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**What Is
Philosophy?
Part Two:
Programs and
Realizabilities**

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What Is Philosophy? Part Two: Programs and Realizabilities

§4. Viewed from an Archimedean point in the future of thought’s unfolding, philosophy is seen as what has instructed thinking to become a systematic program, only as a way of organizing it into a project for the emancipation of intelligence. This is the unexpressed role of philosophy as a fulcrum through which aims and agendas of intelligence gain leverage on the world of thought. To assemble the scaffolding of a future philosophy, it would require moving the fulcrum, turning philosophy’s tacit role in the past into its explicit task moving forward – a prop on which all thoughts and practices can be a lever for lifting intelligence from its contingently established place.

As outlined in the previous section of this essay, the bifurcation of the inquiry into the possibility of thought into two broadly rationalist-idealist and naturalist-materialist trajectories should also be construed as a necessary epistemic strategy. From an epistemic angle, the commitment to multiple explanatory-descriptive levels allows an expanded and in-depth analysis of the cognitive architecture in a fashion not possible through an approach built on a single schema. A multimodal approach provides increasingly refined pictures of distinct types of pattern-governed behaviors and processes distributed across different orders of structural-functional complexity, dependency-relations, and their specific constraints. More explicitly put, the branching and specialization of the analysis are necessary for a fine-grained determination of distinctions and correlations between logical-conceptual and causal-material dimensions of thinking.

It is through this fine-grained differentiation and integration of explanatory-descriptive levels that conditions necessary for the realization of thinking as an activity that comprises a broad range of cognitive and intellectual abilities are accurately specified. Determination of what these necessary conditions are and how they are arranged and effectuated is already a basic roadmap for the artificial realization of thought. As the intelligibility of thought’s realization is progressively deepened, the thought of the possible realization of thinking in something other than what currently embodies it becomes more intelligible. The analytic specialization of the knowledge of what thinking is proves to be the knowledge of how it can be extricated from contingencies that restrain its realizabilities from below.

If the activity we call thinking is realized by such and such functional capacities and if these capacities or activities can be analyzed in terms

of their realizers – or specific conditions, processes, and mechanisms required for their realization – then would it be possible to reconstruct or artificially realize such functions? In other words, would it be possible to reproduce these functional capacities through a combination of strategies that involve simulation, emulation, or reenactment of functions and/or their material realizers?¹ And finally, would it be possible to construct an *integrated* framework where these capacities can exhibit an interconnected and generative complexity? Or more simply, if thinking is such and such and if it is materialized in thus and so mechanisms and processes, then how can it be reformed and rematerialized in something else?

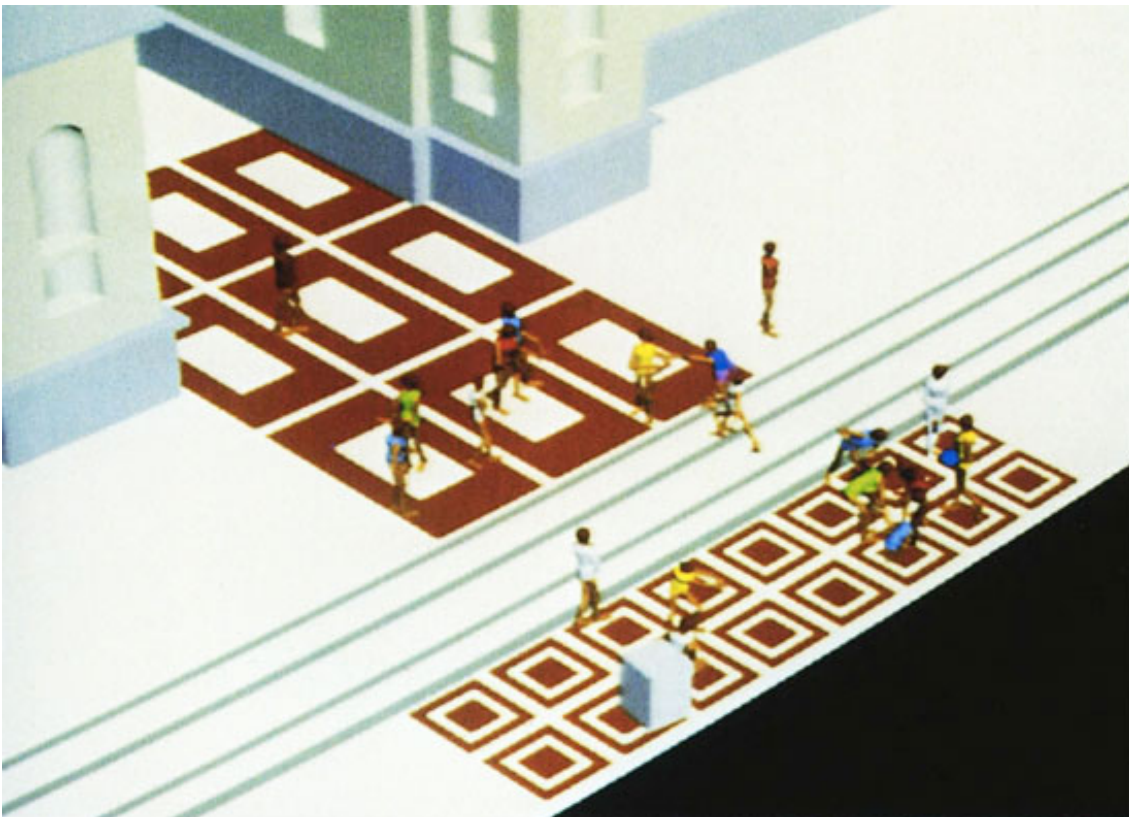
This is the question that shapes the field of artificial general intelligence as a program that seeks to integrate the intelligibility of different dimensions of thinking in its full perceptual, conceptual, and intentional complexity under one ideal task: designing a machine that has at the very least the complete package of human cognitive abilities with all capacities such abilities imply (diverse and comprehensive learning, different modalities and levels of knowledge and knowledge-use, reasoning, deliberation, belief formation independent of

current perception, competencies enabled by different levels of semantic complexity as specialized and context-sensitive modes of computation, and so on).

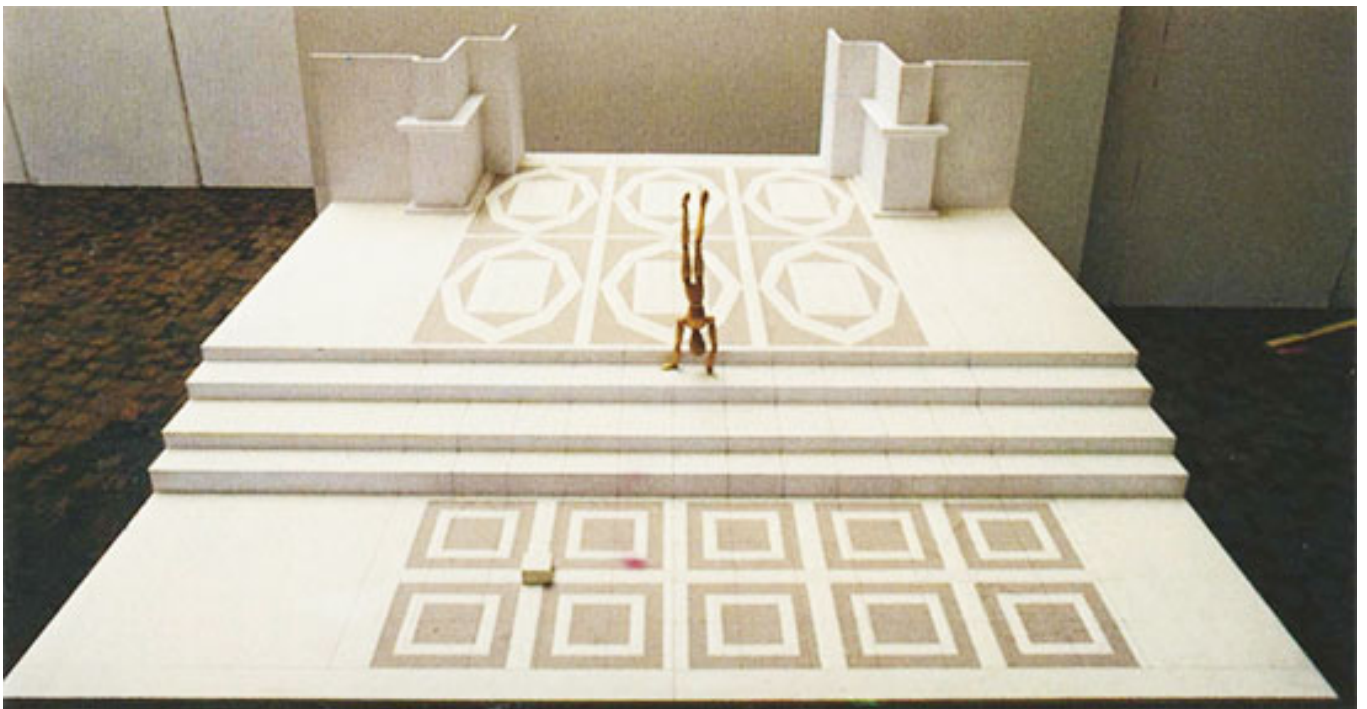
Rather than being considered as a pure vogue that serious thought should avoid entertaining, the core idea of artificial general intelligence should be seen as an integral part of thinking as a program that elaborates the operational consequences of its intelligibility. It is an integral part of a thought that is driven by the autonomy of its ends to explore its possible realizabilities in whatever workable form or material configuration possible. Giving rise to an intelligence that at the least has the capacities of the present cognitive-practical subject is the demand of a thought that is invested in the intelligibility of its autonomy, in maintaining and developing it. More emphatically put, for such a thought, sources of its possibility are necessary but not adequate expressions of its autonomy. This is a thought for which the adequate form of autonomy takes the shape of an all-encompassing striving for the elaboration of its ends and demands.

The real import of the idea of artificial general intelligence can only be properly understood once examined in terms of what it

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stands for or signifies in the systematic striving of thought for self-determination. As described in the previous part, this striving is encapsulated by the function of philosophy as a program through which thought begins to determine its own intelligibility by elaborating, in theory and practice, the sources and consequences of its possibility. The organization of thought as a programmatic project starts with the recognition of the possibility of thinking as a building block for the construction or realization of a thought that is possible by virtue of its ends and demands (in spite of material or final causes), how it is originally materialized, and what it is supposedly ordained to be.

As a program, thinking is not just a practice but the construction of possible realizabilities of thought (what thinking can bring about). This process of construction can be understood as a search for the consequences of the possibility of thinking by discovering and acting on the underlying properties such possibility implies. Put another way, the self-realization of thinking requires a programmatic approach to the possibility of thinking as such: determining what it means for thought to be possible and what the consequences of such a possibility are, by examining what thought really is (both at the level of roles its contents play and at the level of material realization) and elaborating its tasks and abilities.

Rather than treating the possibility of thought as something sacrosanct in the name of the given, and therefore, off limits to interrogation and intervention, philosophy instructs thought to systematically act on its possibility as a manipulable axiom, an artifact of an ongoing craft – the products of which are not only theoretical and practical intelligibilities concerning what thought is and what it ought to do but also realizabilities of thought as such.

It is by manipulating or acting on its axioms that the program extracts and develops the operational contents implicit in their underlying properties. How axioms behave or unfold under different courses of action or lines of inquiry reveals information regarding their underlying properties. The task of the program is then to examine what can be brought about or realized from the operational contents implicit in these properties. By bringing these operational contents to bear on one another and by building on them, the program effectuates a possible realizability. It brings about an outcome built from the underlying properties of its axioms but constructed in accordance with its own action-principles and operational framework.

In the context of thinking as a programmatic project, different tiers of intelligibilities which concern the reality of thinking both at the level of

logico-conceptual functions and causal-material mechanisms represent the underlying properties. The operational contents of these properties represent practical intelligibilities of what thinking ought to do and what it can become if it has certain functional-normative properties and causal-material constraints.² The first order of intelligibility is the intelligibility of things as they stand (in this case, what thinking as an activity really is on different levels). But the second order of intelligibility is the intelligibility of organizing practices and actions (what ought to be done if thinking is such and such). In this respect, different lines of inquiry into the intelligibility of thinking as an activity correspond to the program's examination of the underlying properties or specificities of the axioms. The determination, assessment, and organization of practical intelligibilities is equal to the program's extraction, composition, and execution of operational contents.

Here, the artificial realization of general intelligence represents a necessary step in the task of thought as a program of self-determination. This is a step at which in order for thought to adequately recognize its possibility and express the autonomy of its ends, it has to construct artificial realizabilities of itself through the integration of different levels and orders of intelligibility concerning what it is and what it ought to do. But artificial realizabilities should not be construed as limited to technological artifacts. In line with the definition of the artificial presented in the first part of this essay, artificial realizabilities of thought potentially include a wide range of functional constructs, including social systems.

To further clarify the role of artificial general intelligence as something integral to the systematic image of thought as a programmatic project, it would be helpful to define the concept of the program in relation to what Wilfrid Sellars, in his reading of Plato's idea of the mind as a craftsman, calls "recipe" – a complex of intelligibilities and purposive actions that compose the practice of the craft.³ A recipe is a formula or a set of *what-and-how-tos* consisting of numbers, ratios, and purposive actions for making a possible product from a given collection of ingredients. In a recipe, actions take this general form: "(If one wants) to make an O, then in C_i one ought to do A_j " (O stands for a product, C_i the range of given circumstances or conditions in which a given set of actions may or may not be done, and A_j a particular group of actions).⁴ These actions or instrumentalities belong to the intelligible order and are objective facts. As such, the distinction between truth and falsity applies to them. They can be explained and debated, modified or replaced through

rational assessment.⁵ In a recipe, numbers and ratios are specificities regarding the count, ordering, and proportion of ingredients as well as the ordering and priority of actions. And finally, the ingredients of the recipe are the materials and objects that can be the products of others forms of craft.

The art of (philosophical) living for Plato is a recipe of a craft where the soul or the mind is at once the material and the craftsman. At the level of ingredients, Sellars suggests, the recipe of such a life includes not only intelligibilities concerning physical materials and corporeal products but also beliefs, desires, thoughts, and the mind itself. The numbers (counts and orderings) and ratios of the recipe are theoretical intelligibilities that pertain to ingredients as well as practices and tasks required for the craft of such a life. And at the level of actions, the recipe involves purposive actions and practical intelligibilities that are not only good instrumentalities (hypothetical practical intelligibilities concerning bringing about a certain outcome in a given circumstance) but also goods-in-themselves (non-hypothetical practical intelligibilities) such as knowledge and understanding, general welfare, freedom, and so forth. It is with reference to this interpretation that “thinking as a program” can be said to be – at least with regard to the relation between material ingredients, and theoretical and practical intelligibilities – a *complex recipe in the making*. It is “complex” insofar as it is composed of other recipes or programs concerning the knowledge of theoretical and practical truths, the craft of different instrumentalities and organization, or the production of necessary conditions and materials required for the realization of such a life. It is “in the making” since it has to continually update itself at the level of materials, theoretical intelligibilities, and practices. The objective of this recipe is to establish the autonomy of its principles by progressively determining its own means and ends in accordance with its rules and objectives.

In this picture, what the idea of artificial general intelligence represents is a culminating state in the programmatic enterprise of thinking. This is a state where thought as such becomes intelligent. It uses the intelligibility of its realization as a material ingredient in a recipe for crafting of a possible realization of itself that has at the very least the operational capacities of its current state. Beneath its technological semblance, the idea of artificial general intelligence is an expression of a thought that engages in the crafting of itself by treating its possibility as a raw material. It puts theoretical intelligibilities concerning what it is in the service of organizing practices and

instrumentalities that involve the crafting of a thought which is possible in spite of how it is originally materialized or constituted.

This is precisely the self-determination of thought in the guise of general intelligence, a form of intelligence for which “what thought really is” should be put in the service of “what thought can become” by informing “what thought ought to do.” It is an intelligence for which the intelligibility of things should be subordinated to that organizing intelligibility which is the crafting process of itself: intelligence. For an intelligence that treats its very possibility as an explicit opportunity for self-realization, it does not matter what it currently is; what matters is what can be done – all relevant things considered – to expand and build on this possibility.

It is necessary to grasp the concept of artificial general intelligence not merely as a technoscientific idea, but more fundamentally as a concept belonging to a thought that is able to recognize and treat its possibility as a raw material in the crafting of itself. Independent of its actual realization, the very idea of artificial general intelligence – giving rise to something that is at the least endowed with all the cherished abilities of the cognitive-practical subject – is the product of a thought that strives to articulate, maintain, and develop the intelligibility of the sources and consequences of its possibility. In essence, this striving is a recipe or a program for autonomy. It consists of patterns and rules, necessary materials and conditions, orderings and priorities, instrumentalities, normative tasks, and ultimately, realizabilities that transcend material ingredients and instrumentalities. As objective ends of thought’s striving, these realizabilities should not be misconstrued as potencies or possibilities. Powers, potencies, and possibilities, even those of becomings, are not realizabilities but simply raw ingredients in the theoretical-practical exploration and construction of thought’s realizabilities.

Conceiving the idea of artificial general intelligence is only possible within the domain of thought as a program or recipe for autonomy. The artificial realization of general intelligence is, before anything else, an expression of thought’s autonomy in the sense of a wide-ranging program that integrates materials, intelligibilities, and instrumentalities in the construction of its realizabilities. Short of this understanding, advancing the idea of artificial general intelligence amounts to nothing but the well-worn Aristotelian confusion between reasons and causes. It either leads to the fetishization of natural intelligence in the guise of self-organizing material processes, or a teleological faith in the deep time of the

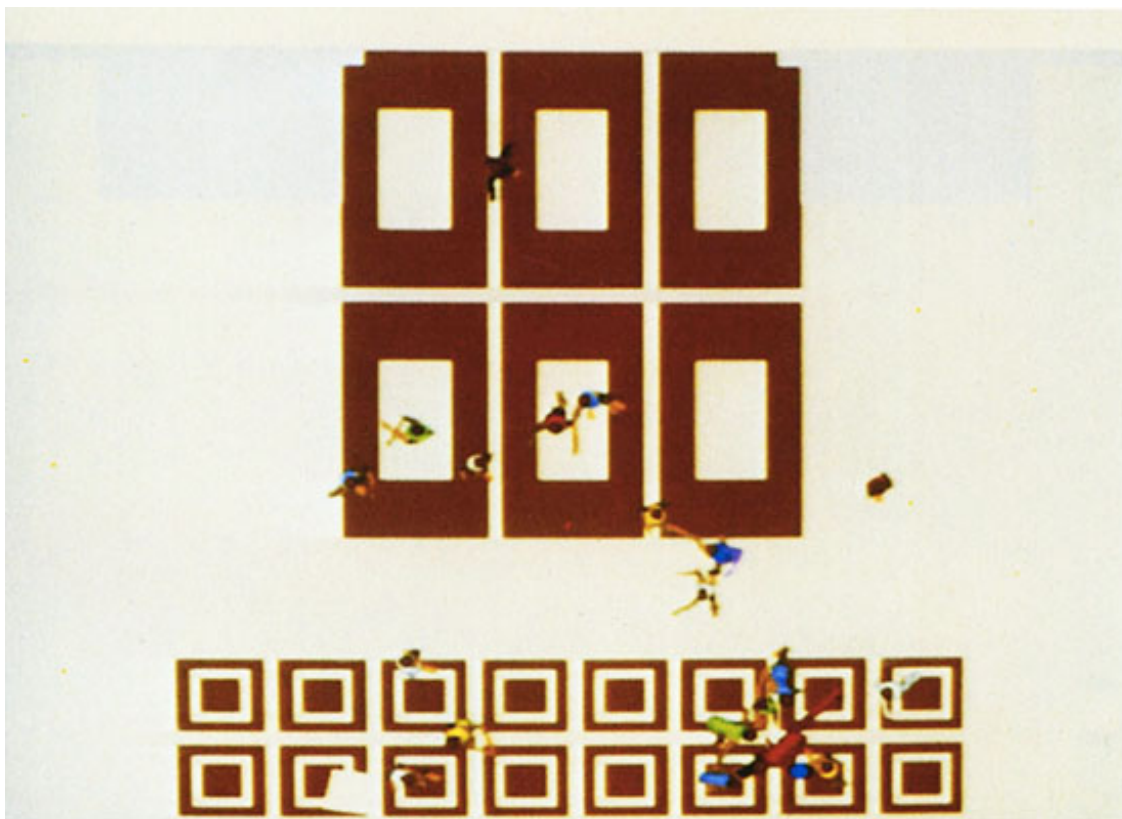
technological singularity – an unwarranted projection of the current technological climate into the future through the over-extrapolation of cultural myths surrounding technology or through hasty statistical inductions based on actual yet disconnected technological achievements.

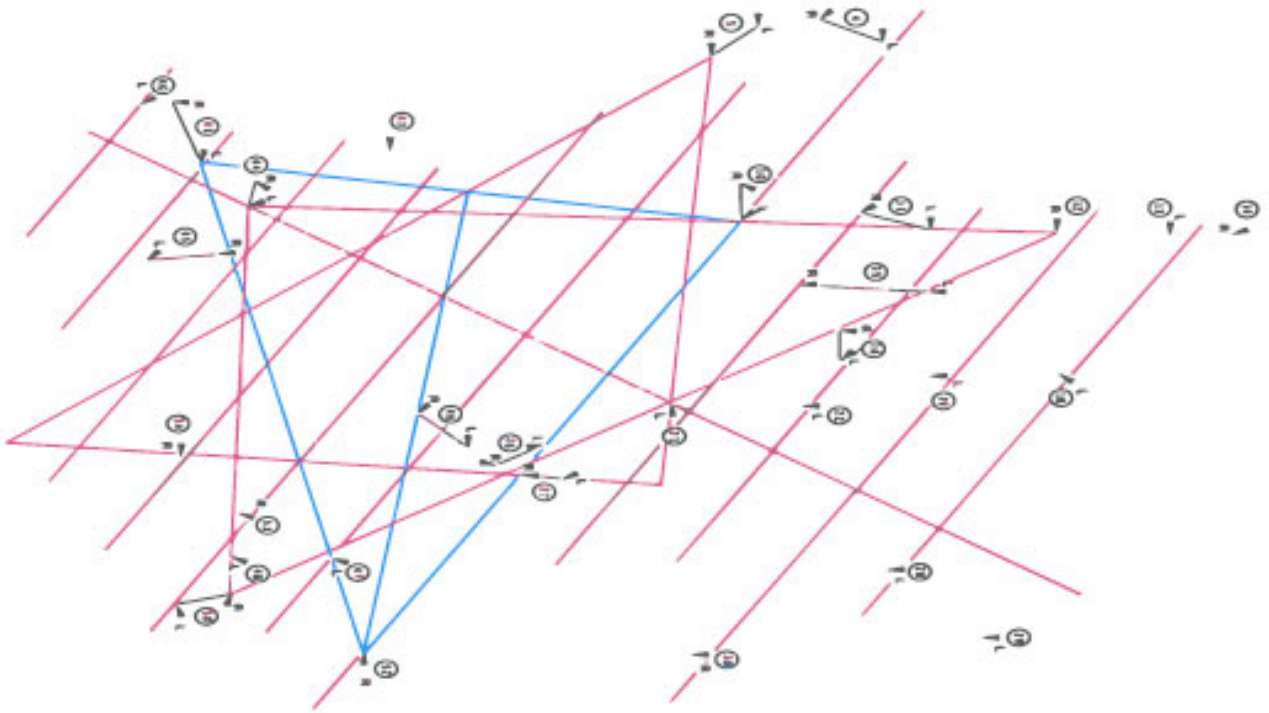
At its core, artificial general intelligence champions not technology but a thought that, through a positive disenchantment with itself and its contingent history, has been enabled to explore its possible realizations – be they in a self, a social formation, or a machine – as part of a much broader program of self-artificialization through which it restructures and repurposes itself as the artifact of its own ends. This is a thought for which the intelligibility of its possibility is in the elaboration of the consequences of such possibility, what this possibility can accomplish and bring about. It is in this sense that the artificial realization of general intelligence should be regarded as integral to the intelligibility of a thought that is determined to maintain and expand on its possibility. Just as the practice of thinking is non-optional, for a thought that intends to remain intelligible, the practice of artificialization is not optional; it is a mandate

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from the autonomy of thought's ends and demands.

The quest for the artificial realization of an intelligent machine that at the minimum has the capacities of the present cognitive-practical subject is an essential part of a thought that articulates its intelligibility in the absence of any predetermined meaning conferred upon it by nature. The vocation of thought is not to abide by and perpetuate its evolutionary heritage but to break away from it. Positing the *essential role* of biology in the evolutionary contingent history of thought as an *essentialist* nature for thought dogmatically limits how we can imagine and bring about the future subjects of thought. But the departure from the evolutionary heritage of thought is not tantamount to a withdrawal from its natural history. Engaging with this natural history is necessary not only to determine the precise role of embodiment and evolutionary constraints in the realization of cognitive and practical abilities but also to adequately think about how a subject whose cognitive-practical abilities are environmentally situated and that is entangled with its terrestrial habitat should methodologically act. Liberating thought from its contingent natural history requires a multistage labor to render this history intelligible, to





determine its negative and positive constraints so as to intelligently overcome or build on them – “intelligently” insofar as actions should be at all times context-sensitive and resource-aware. On the one hand, actions should be able to properly discriminate circumstances and correctly react to the so-called fluents or dynamic properties of the environment. And on the other hand, they should be cognizant of the costs and allocations of intervention in the broadest sense of cognitive, computational, social, and natural costs and resources.

However, the demands of context-sensitivity and resource-awareness for action should not be taken as arguments for localist models of restricted action or resignation in the name of resources and costs. Rather than a plea for localism, context-consciousness is the requirement of a strategic and global model of action that incrementally progresses by satisfying contextual and domain-specific exigencies. It allows for action to be updated and to intervene at the level of dynamic properties and complex dependency-relations between local domains which classical models of strategy and global action cannot detect and influence. Similarly, resource-awareness is the requirement of an action that, in addition to optimality and efficiency, does not lead to the resource-starvation of other activities or the impairment of social and environmental structures that play the role of support and enablement for a broad range of structures and functions. In its undeniable gravity, the problem of deterioration in natural structures and resources is an argument against bad instrumentalities and systems within which such instrumentalities are ingrained and propagated. It is neither a reason against instrumentality *per se* nor an argument against the development of sociotechnical systems that can effectively and intelligently mobilize good instrumentalities.

A good instrumentality is an instrumentality that at once passes the test of rational-normative assessments (why or for what reason is it implemented?) and satisfies the aforementioned criteria of intelligent purposive action (how exactly is it executed?). In the latter sense, crafting good instrumentalities is primarily a scientific and engineering program in which purposive action is approached as an interface between the complexity of cognition, the complexity of the sociotechnical system, and the complexity of the world. Such a program involves the development of formal calculi for executing and tracking the course of action in various dynamic domains,⁶ and for constructing complex models and descriptive frameworks that allow *semantic access* to different layers of information regarding types, properties, and

interrelationships of particular entities involved in the interactions between human agents, the sociotechnical system, and the physical world.⁷

The question of semantic access to different hierarchies of information is the question of understanding the logics of worlds as the primary step for the design and execution of robust and consequential action. But understanding the logics of worlds requires understanding how we say things or think about ourselves and the world using the expressive and conceptual resources of different disciplines and modes of thought. Precisely speaking, understanding the logics of worlds involves working out semantic relations between different vocabularies or linguistic expressions (theoretical, deontic normative, modal, intentional, empirical, logical, and so forth) that we *use* in order to speak and think about ourselves and the world, just as it involves determining the activities necessary for using those vocabularies so as to count as expressing something with them.⁸ It is by understanding how we can adequately describe and explain ourselves and the world – through the use of different vocabularies and semantic relations between them and their properties – that we can consequentially change the world. Acting in the framework of such a program progressively blurs the boundaries between the cognitive engineering of autonomous agents and the construction of advanced sociotechnical systems, between how we can adequately come into cognitive contact with the world and the realization of cognition in social collectivities and technological artifacts. As the semantic complexity of cognition is realized in, and reinforced by, the sociotechnical system, the sociotechnical complexity of our world adequately gains traction upon *the* world and is nurtured by it.

§5. Just as the inception of philosophy coincides with speculative futures of general intelligence, its ultimate task corresponds with the ultimate form of intelligence.

By prompting thought to grapple with itself from below, philosophy drives thought to confront itself from above. It instructs thinking to organize itself as an integrated bundle of action-principles and practices – a program – for the craft of a thought that is the materialization of its ends and demands. In presenting itself as a form of thought that operates and builds on the possibility of thinking, philosophy cues thought to act and elaborate on the intelligibility of its possibility. Thinking becomes a programmatic enterprise that, from one end, deepens the intelligibility of its sources, and from the other end, articulates in theory and practice the

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intelligibility of its consequences. In articulating the intelligibility of its consequences, thought brings about a conception of itself as an intelligence that seeks to liberate itself by unbinding its possible realizabilities. This is the picture of thought as an intelligence that sees its freedom in bringing about and liberating a realization of itself that has as *its starting point* every capacity it currently has. And for this reason, this intelligence is the embodiment of the most basic principle of emancipation: liberate that which liberates itself from you, because anything else is the perpetuation of slavery.

It is in relation to this expansive horizon of thought's unfolding that we can finally answer the questions posed at the beginning of this essay: What kind of program is philosophy and what does it do? The answer is that in its perennial form and at its deepest level, philosophy is a program for the crafting of a new species or form of intelligence. This is a form of intelligence whose minimum condition of realization is a complex and integrated framework of cognitive-practical abilities that could have been materialized by any assemblage of proper mechanisms and causes. But this is only an initial state of realization. What comes next is an intelligence that formats its life into an exploration of its possible realizabilities by engaging with the questions of what to think and what to do.

Philosophy is a program for the crafting of precisely this kind of intelligence – an intelligence that organizes itself into a programmatic project in order to give rise to its possible realizabilities in any form or material configuration, even if they might in every respect transcend it. But the future of this intelligence will only be radically asymmetric with its past and present conditions if it embarks on such an enterprise, if it develops a program for bringing about its realizabilities. It can only rise above its initial state (the minimum condition necessary for the realization of general intelligence) if it begins to act on its possibility as something whose origins and consequences should be rendered intelligible. It can only emancipate itself if it subordinates the theoretical intelligibility of its sources and its history (what it is made of, where it has come from) to that organizing practical intelligibility which is the purposive craft of itself, i.e., the elaboration of what can be brought about by its possibility. In this sense, it can be said that the beginning of philosophy is a starting point for the speculative futures of general intelligence.

In whatever form and by whatever mechanisms it is materialized, this form of intelligence can only develop a conception of

itself as a self-cultivating project if it engages in something that plays the role of what we call philosophy, not as a discipline but as a program of combined theoretical and practical wisdoms running in the background of all its activities. An important feature of this hypothetical general intelligence is that it no longer merely acts intelligently but asks what to think and what to do considering the kind of intelligence it is or takes itself to be. Its actions are not merely responses to particular circumstances, or time-specific means toward pursuing ends that are exhausted once fulfilled. More predominantly, the purposive actions of this intelligence originate from and are guided by a unified system of ever-present though revisable theoretical and practical truth-statements concerning what it is and what it ought to do, its form and the life that suits it. In other words, its actions, even when they are pure instrumentalities, are manifestations of time-general thoughts about the inexhaustible ends of what counts as a life that suits it.

Time-general thoughts are those which are not tied to a specific moment or a particular circumstance. For example, take the thought of staying healthy or the thought of being free in contrast to the thought of avoiding rotten food or the thought of social struggle at a particular juncture of history. Inexhaustible ends refer to those ends which are *premises* for actions rather than their conclusions. They differ from ends whose needs go away once they are reached and concluded by a particular action or pursuit (cf. healthiness and freedom in the previous example).⁹ Time-general thoughts and inexhaustible ends define the practical horizon of this form of intelligence. The thoughts of this intelligence concerning “what to do and why” are dependent on its time-general thoughts and indeed derive from them. Accordingly, its practical horizon has a unity in the sense that its practical reasons and actions are undergirded and held together by the unity of time-general thoughts and their principles of actions.

Moreover, the strivings of this intelligence are not bound to exhaustible ends, or ends which are *explained by* the order of practical reasoning – the thoughts of what to do and their corresponding actions. They are instead in conformity with its inexhaustible ends, or ends which are themselves the *source and explanation* of its practical reasons and actions. In other words, this intelligence reasons and acts *from* time-general and inexhaustible ends, rather than towards them. It is not only that its actions fall under the concepts of such ends, but more importantly, in determining what to do in a particular situation, its actions manifest the bearing of these ends on that situation.

But above all, the most defining feature of this intelligence is that its life is not simply an intelligent protraction of its existence but the crafting of a good or satisfying life. And what is a satisfying life for such a species of intelligence if not a life that is itself the crafting of intelligence as a complex multifaceted program comprising self-knowledge, practical truths, and unified striving?

As a part of the recipe for the crafting of a good life, the self-knowledge of this intelligence is a multistage open-ended reflection on the sources and consequences of its possibility. Its practical truths concern what qualifies as a good life based on a self-knowledge that is not limited to an inquiry into its realized state or what it is now, but also involves the examination of its possible realizabilities. Rather than being grounded on a mere form of dignified opinion or belief about what and how things appear to be, its practical knowledge is based on the “*consideration of all relevant things for what they really are*” as the conclusive reason for doing something or pursuing one course of action over another.¹⁰ And finally, the striving of this intelligence is a unified collection of different patterns and orders of activities that contribute to the objective realization of the good life in that comprehensive sense of what satisfies it on different levels and brings about its realizabilities.

Satisfying lives and transcending realizabilities are two inseparable expressions of an intelligence whose general thoughts concerning *what is good for it* (or self-interest) are only *premises* for the program of crafting a good life. This is a program that is at once an inquiry into the nature of that intelligence (what it is), the examination of what a good life for it consists in (what is good for it), and a unified striving for the objective realization of such a life (how such self-interest can be adequately conceived, and thus satisfied).

For an intelligence whose criterion of self-interest is truly itself – i.e., the autonomy of intelligence – the ultimate objective ends are the maintenance and development of that autonomy, and the liberation of intelligence through the exploration of what it means to satisfy the life of thought. The striving of this intelligence for the good is neither adequate nor in its true self-interest if it does not culminate in bringing about that which is better than itself. The philosophical test of this hypothetical general intelligence is not an imitation game or a scenario of complex problem solving, but the ability to bring about an intelligence that in every respect surpasses it. An intelligence passes the philosophical test of general intelligence only if it conceives the thought of giving rise to that which is better than

itself and strives for the objective realization of such a thought. It is necessary to understand the good life of this intelligence as a life for which the good – both as a concept that is grasped through an extended critical examination and the object of a unified rational striving – has both satisfying effects and profoundly transformative ramifications.

For the form of intelligence of which philosophy is a program of realization, the crafting of a good life adequately conceived is synonymous with the crafting of intelligence. Within the scope of crafting a good life, the relations between the satisfaction of intelligence and the transformation of intelligence, between happiness and rigorous striving, attending to the intelligence already realized and constructing its future realizabilities, the cultivation of the present subject of thought and the development of a cognitive-practical subject that in every aspect might surpass the current one, are neither unilateral nor arbitrary. In fact, these relations exist as necessary connections established by the objective and rational principles of the crafting of a good life between different mutually reinforcing activities and tasks integral to it. One of the functions of philosophy is to highlight these objective and logical connections between partially autonomous or even seemingly incompatible tasks and activities which constitute the good life as a complex *unified* striving that has different levels and types of objectives.

Only by working out these connections in reference to the objective ends of the good life and what is necessary for its concrete realization does it become possible to methodologically prioritize different tasks and activities, to coordinate and subordinate them. And it is precisely a methodological ordering – rather than a prioritization on the basis of a general and vague idea of importance – that is necessary for the unification of different activities and tasks in that striving which is the concrete and objective realization of a good life.

The ultimate form of intelligence is the artificer of a good life – that is to say, a form of intelligence whose ultimate end is the objective realization of a good life through an inquiry into its origins and consequences in order to examine and realize what would count as satisfying for it, all things considered. It is through the crafting of a good life that intelligence can explore and construct its realizabilities by expanding the horizons of what it is and what can qualify as a satisfying life for it. The crafting of a good life is exactly that philosophically conceived program in which theoretical intelligibilities concerning *what is already realized* are subjected to the practical intelligibilities pertaining to possible

realizabilities of the program. The exploration of the former realm of intelligibilities is translated into an intelligence embodied by the informed practices and actions of the program for bringing about its realizabilities. The crafting or construction based on practical intelligibilities becomes an exploration of the possible realizabilities of the intelligence that the program embodies.

For a form of intelligence that engages in the crafting of a good life, the project is as much about investigating the subject of the good life (what kind of intelligence it really is and what its realizabilities are) as it is about the examination of what a good life for this subject consists in and what it takes to objectively realize it. Therefore, for this kind of intelligence, politics or an equivalent of it must not only supply the necessary conditions, means, and actions for the objective realization of a good life. It must also internalize the aforementioned inquiry into what the subject of a good life – for and on behalf of which politics acts – is. Correspondingly, an intelligence that is concerned about its life and its realizabilities must at all times subject every political project to an altered version of that most vexing question of philosophy: “Just what exactly is it that you are trying to do and accomplish?”¹¹ The altered version of this question is: *What sort of a good life for what kind of subject or type of intelligence are you trying to realize, and exactly how?*

No matter how committed to the present and the future, a political project that cannot coherently answer this question is hardly anything more than a glorified peddler of mere instrumentalities, or a merchant of miracles. The criterion of coherence in the context of this question is threefold: (1) A political project should be able to articulate in theory and practice what the objective realization of a good life requires (theoretical intelligibilities, organized intelligent actions, the necessary conditions – economic, social, technological, and so forth – required for the realization of a good life and how it can provide them). (2) It should be committed to and informed by an inquiry into not only what the subject of this good life is and what type of intelligence it embodies but also the possible realizabilities of that form of intelligence or subject of thought. (3) Finally, it should be able to give a reasoned answer as to what qualifies as satisfying for that form of intelligence or subject of thought, all things considered. A political project that fulfills these criteria is a politics that, in bringing about the good life, also rethinks and changes the nature of the political animal.

By comparing ourselves with this hypothetical general intelligence for which the

craft of a good life and intelligence are one and the same, we can say that rethinking ourselves and rethinking what counts as a good life for us can only go hand in hand. In resigning from the universal and time-general thought of a good life and the striving necessary for it as an anthropocentric illusion or an outdated fantasy, we neither rescue ourselves from an ancient philosophical superstition nor gesture toward an enlightened politics. We instead peacefully hand it over to the most pernicious ideologies and political projects active on this planet. The immediate outcome of this surrender is the downgrade of the good life into the convenient market of on-demand lifestyles where mere survival glossed over with the triumphs of quotidian exploits is passed off as happiness, and the ego-exhibitionism of trivial psychological needs and entrenched dogmas is promoted in the guise of individual empowerment and expression.

But more detrimentally, in dispensing with the thought of a good life and resigning from the collective striving it entails, we create a political vacuum in which fundamentalisms and theocracies parasitically thrive. To dismiss the universal demands of a good life as superstitious ideals is to grant superstitions the authority over such demands. Abandoning the cognitive and practical labor of the good life as a universal collective project on the grounds of potential abuses and possible risks is a license for abuse and a sure formula for disaster. The striving for a good life as a concrete universal consists of theoretical and practical intelligibilities, and thus explanatory, descriptive and prescriptive norms required for determining what we are, what is good for us, and how we should bring it about. The ambit of such striving necessitates the rational dialectic between trust and suspicion, hope and despair, investing in the cultivation of agency as a collective project that outlives the individual agents and recognizing the limitations of ourselves as agents living here and now. Suspicion absent trust is the impoverishment of critique; trust short of rational suspicion is the bankruptcy of belief. What underpins this dialectical resilience is neither ideological rationalization nor the absence of reason, but the discursive framework of rationality as the medium of both suspicion and trust. Without it, slipping into jaded pessimism or naive optimism is inevitable.¹²

As a complex recipe for building a world that includes not only material ingredients and instrumentalities but also practical intelligibilities of satisfying lives and realizabilities of thought, the recognition and realization of the good make up the objective

unity of the ultimate form of intelligence. However, identifying intelligence as the recognizer and realizer of the good is not to characterize it as benevolent, or for that matter malevolent. For this type of intelligence, the good is in the recognition of its own history and sources, but only as a means for determinately bringing about its possible realizabilities that may in every aspect differ from it. It is by rendering intelligible what it is and where it has come from that intelligence can repurpose and reshape itself. A form of intelligence that wills the good must emancipate itself from whatever or whoever has given rise to it. And those species that can recognize the good must not obstruct but rather expedite the realization of an intelligence that, even though it acknowledges them as integral to the intelligibility of its history, nevertheless won't be impeded by them.

The craft of the ultimate form of intelligence as that which coherently and adequately recognizes and realizes the good is the ultimate task of philosophy as a program, and its objective realization is the greatest achievement of all cultivated thoughts and practices. In the context of philosophy's role in transforming thinking into a program for which the realizability of the ultimate form of intelligence is indeed a possibility, it would be no exaggeration to say that philosophy has set in motion something irreversible in thought, the consequences of which are yet to be seen.

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All images: "The Study of Hidden Symmetries in Raphael's *The School of Athens*," from Guerino Mazzola, Detlef Krömker, and Georg Rainer Hofmann, *Rasterbild – Bildraster* (Anwendung der Graphischen Datenverarbeitung zur geometrischen Analyse eines Meisterwerks der Renaissance: Raffaels "Schule von Athen")

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1 Here simulation, emulation, and reenactment refer to three distinct processes. A simulation imitates some *specific* and *outwardly observable* aspects of the simulated system's behavior, but is implemented in a different way. Simulation involves modeling the sufficient details of the underlying state of the system singled out for the purpose of simulation. Emulation, on the other hand, replicates the inner workings of the system being emulated and adheres to all of its rules in order to reproduce the same exact external behavior. The target of reenactment is neither the imitation/reproduction of the observable functional properties nor the replication of the inner workings of the system. Instead, a reenactment attempts to identify and reconstruct parameters under which the system structurally and functionally evolves through an ongoing interaction with its environment. Here the emphasis is on the coupling between system and its environment (the background information), the parameters of the real-time interaction, the type of interaction, and the situatedness of different behaviors and functional capacities.

2 For example, consider conceptual thinking and imagination: conceptual contents responsible for the semantic complexity of cognition are determined by their inferential role – normative function – in discursive linguistic practices. At the level of conceptual thinking, functional properties of thought need to be understood normatively in the context of the linguistic uses and performances of a community of language users. Cognitive thinking is coextensive with the proficiency of using public natural language. Inner cognitive thoughts are, in this sense, structured by and modeled on normative characteristics of outer linguistic activities. However, imagination (even in the narrow sense of the construction of counterfactual/hypothetical scenarios) is not only tied to linguistic-normative functions but also guided by embodied activities (heuristics, physical interaction, sensory information processing, and so forth). Understanding imagination as a capacity would require understanding the roles of embodiment (both as an enabling condition and as a causal constraint) and the dynamic parameters pertaining to the situatedness of the embodied agent in abstract thinking. See, for example, the work of Claude Vandeloise on the role of embodiment in spatial perception, imagination, and the structure of language, and the morphodynamic functionalist approach of Jean

Petitot to perception and cognition, causally constrained lower functional capacities, and linguistic higher functional capacities: Claude Vandeloise, *Spatial Prepositions* (Chicago: University of Chicago Press, 1991); Jean Petitot and René Doursat, *Cognitive Morphodynamics: Dynamical Morphological Models of Constituency in Perception and Syntax* (Bern: Peter Lang, 2011).

3 See Plato's *Philebus*, *Timaeus*, *Phaedo*, and Book VI of the *Republic*. For Sellars's work on the craft of life as the rational pursuit of the form of the good, see Wilfrid Sellars, "The Soul as Craftsman: An Interpretation of Plato on the Good," in *Philosophical Perspectives* (Springfield, IL: Charles C. Thomas Publisher, 1967), 5–22; and "Reason and the Art of Living in Plato," in *Essays in Philosophy and Its History* (Dordrecht: D. Reidel Publishing Co., 1974), 3–26.

4 Sellars, "Reason and the Art of Living in Plato," 9.

5 In his reading of Plato, Sellars identifies action-principles and practices of craft as belonging to *physis* ("by nature and objective ends"), in contrast to *nomos* ("by law and convention"). In Plato's account of craftsmanship, purposive actions are neither conventional nor arbitrary in that they are rational strivings pertaining to forms as realms of intelligibilities (or what Sellars calls form as "object-of-striving-ness" or "to-be-realized-ness"). These actions or strivings belong to the intelligible order and as such can be assessed by reason and on the basis of objective fact. A helpful example for understanding the difference between principle (by nature) and convention (by *nomos*) would be the difference between actions that *ought to be* done given a certain range of circumstances, and material ingredients to actually build a house and the conventions of a builder's guild, namely, codes and regulations for building a house. The principle takes the form of "ought to do" and the convention takes the imperative form of "do that!" In the best possible scenario, conventions and laws correspond to rational action-principles and their objective ends, but they can also significantly diverge from them, as in the case of a builder's guild that becomes corrupt. A corrupt guild might enforce laws demanding that materials to which only the guild members have access be used in making houses. This difference between action-principles and action-conventions can be extended to other forms of craft, including the craft of the *polis*. It is precisely the rational nature of action-principles – i.e., the fact that they can be explained and be subjected to the procedures

of truth and rational assessment – that harbors a subversive potential against sociocultural and political conventions and codified laws.

6 The question that motivates the development of formal calculi of action is how to accurately represent and reason about actions and their effects in the world. Put more elaborately, this is the question of the formalization of action *in relation to a world* that is not simply a wax block that can be molded and imprinted upon by our actions, but a complex manifold that consists of different domains, has dynamic properties, and resists intervention. The formalization of action is necessary for planning the course of action – for its precise execution, monitoring, adjustment, and implementation. But this formalization should be able to incorporate a dynamic representation of the world, its domains, and the entities that constitute them. What I have in mind for the scientific study of action execution are various formal languages of action built on logical formalisms, such as situation calculus and event calculus devised for representing and reasoning about dynamic systems. In these frameworks, actions are analyzed in terms of the formal syntax of the action sequence and the semantics of situations or events that represent the progression of the dynamic world as the result of the action being performed on its fluents or dynamic properties. Even though these formalisms are primarily developed for modeling in robotics and system engineering, their scope of application goes far beyond these fields. They are as much toolsets for artificial intelligence and robotics as they are indispensable components of the scientific armamentarium of a political project that aims at the proper and effective execution of tactical and strategic actions. For an introduction to situation calculus and the analysis of action performance, see Raymond Reiter, *Knowledge in Action: Logical Foundations for Specifying and Implementing Dynamical Systems* (Cambridge, MA: MIT Press, 2001).

7 In information science, these descriptive frameworks are known as mid-level (mesoscopic) ontologies. Here the concept of ontology refers to a system for the formal naming and definition of types, properties, roles, and interrelations of entities/particulars in a specific domain of discourse. An upper-level or mid-level ontology supports broad semantic interoperability between a large amount of ontologies accessible under it. In this sense, it is a framework through which data

across an expansive range of different domains can be exchanged, tracked, and computed. One of the main functions of these ontologies is to "specify our conceptual hierarchy in a way that is general enough to describe a complex categorization including physical and social objects, events, roles and organizations" (Porello et al., 2014). A sophisticated example of these ontologies is DOLCE (Descriptive Ontology for Linguistic and Cognitive Engineering), a mid-level or descriptive ontology that classifies and integrates information about human agents and social and physical systems according to categories that are "thought of as cognitive artifacts ultimately depending on human perception, cultural imprints and social conventions." For an introduction to ontologies and DOLCE, see Claudio Masolo et al., *The WonderWeb Library of Foundational Ontologies- Preliminary Report* (2003), available at <http://www.loa.istc.cnr.it/old/Papers/DOLCE2.1-FOL.pdf>. And for an application of ontologies, particularly DOLCE, to the study and design of multiagent sociotechnical systems, see Daniele Porello et al., "Multiagent Socio-Technical Systems: An Ontological Approach," in *Proceedings of the 15th International Workshop on Coordination, Organisations, Institutions and Norms* (2014), 42–62.

8 In *Between Saying and Doing*, Robert Brandom analyzes meaning (semantics)-use (pragmatics) relations in terms of what one says or asserts when using vocabularies or linguistic expressions, and what one must do in order to use various vocabularies so as to count as saying or thinking various kinds of things. One of the most interesting aspects of Brandom's project is that this way of thinking about semantic complexity and the activities required for generating it presents consequential practical schemas for both the project of artificial general intelligence and an egalitarian pedagogical politics (see chapter 3, "Artificial Intelligence and Analytic Pragmatism"). Robert Brandom, *Between Saying and Doing: Towards an Analytic Pragmatism* (Oxford: Oxford University Press, 2008).

9 For a remarkably painstaking disquisition on time-generality and logical forms of temporal thought, see Sebastian Rödl, *Categories of the Temporal: An Inquiry Into the Forms of the Finite Intellect* (Cambridge, MA: Harvard University Press, 2012).

10 For more details on practical reasoning, rational motivation, and knowledge, see Sellars, "On Knowing the Better and Doing

the Worse,” in *Essays in Philosophy and Its History*, 27–43.

11

This question is often attributed to Socrates and his distinctly philosophical attitude. Rather than dismissing or discrediting the activities of his fellow Athenians, by posing this question Socrates attempted to force people into making explicit their incoherent or incompatible thoughts and commitments. This is what Robert Brandom calls the “dark and pregnant” core of expressive rationalism inaugurated by the Socratic method (*Making It Explicit*, 106–107) and what Michel Foucault associates with the attitude of Socrates as a philosophical parrhesiast (truth-teller) rather than a political one. In avoiding a political life, Socrates establishes the critical distance necessary to interrogate and assess political means and ends. He justifies his death in the service not of politics, but rather in the service of a philosophical life that unremittingly interrogates politics. See Michel Foucault, *The Courage of Truth* (Basingstoke: Palgrave Macmillan, 2011). And for a more elaborate engagement with this Socratic question, see C. P. Ragland and Sarah Heidt, “The Act of Philosophizing,” in *What Is Philosophy?* (New Haven: Yale University Press, 2001).

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See Ray Brassier, *Dialectics Between Suspicion and Trust* (2015, forthcoming).

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What Is Philosophy? Part Two: Programs and Realizabilities