a unique challenge to his commitment to avoiding the “intellectual blackmail.”

In the original essay “Answering the Question: What Is Enlightenment?” (1784), Kant specifies how an enlightened subject participates in political life in an enlightened society, i.e. by exercising public reason as a “scholar:” “...each citizen, particularly the clergyman, would [in enlightenment] be given a free hand as a scholar to comment publicly, i.e. in his writings, on the inadequacies of current institutions” (Kant, 2006, p. 20). Public use of reason he famously defines earlier in the essay as “that use which anyone may make of it as a man of learning addressing the entire reading public” (p. 19). Taken together with the injunction from “Towards Perpetual Peace” (1795) that all individuals in the world should live under a republican constitution (p. 74), one has the basic parameters of Kant’s ideal conditions of political freedom, along with a conception of the kind of speech that, in enlightenment, must remain unrestricted, i.e. the public exercise of reason. That speech is individual, vaguely scholastic, and based around a specific technology, the printing press, and thus the public constituted through it. For Kant, however, this technology remains hidden there is no reading public nor ideal relation conceivable without it, yet Kant leaves this situation unacknowledged. His ideal model of public reason sees it as an expression of an internal cognition that belongs properly to the subject of enlightenment, the mature individual – the reading public is thereby naturalized and uncritically accepted as an object preceding the relation.

The historian of publishing Robert Darnton helps reveal why this is empirically mistaken—in fact, the technical and economic realities of printing, publishing, and



distributing texts during the Enlightenment (and beyond) had a substantial effect on its discourses. What Pickering calls the “mangle” of human and material agencies is on full display in Darnton's work, though the latter is not concerned with the same theoretical questions. For example, Darnton's history of the publishing of Diderot's *Encyclopédie* goes into great detail about how the Enlightenment itself, as an effective movement, arose from the tangled agencies of printing houses, legal gray zones, cross-border customs raids, patronage, commerce, piracy, police work, and the conditions of paper, folios, and books themselves. He describes the founding of the Société typographique de Neuchâtel (STN) in 1769 by three educated bourgeois as a technical and speculative venture: “Writing memos, scheduling conferences, going over the pros and cons of complex questions of finance and marketing – the directors of the STN operated like modern businessmen, although their business was Enlightenment” (Darnton, 1979, p. 53). Working between polities, markets, shipping routes, bookstores, and a complex French regime of censorship with domestic and geopolitical dimensions, the publication and distribution of the *Encyclopédie* was far from a pure contest of ideas among readers—it was a struggle over the constitution of a reading public as such, on top of a world consisting already of readers, texts, and exchanges.

Among thinkers of 4E cognition, as well as thinkers of material agency, it is generally held that the relation is primary to the relata—that is, in this case, that both the scholar and reading public are constituted through their relation, that is, through the technology of the printing press and its coordinated systems, rather than preexisting that relation (see e.g. Barad, 2007; Thompson, 2007). Among other things, this is why Malabou (2008) can state that “the brain is a history” or “the brain is a work, and the do not know it,” a transformation of the fundamental Marxist idea that production not only creates an object for the subject but a subject for the object. Transforming Marx in this way also motivates Pickering (1995), who likewise echoes this point in his account of the mangle: “The world makes us in one and the same process that we make the world” (p. 26). That is not, however, how Kant speaks of it – he is clear in the essay that enlightenment begins with a private effort, a struggle of the individual to assume maturity as a relationship of mastery to itself, such that its freedom is its self-mastery; moreover, the public as an entity is said to be destined for enlightenment innately. This accords with his fundamental division of knowledge, science, and cognition into external and internal zones, the latter being the domain of pure reason. Fundamentally, 4E cognition renders this basic Kantian split impossible, as the mind is no longer conceived as separable from what Kant consigns to externality. Remedying this deep Kantian suture is already an explicit goal of Foucault's, but he finds it re-emergent in Iran; in fact, he himself reinscribes it despite years of committed opposition. Following Malabou and Pickering, I believe this illustrates genealogy's need for 4E. In turn, this opens an alternate path to conceiving of public reason and political speech.

Foucault's writings on Iran can be especially useful in decomposing the Kantian myth because of the resistances he encounters. Foucault traveled in Iran throughout 1978-1979 during its ongoing revolution, as it was consolidated under Islamist leadership, writing a series of reports for the journal *Corriere della sera* that exhibit a kind of tempered ebullience about the course of events, sparking debates about the nature and



propriety of his interest that continue to this day (see e.g. Afary and Anderson 2005). Concurrently, his methodological struggles at the time included his concern with genealogy, the *dispositif* (or “apparatus”) and its attendant concept of “strategy.” In my understanding, due to the broader intellectual context in which he engaged Iran, Foucault was focused on the revolutionary strategy there and the tactics that constituted it, and his enthusiasm – baffling to some, offensive to others – can be read more legibly as an engagement with events on those terms. In other words, when Foucault speaks of the “spiritual,” it can be understood as an aspect of the *dispositif* that manifests through the practices of the revolution as strategy; but for this very reason, it can also be understood as the vengeful return of a Kantian logic of representation in political action. By attempting to incorporate a spiritual dimension to the *dispositif*, Foucault inadvertently falls back into the Kantian split. Much as he wants to escape the Kantian transcendental theme, it returns as Foucault posits a unique “spiritual” dimension to the Iranian revolution. Rather than contest that observation, I aim to show that it arises not (or not merely) from Orientalist folly, but mainly from genealogy’s fraught methodology at that time. At precisely this impasse, more recent work on material agency can provide aid.

Anonymity is a defining feature of strategy, itself a necessary constituent of the *dispositif*. The *dispositif* is a concept often translated as “apparatus,” that comes to supplant the concept of the *episteme* as Foucault’s method morphs from archaeological to genealogical in its self-identification. One could think of it as roughly analogous to Kuhn’s idea of a “paradigm” in the sense of naming a situation of knowledge in relation to power, in this case more precisely knowledge as power, “power-knowledge.” The *dispositif* is an idea meant to describe the conditions of power-knowledge, including its discursive modes and its non-discursive component forces; as such, the *dispositif* itself has a strategic aspect. It “wants” something and imparts a “direction” to forces. Strategies do not have strategists, and they are not conspiracies. As John Nale puts it in the *Cambridge Foucault Lexicon*, “there is no subject who invents or is responsible for carrying out a strategy, and furthermore, the strategy that comes to envelop a tactic may be quite antithetical to the aims of those who ‘invented’ any particular practice” (Lawlor & Nale, 2014, p. 487). While tactics are carried out locally by individuals, their coordination as strategy is not. That is the job of the *dispositif*; but the means by which this occurs remain nebulous to Foucault.

For example, in “The Confession of the Flesh,” a 1977 interview with a panel of contemporary psychoanalysts, Foucault elaborates on strategy’s anonymity to Jacques-Alain Miller by way of a comparison of the condition of strategy in absolute monarchy compared to bourgeois parliamentary democracy, which he vaguely attributes to “someone talking about power the other day”:

He observed that the famous ‘absolute’ monarchy in reality had nothing absolute about it. ... Certainly there was a King, the manifest representative of power, but in reality power wasn’t centralized and didn’t express itself through grand strategies, at once fine, supple and coherent. On the other hand, in the nineteenth century one finds all kinds of mechanisms and institutions – the parliamentary system, diffusion of information, publishing, the great exhibitions, the university, and so on: ‘bourgeois power’ was then able to elaborate its grand strategies,



without one needing for all that to impute a subject to them. (Foucault, 1980, p. 207)

This comment on the practical administrative efficacy of these different regimes brings home the point about strategy's anonymity – in fact, historically, it is the more faceless of the governments that more definitively manifests strategy. Following this logic, what could be more faceless than a spiritual government? Yet, as Miller goes on to point out, the question of subjects remains, in particular those who participate in struggles and other force relations. Foucault (1980) concedes that this question concerns him, and subsequently stakes out two striking positions:

J.A. MILLER: So who ultimately, in your view, are the subjects who oppose each other?

FOUCAULT: This is just a hypothesis, but I would say it's all against all. There aren't immediately given subjects of the struggle, one the proletariat, the other the bourgeoisie. Who fights against whom? We all fight each other. And there is always within each of us something that fights something else.

J.A. MILLER: Which would mean that there are only ever transitory coalitions, some of which immediately break up, but others of which persist, but that strictly speaking individuals would be the first and last components?

FOUCAULT: Yes, individuals, or even sub-individuals.

J.A. MILLER: Sub-individuals?

FOUCAULT: Why not? (p. 208)

This concept of the sub-individual is not elaborated further in the interview. It had already shown up in "Nietzsche, Genealogy, History" a few years prior. It clearly marks a theoretical trouble for Foucault. In his recent critique of the new materialist engagement with Foucault, Lemke (2021) relates the issue of the individual for Miller to the question of the role of the plebs as the ever-silent target of dispositives of power, an idea elaborated by Foucault in "Questions on Geography." This is relevant especially for the idea of a spiritual revolutionary subject, which would change the nature of this target of power. Differently though, with the psychoanalysts, Foucault articulates an iteration of the older trope of all-against-all that seems to attempt to avoid falling back into the corresponding idea of rational, individual subjectivity by positing the figure of the "sub-individual," so that when Miller notes that the figure of the individual appears to be the primary ("first and last") unit at work operative in Foucault's theorizing, he is able to deny it. The concept of sub-individuals, I want to suggest, can be read as an attempt to facilitate this. One can say that Iran finds Foucault caught between Kant and material agency. Whereas a thinker like Habermas recoils from the "totalitarian" idea of sub-individual agencies, Foucault asks "why not?" In the context of an Iranian revolution often condemned in the West as totalitarian, this difference is especially relevant.

The suggestion of sub-individuals points to the continued primacy of forces rather than individual subjects, relations before relata—in Foucault's iteration of the war of all against all, sub-individuals would be those forces engaged in struggle even "within each of us," so that the individual would itself be a site of tension, constituted by forces that exceed it. Before Foucault would concede that he has fallen back into a logic of rational



subjectivity, he makes a composite of the individual itself, so that it is still constituted by forces all the way down. This is not simply an improvisation, insofar as beforehand in “Nietzsche, Genealogy, History,” Foucault (1998) writes of the sub-individual in the context of *Herkunft*, a term that refers to descent in the sense of identity or personhood, “[b]ut the traits it attempts to identify are not the exclusive generic characteristics of an individual, a sentiment, or an idea, whichh permit us to qualify them as ‘Greek’ or ‘English’; rather, it seeks the subtle, singular, and subindividual marks that might possibly intersect in them to form a network that is difficult to unravel” (p. 373). The individual cannot serve as the irreducible unit, for Foucault, if genealogy is to analyze strategy. Hence the enthusiasm for Iran; yet, undeniably, Foucault seems in the end to substitute another irreducible unit, i.e. his conception of Islam as an absolute horizon (Afary and Anderson, 2005, p. 203). Characterizing the Iranian revolution as a zero-point within an absolute Islam in this way is part of what leads contemporary critics to reject Foucault’s thoughts on it. Here I turn to Pickering who, on the other hand, is able to articulate a comprehensive account of “sub-individual” politics through accounts of material agency, as are 4E-inspired thinkers in regard to cognition. This is ultimately much more productive – this is what my analysis aims to show here, that political speech considered through a 4E framework can be thought of beyond the roadblock Foucault hits.

Beyond helping to consider the material particulars of the “spiritual” aspect of the Iranian revolution – e.g. popular cassette tapes containing Islamic sermons—the shift to analysis in terms of material agency and 4E cognition allows accounts of political speech to go beyond Foucault’s evidently limited critique of Kant by getting at some of the more fundamental scientific issues regarding space and time inherent in the latter’s theory of politics. Scholars like e.g. Karen Barad (2007) and David Harvey (2007) suggest that there is a Newtonian issue Foucault inherits through Kant, related to the concept of matter itself, that constitutes the essence of the roadblock. Kant separates history from geography, the former being a form of narration in time, the latter being “an empirical form of knowledge about spatial ordering and spatial structures” (p. 44). Harvey claims that “Kant’s whole approach to geography and space rests on a pure Newtonian foundation of absolute space and time” (p. 45), that is, one that understands space and time as fundamentally separable. Moreover, to Harvey, Foucault seems to adopt this same disposition, finding a key differentiation between spatial ordering, which “necessarily produces regional and local truths and laws as opposed to universals,” and moral teleology in his own commentary on “What Is Enlightenment?” (p. 45). While noting that Foucault eventually seems to realize there is something wrong with the Kantian theory of absolute space, he fails to develop a viable alternative (p. 46). Barad (2007) likewise suggests that Kant’s physics ultimately informs his humanism, and that any shift from that humanism must likewise shift the physics.

I believe this methodological hitch is precisely what sends Foucault’s analysis of Iran in its incoherent direction, thus revealing the need for an account of material agency. This is what 4E can provide. In the revolution’s “spiritual dimension,” Foucault believes he has found some way to handle the disjuncture that Barad and Harvey trace back to Newton, the problem of overcoming the theory of absolute space that underwrites Kant’s transcendental. In regard to Iran, the unique tactics of the revolution – including



spontaneous public prayer and the distribution of Islamist cassette tapes – are taken to introduce a spiritual dimension to its strategy, that is, a dimension neither purely spatial nor purely temporal. This is all the more reason to see Miller's challenge over the non-discursive as more important than Foucault wants to acknowledge in that interview. In the context of Iran, this might help explain the reversion to a kind of Orientalism, including the totalizing characterizations of Islam and rosy descriptions of the social role of the clerical class – a kind of anthropological entrenchment inherited from Kant as much as notions of space and time.

In the 1976 interview with the geographers of *Hérodote*, Foucault offers an insightful comment on the relationship between strategy and the stubbornly persistent figure of the individual:

Metaphorising the transformations of discourse in a vocabulary of time necessarily leads to the utilisation of the model of individual consciousness with its intrinsic temporality. Endeavouring on the other hand to decipher discourse through the use of spatial, strategic metaphors enables one to grasp precisely the points at which discourses are transformed in, through and on the basis of relations of power (Foucault, 1980, p. 69).

Read through Harvey's critique, one might conclude that the direct identification of the spatial with the strategic is a Kantian repetition that dooms genealogy to the "abyss" that Foucault explicitly seeks to escape – sending it back into the model of representational consciousness with an exotic appendage of spiritual excess. On the other hand, as discussed below, Pickering's theory of the mangle offers a detailed account of agency's emergent temporality, without reverting to Enlightenment myths.

The points at which discourses are transformed on the basis of relations of power, though graspable through strategy, depend on strategy's substance, tactics. As Nale puts it in the *Cambridge Foucault Lexicon*:

Strategies do not exist before tactics. Rather, the tactical relationship that defines the family is conjoined with other tactics in medicine, statistics, and psychiatry to form a strategy, and the "double conditioning" between strategies and tactics must refer to the way in which strategies enable particular force relations to find their consistency and stability, whereas tactics must anchor a strategy in precise and concrete points of support. (Lawlor & Nale, 2014, p. 487)

In the context of the Iran encounter, Foucault is consistently interested in the tactics of the revolutionaries. He writes of practices of mass recitation of religious verse from rooftops, as well as the distribution of recitations through cassette tapes (Afary and Anderson, 2005, p. 216). To Foucault, these tactics signal the emergence of an entirely new strategy. In his 1978 conversation with Baqir Parham, Foucault even espouses a kind of enlightened optimism towards these turns of events:

We have to abandon every dogmatic principle and question one by one the validity of all the principles that have been the source of oppression. From the point of view of political thought, we are, so to speak, at point zero. We have to construct another political thought, another political imagination, and teach anew the vision of a future (Afary and Anderson, 2005, p. 185).



For Miller, the individual subject seems the only option to serve as the concrete site of double-conditioning, the “struggle of all against all” made manifest. But Foucault cannot accede to such an account without returning to the temporality of the individual subject, enacting a separation of space and time, and thus slipping back into the Kantian-Newtonian snare. Hence, the revolutionary public appears at a “zero-point.” But taking the cassettes as an example, it makes little sense to speak this way. Surely only an absolute theology could send its listeners to a zero-point simply by their listening. Here, Foucault avoids the Habermasian concern, automatic *mental* efficacy, only by seemingly introducing an automatic *material* efficacy – explained by the vague spiritual power of Islam. This does not adequately address the legitimate concern.

A methodological amendment is necessary. The gesture to the sub-individual in the context of Miller’s challenge to the *dispositif* can best be understood as a move towards a more plural anchoring. (This is, at any rate, the direction Pickering goes, towards a theory of multiple ontologies.) Crucially, sub-individual forces can better be understood in material terms; whereas an individual exists as a particular confluence of institutions, practices, and forces, sub-individuals can themselves be those forces—not the building planned *per se*, but the bricks, the tools, the weather, the gargoyles, the archaeology, the infrastructure, the fungus, the labor, the management, etc. In Iran, rather than a vector for theology, cassette technology can be understood to constitute a new public with a new mode of speech—not the activation of a revolutionary subject through the incantation of magic words, but the constitution of a new political subject through a new mode of relation.

Yet Foucault’s fascination with the tactics of the Islamists lead him to posit an irreducible source behind them – his conception of Islam. This also tracks with Pickering’s (1995) critical diagnosis of traditional social theory, that such “[h]idden limits, (constraints, horizons) are...a necessary part of traditional social theory” when it tries to come to grips with the historical details of social transformations (p. 175), as it lacks recourse to an analysis of material agency. In Europe, the irreducible object is the plebs referenced by Lemke, a non-discursive entity; in Iran, the irreducible object is Islam, an inherently discursive entity. It leads Foucault to an idealized view of the Shiite branch in particular, for example in his October 8, 1978 report in *Corriere della sera*, where he writes that

Among the Shi’ite clergy, religious authority is not determined by a hierarchy. One follows only the one to whom one wants to listen. The Grand Ayatollahs of the moment, those who, in facing down the king, his police, and the army, have just caused an entire people to come out into the streets, were not enthroned by anybody. ... These men of religion are like so many photographic plates on which the anger and the aspirations of the community are marked. If they wanted to go against the current, they would lose this power, which essentially resides in the interplay of speaking and listening. (Afary and Anderson, 2005, p. 202)

Note the analogy to photographic technology—the clerics are viewed not merely as representatives, but as a power of pure representation, “speaking and listening.” Again, as with Kant’s printing press, the technology becomes invisible as it is subsumed under human agency – in this case, the clerics metaphorically become the technology. So the



mythical mode of politics-as-representation returns. This is precisely the problem that the introduction of an idea of material agency, missing from Foucault's work, can ameliorate. Foucault's endorsement of the founding program of the Islamic republic is in some sense also true to form, insofar as it follows through on the problem Miller identifies – an ambiguity of the non-discursive. Foucault even ends that particular report with the language of destiny reminiscent of the way Kant writes of Prussia, validating some of Harvey's comment about moral teleology:

Persia has had a surprising destiny. At the dawn of history, it invented the state and government. It conferred its models of state and government on Islam, and its administrators staffed the Arab Empire. But from this same Islam, it derived a religion that, throughout the centuries, never ceased to give an irreducible strength to everything from the depths of a people that can oppose state power (Afary and Anderson, 2005, p. 203).

In the late seventies, as Foucault is being challenged about the status of the non-discursive, he is also becoming enthusiastic about the prospects of this vision of an irreducible Islam. Simply put, I believe the unresolved condition of the former enables the latter. It all makes clear the need for an analysis of material agency, and how 4E cognition, particularly in its moving beyond an idea of intrinsic temporality, can help.

POLITICAL SPEECH IN THE PERFORMATIVE IDIOM

To continue this analysis in terms of the mangle, applying Pickering to Kant on the question of political speech, one could first contrast Kant's commitment to pure reason, pure origins, and pure human agency to Pickering's understanding of material agency: "material agency emerges via an inherently *impure* dynamics that couples the human and material realms" (Pickering, 1995, p. 54). This idea of material agency does not mean that objects literally have minds, though it might allow it metaphorically, e.g. as Marx (1867/1990), writes in the famous section on the commodity fetish in volume one of *Capital* about a table with grotesque ideas in its wooden brain (p. 163). The impurity of the dynamic is precisely the contingency and emergent quality of its "dance of agency." While material agency reveals itself to be without intentionality in the phenomenological sense, nonetheless it exercises real power, produces real effects, and makes real differences in the world – not unlike Foucault's concept of strategy. Through what Pickering calls the dialectic of accommodation and resistance or the "dance of agency," practices reveal themselves to be constituted through engagements between human and material. This comes with its own emergent temporality, in contrast to the intrinsic temporality of Kant's ideal subject. As Harvey (2007) points out, Kant bifurcates his own thought along deterministic and human lines in his split between the sciences of geography and anthropology; to apply Pickering to the question of political effort is to exceed that split. This parallels how 4E cognition exceeds the split between the external and the internal likewise fundamental to Kant, as the supplementary example of Malabou will show.

Resistances are central to the emergent agency of the mangle, according to Pickering:



As I remarked when discussing material agency, resistance emerges at the intersection of human and material agency and, as the present argument suggests, serves to transform the former in one and the same process as it delineates the latter. Just as the mangle, then, pulls material agency onto the terrain of human agency, so it materially structures human agency. Just as the evolution of material agency lacks its own pure dynamics, so too does the evolution of human agency.” (Pickering, 1993, p. 581)

In this sense, his work is inherently genealogical insofar as any analysis of the dialectic of accommodations and resistances needs to take a historical look at these interactions. “The performative idiom encourages us to carry out a genealogy organized around striking transformations in the realm of human and material performances...the performative idiom, then, invites a *performative historiography*, one might say, that would be centered in the industrial era on technology, the factory, and production” (Pickering, 1995, p. 230). To apply Pickering to Kant is to suggest that the printing press and the mangle accessible through it should not remain invisible and silent in the latter’s account of political speech; today, one should factor material agents into any account of political effort. Rather than an expression of rationality as it manifests through intrinsic temporality in the individual, then delivered to a reading public already constituted and waiting to process this data, public reason can be understood as one dialectic of resistance and accommodation among many, such that both the “scholar” and the reading public can be understood as constituted only through their relation, including how they interact with its real components, e.g. the printing press, circulated media, etc.

A major worry constituting another obstacle for overcoming a humanist conception of political speech is a fear of naturalistic or mechanistic reductionism, that straying too close to accounts of agency that provide a constitutive role for matter or material arrangements might precipitate a kind of causal meltdown that eliminates any concept of intention or will, or else reduces people to a “standing-reserve” (the Heideggerian expression of this fear). Some philosophers of extended cognition provoke this response deliberately, for example Catherine Malabou (2014) in her essay “Can We Relinquish the Transcendental?” which she concludes with a simulated dialogue:

—We thus have to negotiate the relinquishing of the transcendental with Kant’s own struggle with it.

—How, then?

—Well, in exploring a field that is so often despised by the philosophers—we mentioned it, that of biology.

—In establishing that our categories are reducible to biological concepts, for example?

—Yes, exactly.

—That the transcendental is in the brain?

—Yes, exactly

—Are you aware of being inauthentically Kantian when you say that?

—I am perfectly aware of it and not certain that Kant would have rejected such an inauthentic approach to his philosophy. (p. 253)



Malabou in that essay critiques Quentin Meillassoux's account of the relinquishing of the transcendental in continental philosophy. Malabou is interested in genuinely abandoning the transcendental, and reads Meillassoux as retrenching it in his 2006 book *After Finitude*. While Meillassoux defines and critiques a persistent Kantian "correlationism" in continental philosophy that axiomatically prioritizes the synthesis of thinking and being, and subsequently maintains the inseparability of subjectivity and objectivity, he comes to define relinquishing the transcendental as canceling the priority of the synthesis over positing thinking and being discretely. This is not Malabou's understanding of it; to her.

To relinquish the transcendental implies a neutralization of the "proper" and of "property." To relinquish the synthesis amounts to admitting that the world is not our world, that the laws of nature are not those of our understanding. That we are not correlated to the world or nature in the first place means that they do not belong to us. (Malabou, 2014, p. 247)

Like Pickering, for Malabou there is a clear social aspect to this discussion of facticity and cognition. In her 2008 essay *What Should We Do with Our Brain*, she riffs on Marx in stating that "the brain is a work, and we do not know it," likewise that "the brain is a history." For Malabou, to take seriously the idea that "the transcendental is in the brain" is not to become a vulgar reductionist, but rather to recognize that the brain itself is historically engaged with its world – in other words, to shift from a representational to a 4E model, as her essay explains. Recognizing the historical condition of the brain in this instance is not a gesture towards mere social construction, but rather, much like Pickering's move to a performative idiom and its articulation of a dialectic of resistances and accommodations in the mangle, Malabou's intent to raise a "consciousness of the brain" is an attempt to raise a new political agency.

This sense of raising consciousness, while clearly influenced by a Kantian inheritance, incorporates some insights from 4E theory that make a meaningful difference in its theory of action. The field of cybernetics is often used as an example of an attempt to raise a new political agency that forewent Kantian humanist categories, and as mentioned it is of particular interest to Pickering (2010), who has written extensively on the subject. Separately, a history of the Cybersyn Project in the early 1970's in Chile has been authored by Eden Medina. That project, a collaboration between members of the socialist government of Salvador Allende and the British engineer Stafford Beer, marked the world's first attempt at a civilian national computer network. The aim was to design a system that facilitated the central, but still democratic, coordination of the entire Chilean economy. This involved data production and processing, interfacing between industry and government, and even the design of a futuristic control room, complete with large screens on the walls and a circle of sleek mid-century swivel chairs with control panels built into the arms. By design, the system was meant to foster democratic relations and socialist economics on the level of its very hardware – a "Liberty Machine." The project never came to full fruition, not least because of American intervention in the country leading to the destruction of the Allende government. But there were issues internal to Cybersyn that Medina (2011) notes in her concluding remarks: "...the history of Project Cybersyn shows that it is very difficult to make technologies that are capable of creating



and enforcing desired configurations of power and authority, especially if those configurations are radically different from those that preceded them” (p. 217). Beyond the geopolitical and economic exigencies, there were problems of labor relations, gender relations, manufacturing processes, computing power, and other issues related to the interplay of human and material agents on an immediate level. The cybernetic system envisioned by Beer and designed from scratch in collaboration with teams of Chilean scientists, engineers, and designers still could not quite engage in the “dance of agency” with the broader Chilean society without encountering stark resistances that the project did not figure out how to accommodate before its termination.

So what might serve as a counter-example to the Kantian humanist idea of public reason as the ideal political effort, if not cybernetics? As a final example, one could look to the project of Material Engagement Theory, as described by Lambros Malafouris in archaeology. There is less of an obvious political principle at work there, but rather a deeper reconsideration of the role of 4E theories not simply in reappraising material agency, but material culture more broadly in an archaeological, anthropological, and generally cultural sense. Malafouris (2013) defines the goal of MET in philosophical terms as a reorientation of the archaeological discipline in a new mode grounded in “relational ontology”: “The aim of MET is to restate the problem of the interaction between cognition and material culture in a more productive manner by placing it upon a new relational ontological foundation” (p. 35). MET still engages in “historical analysis of the relationships between our thought and our practices,” but “whereas the majority of studies in cognitive and evolutionary archaeology seem to be primarily preoccupied with questions about when and where (e.g., where and when symbolic thinking and language first appeared in the archaeological record), MET asks primarily about the what, the why, and the how – for example: What is symbolic thinking? Why and how did symbolism emerge?” (p. 38) In this way, MET seeks to apply an entirely new theoretical approach to questions of ‘mind’ to archaeology’s handling (and production) of the material record, based on its engagement with 4E. Malafouris makes use of primate brain studies, for example, to argue that the changing body-schema of the brain during tool use (detectable in laboratory tests) can be taken as an integration of the tool into the mind broadly speaking. In cases of artifacts like Mycenaean swords and signet rings, this lets him claim that “The centre of consciousness and bodily awareness for the Mycenaean person, and for the warrior in particular, is not some ‘internal’ Cartesian ‘I’, but the tip of the sword” (Malafouris, 2008, p. 122), or likewise that for early hominins, the seat of cognition may better be conceived as the hand rather than the head.

In having a body, humans are spatially located creatures. Embodied cognitive science has made a strong case for the fundamental role of bodily sensorimotor experiences in the structure of our thinking. Thus, for distributed cognition, space is not simply the passive background against which the activity unfolds; it is something that can be used as a cognitive artifact. ... although mental states can be “internal” in the traditional sense of inter-cranial representation, they can also be outside the individual (e.g., maps, charts, tools) and thus “external” to the biological confines of the individual. In other words, for distributed cognition “a cognitive process is delimited by the



functional relationships among the elements that participate in it, rather than by the spatial co-location of the elements. (Malafouris, 2013, p. 67)

This idea of cognition deliberately overcomes the Kantian (and Newtonian) bifurcations of space and time. It is closer to Foucault's idea of power-knowledge and an analysis of force relations than traditional archaeology, but like Pickering it takes a much more comprehensive view of the sub-individual constituents of cognition. Returning to Harvey's terms, one could say that MET's cognitive archaeology overcomes the relevant theoretical opposition between environmental determinism and possibilism in Kant, fundamentally that between inner and outer knowledge, by redefining tool use and its relationship to the mind. It also effects a transformation of the historical subject in so doing, again setting itself into parallels with Foucault: "Power, intentionality, and agency are not properties of the isolated person or the isolated thing; they are properties of a chain of associations" (Malafouris, 2013, p. 129).

In this way, Malafouris can be understood to extend the performative idiom to archaeology, a holdout of the representational idiom – and not coincidentally, a discipline joined at the hip with anthropology, a field of special interest to Kant. With the way MET introduces a 4E-based reconfiguration to the field, the humanist myth can be more fully decomposed, as its anthropological basis is removed.

CONCLUSION

I have not offered a prescription for any particular political statement here, but rather a consideration of how new work on material agency, informed by 4E theories of cognition, can help move beyond the persistent Kantian-Enlightenment myth of political speech. That myth is based on an ideal interaction between an individual appearing as scholar and a reading public, as told by Kant. The myth poses substantial problems today. These figures and their relation in Kant are based in an outmoded, Newtonian model of space and time that in turn informs an outmoded view of cognition. Moreover, the ontology presumes their existence prior to their relation. While major critics of Kant have succeeded in addressing some of the issues inherent in that model of political speech, even Foucault falls back into the myth when confronted with the challenge of analyzing events like the Iranian revolution. Subsequently, newer work on material agency and 4E cognition can provide a supplement that allows one to decompose the myth fully, by means of a comprehensive account of what Foucault vaguely gestures towards as the "non-discursive," "sub-individual" forces of social and political life. This can then effect a modal shift in political thinking from a rationalist politics of communication, in which the ideal effort is to exercise public reason through printed matter, to a posthumanist politics of material agency, in which one can understand political effort as the participation in a dialectic of resistance and accommodation. Both resistances and accommodations can take the form of material agents, including technologies. As the reading public is increasingly located in virtual spaces populated by anonymous accounts, governed by algorithmic sorting, and now monitored, mimicked, and directed by "artificial intelligence" systems, in practice the Kantian mythical figuration, the scholar and his audience, has already been well undermined in practice. The challenge for theory,



then, is to understand political speech in this new context by engaging directly with the agencies that constitute it, abandoning for good the pretense of zero-point discourse and giving up the ghost of purely effective published reason.

One might object: Does this not precipitate a determinism? If public discourse itself is viewed as merely one dialectic of resistance and accommodation among others, what becomes of the possibility of actually effective speech? To reiterate, my analysis does not discount the latter possibility, but contests its ideal status while revealing its deep entrenchment to be a cause of real methodological issues. The issue of determinism is an important concern of its own, but in brief here, I would suggest that the specter of determinism is itself a product of the Kantian bifurcation of internal and external. What is the specter of determinism except the total subsumption of the former by the latter? I would then point to a grim finding of recent public health research, that our bodies seem increasingly to be contaminated with microplastic particles, including our brain matter (Nihart et al., 2025). Would this intrusion, in more concrete as opposed to theoretical terms, not constitute a determinism of its own, if determinism is the intrusion of the external on the internal? With what words could we possibly engage with the plastic in our brains? What scholarship could possibly expel it? It is a great irony that precisely what are called plastics pose the most immediate danger to our brain plasticity. That is an example of real, concrete determinism. To draw on theories of 4E cognition, to recognize material agency, is to take crucial steps to overcome this kind of newly revealed problem, not least by becoming able to raise a consciousness of what powers are at work in it. The brain of the scholar is also the brain of microplastics – so who says what? By effecting the necessary theoretical shift towards a new idea of political speech, taking account of material agency, understanding cognition through 4E theories, one can begin to answer.

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