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Logic Gate, The Politics of the Artifactual Mind

Glass Bead

Artificial Intelligence profoundly disturbs the sense we have of our own intelligence. In many domains, its information processing power has surpassed human capacities, fundamentally altering the political economy. It has provided indispensable tools that have facilitated what was previously difficult or impossible, ushering in new modes of experience, communication, and artistic expression. At the same time, it has transformed the political landscape in critical ways. It has been the cause of algorithmically amplified discrimination, global surveillance and securitization, data-driven political manipulations, cyber-warfare and the exacerbation of already existing inequalities, as well as increasing unemployment, alienation, and mental health crises. In many ways, computational processes allow humans to transform and organize their experience in enhanced ways, to access what was inaccessible in their local milieu. Yet, in most of its already existing forms, AI has surreptitiously crystallized various social antagonisms and compounded local hostilities and identitarian struggles, fragmenting the contemporary political field in ways that seem increasingly intractable.

There is a strange and complex dialectic between the personal and impersonal at play in the politics of AI. Personal users roam their filter bubbles and customized search results while behavioral analysis companies harvest data according to impersonal protocols. The formal procedures of computation, and the growing use of AI, are impersonal in the sense that they do not discriminate on the basis of personal assumptions but only according to the available data. However, the rapid development of such technologies are largely directed towards corporate and political ends that are intentionally obscured by

their intimate and informal interfaces. Big Data engineering firms are not just passively facilitative but actively manipulative, they play active roles in the personally-targeted shaping of opinion.¹ The web behemoths portray themselves as neutral providers but are engaged in the management of the hegemony that best suits their interests, and many supposedly impartial algorithms and AI interfaces are riddled with bias. This data-driven engineering, of *affects* as much as information, targets users through a constrained picture of their cognitive capacities that (apparently for their own safety) corrals them into a local enclave in which they find themselves individually trapped, paradoxically by their own connectivity.

The old caricature, which figured reason, logic, and computation as dispassionately detached, condensed in the 'straw vulcan' formula, is no longer tenable in the age of affective engineering. It is exactly when the indifferent protocols of computation have managed to differentiate and personally address us that we are most in need of embracing the interpersonally collective and yet radically impersonal force of reason.² In the same way in which the technological construction of the future has been hijacked by financialization and corporate interests, so impersonal reason has been commandeered by AI platforms (Google, Apple, Facebook, Amazon etc.) that are building globalized infrastructures that increasingly personalize and localize us, tricking us into believing that there is no alternative.

This personalized incapacitation is exactly why we must reclaim impersonal reason: to extricate ourselves from such locally circumscribed horizons, and to gain the power to collectively act on global problems. This is by no means to diminish the importance of local struggles and identity politics, it is precisely because of the aggravated nature of these problems that we need to identify with the collective power of reason. Thus, these pressing questions: If the development of AI is driven by class interests and private property, how can we reclaim the disinterested force of reason that AI unleashes towards a common purpose? How can the global computational capture of impersonal reason be repurposed towards the different emancipatory ends of diverse locally constrained persons? How can transient connectivity give rise to robust collectivity?

While the capacities of thought are being externalized in machines that increasingly mirror human intelligence, the question of the technical artifactuality of mind and its political ramifications becomes particularly pressing. The externalization of cognitive capacities onto digital devices has reached a point where we risk the piecemeal

surrendering of every aspect of our (asymmetrically distributed) freedom to a covert algorithmic colonization. The truth is that there is no way back; we must confront the contemporary injustices of computational culture by interrogating its logic.

Faced with the rise of thinking machines we need to understand what thinking is. In the recent history of this debate, there is something of a recalcitrant opposition. On the one hand, in cognitive science there has been a tendency to explain cognitive capacities in reductionist terms, and an increasing capture and exploitation of those functions embedded in technical apparatuses of control. On the other hand, particularly within the humanities we have inherited a critique of mechanization that leaves us with a picture of mind as something irreducible to mechanistic decomposition. As the development of AI insidiously gathers pace, like a tidal wave swelling gently over the harbor, we are at a juncture where the question of what mental autonomy or rational freedom really *is* acquires a new significance. This implies contending with scales below the level of personal experience—sub-personal neurological processes; and beyond it—collective social, technical, and political processes. Rather than believing thought to be irreducible to mechanism, we need to develop the scientific image of cognition so that its dynamic mechanistic explanation is consistent with the autonomy of reason. Rather than ruthlessly reducing thought to fundamental components we need to grasp the way in which the freedom of thought is a political project and an ongoing process of techno-socially enabled elaboration.



Edinburgh Skull, trepanning showing hole in back of skull, 7000 BCE. Wellcome Library, London. Wellcome Images

The Inhuman Artifact

The first issue of Glass Bead's journal, titled *Site 0: Castalia, the Game of Ends and Means*, was dedicated to repositioning art in the landscape of reason. This issue is focused on the fabric of reason itself, and to the ways in which it is currently being altered by the emergence of artificial intelligence. Far from being limited to the computational instantiation of intelligence, understanding the politics of these developments in *artificial* intelligence requires acknowledging that mind has always been *artifactual*. *Site 1: Logic Gate, the Politics of the Artifactual Mind* proposes to explore the formal, philosophical, and scientific dimensions of this question, so as to consider the role art might play in the lucid unfolding of its possibilities.

Logic, in the wide sense in which it is taken here, appears to be the precondition for the artifactual elaboration of mind. The classical image of logical thought presupposes the capacity to make inferences, to construct propositions and to make inferences. Rational

agency is depicted as just the individual ability to make deductions, inductions, abductions. Logic, so posed, constitutes the transcendental framework of reason, that through which thought occurs. It appears as though it were the software that comes bundled in the human package, and which loads up automatically when it boots up. But, unless we are to swallow some theological creation story, we must acknowledge the incremental development of rational capabilities in the material environment in which thought emerged. The transcendental framework of reason did not descend from the heavens, nor was it unearthed in one piece. Rather, it emerged through a gradual interactive and interpersonal process of discovery and invention, in the co-construction of inferential resources and the collective transformation of normative values, in the weaving together of the material and immaterial, the real and the ideal. That is, if we can speak of a transcendental framework of reason then it is not a fixed *a priori* but is constructed *a posteriori* by a long process in which the conditions of possibility of thought are dialogically elaborated.

If we cannot *think* without presupposing some implicit logical structure then we cannot hope to transform thought without the dialogical articulation and explicitation of these structures. Logic, so understood, is an active site: it is an open gate on the ongoing elaboration of mind as a dual process by which practical and formal reasoning engage in co-constitutive transformation. Logical thought coalesces in an inhuman engineering loop whose forward momentum requires the incessant decomposition and recomposition of its structural components and functional properties. It is not a fixed given but a nature already denatured over a long process of biocultural coevolution, transformed by the collective manipulation of the natural and cognitive environment. In other words, *logic is the ultimate artifact*. It is an artifactually constructed conduit that leads to the amplification of intelligence, the invisible portal that opens to the artifactual expansion of mind. If reasoning is how we exit one world and enter another, logic is its gateway.

The term logic gate in its normal usage refers to an elementary component of a digital circuit that either describes or embodies an ideal Boolean function (a “switching function,” found in binary decision diagrams, “simple games,” or social choice theory). On the most general level, logic gates can be defined as the materialization of a form of organization according to the instantiation of specific rules and constraints. This materialization of explicit logical rules is what underlies the modern computer and the vast planetary computational infrastructure that pervades every aspect of contemporary life.

Such a foregrounding of logic does not mean that we must transform all thought into a series of signs drawn on a blackboard, or that artworks have to be reduced to their formal symbolic articulation. By naming the site of this issue *Logic Gate*, we do not either merely refer to this modern digital electronic administration of logical operations, but to the wider way in which dialogical interactions are implicit in rational thinking, and is embedded in the deep historical evolution of mind. What we are experiencing today is certainly without precedent, but the profound dynamics of this self-transformation trace back to the deep history of early hominins. The history of mind has been nothing but the history of its artifactual construction through which mind emancipates itself from its natural constraints: mind is just the process of its artifactual auto-alienation from nature. Naturalistically speaking, the deep historical development of artifactually enabled cognition is a vector of amplification with no telos. From the perspective of human freedom, we should not allow this wandering to aimlessly blunder into further violence and destruction. We must give this movement direction.

Both in the narrower sense of contemporary computational culture and in the wider sense of the artifactuality of mind, the logic gate has never been a neutral cognitive tool for grasping what *is the case* but always an apparatus of power, a contrivance for organizing what *ought to be the case*. The logic gate is thus an eminently political site, underlining the role the artifactuality of mind plays in its organization as well as in its transformation. For some, logic is a form of domination, an intrinsically oppressive structure that upsets the fragile equilibrium of the Earth, putting us on a demented course towards the eradication of nature and the auto-annihilation of freedom. For others it is an emancipatory trajectory that spirals out to superintelligent Artificial General Intelligence (or AGI), cutting thought loose from its parochial human form, its restrictive biology and morality, and disencumbering intelligence from the contingent structures in which it emerged. Glass Bead's *Site 1* argues against ruthless reductionism and essentialist irreducibility, exploring instead the lucid transformation of our artifactuality, the deliberate use of this inhuman vector of alienation embodied by the logic gate to reengineer what it means to be human.

Charts

The contributions gathered in *Site 1: Logic Gate, the Politics of the Artifactual Mind* explore and formalize the opportunities this inhuman vector of alienation provides for art, science, and philosophy to engage in the artifactual transformation of the mind. They are divided into three charts that are meant to figure specific routes drawn in the site by the contributors to this issue.

Chart 1: Inhuman Transformations

Having embarked on a process of constant elaboration and transformation of itself, the human mind is nothing but the reflexive and revisionary process of its artifactual elaboration. As such, mind progresses by reaching for what lies beyond it, by integrating into itself that which it is not—i.e. by tarrying with the negative. This inherent inhumanism is precisely what makes us most human. The contributions gathered in this first chart explore the deep history of this impersonal dynamic, from the feedforward movement triggered by the emergence of semiotic processes in the human environment to the problem of the genesis of an ideal language, and from the discussion of particular systems of formalization to that of the political potency of reason.

Chart 2: Impersonal Entanglements

This chart addresses the political consequences of the way in which logic is embedded in our computational landscapes and how we can engage in a transformation of its conditions. This planetary distribution of AI produces a denaturalized environment, a fully artifactual nature constructed upon the impersonal operations of logic. The contributions gathered in this chart explore the ways in which this global computational culture acts both as a vehicle of intensification and a revealing agent of epistemic, technological and social biases, from the impact of computation on urban space and subjectivities, to the way technological instantiations of machine intelligence transform the conception of thought as such.

Chart 3: Denaturalizing Experience

This chart explores the pendular oscillation between impersonal reason and personal experience in logical processes crossing art and politics. It describes the various ways in which human cognitive abilities have been externalized in historically constructed apparatuses of formalization, from the invention of diagrammatic reasoning in Ancient Greek mathematics to the computational logic embedded in modernist poetry and textile practices; and from the distributed intelligence at play in soundsystem culture to the normative constraints underpinning both political hegemony and the possibility of formulating counter-hegemonic practices.

The authors wish to thank Lendl Barcelos and James Trafford for their comments on an earlier version of this text. ([#_ftnref1](#))

Footnotes

1. For example, Cambridge Analytica, by profiling citizens and modeling their potential voting behavior, was held by some to be critical in swaying the result of both the Trump election and the campaign for Brexit. While there was certainly some hype from both sides (critical and congratulatory) concerning the extent of this effect that has been discredited, the new capacity to shape mass opinion by the targeted use of information wasn't totally ineffective, and demonstrated a real shift in the manufacture of consent.

2. This formulation, and the thrust of the argument here are indebted to the work of Reza Negarestani: “[the formal autonomy of reason] signifies a certain form of being bound to laws and constraints which are imposed neither by nature nor by the individual subject of experience and understanding, but by the interpersonal subjectivity of reason which, in its very special kind of inter-personality, is also impersonal—that is, de-individualizing and cognitively communist.” Reza Negarestani, “Causality of the Will and the Structure of Freedom”, 2017, talk given at an undisclosed location in New York.

Glass Bead is an international research platform and journal. Glass Bead was conceived and is run by Fabien Giraud, Jeremy Lecomte, Vincent Normand, Ida Soulard and Inigo Wilkins.