

Contribution to the Critique of Political Organization: Outline of An Ongoing Research Project

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Abstract: Rather than seeking to interpret the political dimension of the current health, economic and political crisis we are going through, the present contribution goes in a different direction: we would like to present what we have been able to accomplish this year, while so much else has spiralled beyond our control or understanding. The research project described here does rely on several lines of investigation that pre-date the global pandemic — stretching back to 2012, in fact — but its formulation into a more or less coherent theoretical proposition is a direct product of the new conditions of study and work that were imposed on many of us by our current predicament. We leave to the reader the work of assessing if the present conjuncture has influenced the content or the ambitions of this research.

Keywords: Political economy, political organization, Marx, Badiou, Karatani, Tononi

Preliminary note

Freud begins *Beyond the Pleasure Principle*¹ with an enigma: why is it that the soldiers who had been injured in the war were able to work through their traumatic experiences better than those who returned unscathed – who tended to have repeated dreams, reliving the violent imagery and fantasies associated with the battlefield? A similar phenomena can be seen in certain political protests — for example, the famous “June Journey” protests in Brazil in 2013: some of the militants who were at the frontline of the protests and who got injured and beaten by the police experienced, despite the pain and the anger, a sort of subjective relief of having made *injustice visible*, by being “marked” by the situation - as if the bruises “scaled down” the invisible political forces shaping that moment to a manageable individual measure, giving some limits to the phantasmatic power of the State. It was as if the cuts and bruises gave some contours to the social and political situation. Yet another similar case is reported by the psychoanalyst Rosaura Oldani Felix:² in the 1990's, in Brazil, young teenagers engaged in a game called “Russian Roulette”, where people purposefully shared needles — amongst them, some HIV-contaminated ones — claiming that “everyone is born with a passport (i.e. everyone will die) but I want mine stamped”. It was as if the invisible spread of the HIV crisis was so nerve-wracking, the impossibility of rendering ourselves commensurate with the scale of the problem so anguishing, that having one's passport “stamped” did not seem, to some, like too high a price to pay for giving the situation some symbolic contours: it would at least give a measure to the power of the virus and deliver us to a situation in which, already having contracted it, we could then see what sort of freedom we would still have.

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1 Freud 1959

2 Felix 1887

Today, the incommensurability between the scale of the pandemic and that of our lives and actions seems to haunt us as well. And the situation is all the more terrifying in that the very measure we must take to avoid making it objectively worst — isolating at home and avoiding contact with others — creates a condition where our subjective experience lacks any concrete markings of its very cause: by avoiding all contact and remaining in a safe space, we end up deprived from signals and objective constraints that could give the pandemic some contours and limits. This is why psychoanalysts report that people who already worked from home are the ones who are the most anxious, and most exposed to the worst fantasies of impotence in these times, since not even a change in their habits is delimiting the singularity of this situation in their daily lives.

This scalar problem is very particular to social and natural catastrophes - a sort of impediment to the process of mourning and grief: it is hard to work through and ultimately accept predicaments whose inherently global and un-situated nature leave very few singular traces at the level of our local experience. Rather than working through the loss and transformation of our life-styles and ideals, we get trapped either in anxious paranoia (pure sense of globality) or resort to ineffective symbolizations through acting outs that expose us to unnecessary risks (pure locality). The fact that medical doctors who are in the frontline of the pandemic, militants creating mutual aid systems in peripheral communities to allow others to stay home, as well as essential workers and poor people who lack the financial means to remain in isolation, are less likely to experience this intrusion of the Other — the realization, the coronavirus has forced on many of us, that we live in one same world — as an anguishing one, or to give in to crazy paranoias. In short, there seems to be some “collateral” subjective benefit to certain forms of political work today, those which render us more commensurate with the social causes of our personal effects, not only providing us with the means to change the situation, but also to give the proper form to the things we have lost.

This is why, rather than hastily seeking to interpret the political dimension of the current health, economic and political crisis we are going through, the present contribution goes in a different direction: we would like to present what we have been able to accomplish this year, while so much else has spiraled beyond our control or understanding. The research project described here does rely on several lines of investigation that pre-date the global pandemic — stretching back to 2012, in fact — but its formulation into a more or less coherent theoretical proposition is a direct product of the new conditions of study and work that were imposed on many of us by our current predicament. We leave to the reader the work of assessing if the present conjuncture has influenced the content or the ambitions of this research.

General overview

The strategic objectives of this research project can be defined by two interconnected imperatives.

First of all, our goal is to construct a theoretical approach capable of maintaining that *politics is its own form of thinking* — irreducible to science, ethics or aesthetics — without thereby losing any claims to its capacity to produce rigorous knowledge of social reality.

This objective requires us to avoid both the trope of Marxism as a “science of history” as well as the opposite one, which reduces politics to an autonomous field defined by immediate political action, struggle and decision-making. To avoid the first position, we must be able to demonstrate that politics has its own criteria of rigor and consistency, which cannot be reduced to its similarities to science, even when scientific results are mobilized as relevant political resources. To avoid the second, this internal consistency must be shown to also include the means for production of social knowledge and social technologies. These two negative orientations are brought together in a more constructive way in our attempt to recast the binomial “political economy”, which preserves the difference between a field of political agency and another of materially-based social laws and tendencies, and to propose a further integration between the active and the descriptive dimensions of politics — between political organization and political economy — in such a way that local organizations can be conceived as small economic models and national and world economies as particular forms of large social organizations.

Our second goal is to substitute the strategy of theoretical “critique” for an *axiomatic* strategy.

Against what remains the main theoretical strategy of the Left — that is, proposing better descriptions of our current social reality in such a way that our theory is capable of locating and expressing the inconsistencies and weaknesses of our social system in ways that conservative depictions cannot — we want our theoretical space to be infinitely richer than our social world, so that capitalist social formations might appear within it as *particular* solutions within the broader space of other possible solutions to general problems of social coordination, allocation of resources and free association. The strategy of regionalizing or situating the parameters of our social formation has profound effects both to theoretical construction as well as to the practice of politics, since the first sign of a broader theoretic framework is its capacity to reformulate problems in its own terms, meaning that, within this framework, *communism becomes the theory of how to solve communist problems, and not capitalist ones*.

Together, these two objectives suggest an overall approach to political thinking which combines a theory of social organization within which both capitalist and non-capitalist forms of organization are expressible and comparable while, on the other, we further reinforce our reliance on actual political practice as the primary experimental means

to probe into the validity of new egalitarian hypotheses and structures — endowing political work with its own “epistemological” value, so to speak, while also connecting politics and social models in a more integrated way.

The Circle of Studies of Idea and Ideology

The main motivation behind this research is, however, not a theoretical or exegetical one — we are not interested in providing yet another interpretation of the Marxian corpus or a better proof that it is scientifically sound. Our starting point is, instead, the accumulated political experience of the *Circle of Studies of Idea and Ideology* (CSII)³.

Though the project has undergone several transformations throughout the last ten years, its basic purpose remains functioning as a laboratory of organizational practices. Rather than focusing on the engagement with a particular political issue or movement, CSII established itself as a space where activists from a diverse set of social backgrounds and political commitments could come together to investigate their common obstacles and develop tools that could be useful in their different sites of struggle. The basic premise of the project is that even if, from an ideological point of view, the Left is composed of a highly diverse — and sometimes conflicting — tapestry of organizations and ideals, a great number of common struggles and problems become clear when we approach the political landscape from the standpoint of its concrete organizational challenges.

In order to explore these practical impasses, we have developed a methodology that has theoretical, therapeutic and experimental components. First, the collective is divided into groups based on geographical differences — we have had groups in more than 7 cities in Brazil and elsewhere, not counting members who only joined our meetings virtually. In these groups, we share both our experiences as activists in different political fronts — trade unions, political parties, social movements, etc — and theoretical tools that some of us consider helpful in understanding these diverse political contexts.

But the crucial aspect of CSII is that, based on the conflicts and impasses that emerge in these groups, members are invited to construct “subgroups” inside the collective — associations with other members with the most diverse goals in view: creating journals, study groups, communitarian aid projects or new party cells, for example. The organization of these subgroups is then used as an experimental ground where we can test different hypotheses on how to deal with the emergent impasses and insights developed in our collective meetings — and the ideas which gain practical confirmation in their subgroups are

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³ Information about CSII can be found at www.ideiaeideologia.com (in portuguese) and <https://csiiimontreal.wordpress.com/> (in english). A good overview of the Circle’s organizational structure can be found in this recent presentation: <https://www.youtube.com/watch?v=-PMZuPwNOtE>

then properly formalized and offered in projects and partnerships with other collectives and institutions. In this way, we are able to reframe the organizational problems which, within regular political practice, might not emerge as common impasses that effectively cut across the ideological and tactical spectrum of the Left or that might remain hidden under a myriad of external social forces constraining political action.

Throughout the last decade, over 300 activists and militants have participated in our project, bringing together their combined experiences within 6 political parties, several trade unions in Rio and São Paulo, social movements, as well as their heterogeneous social backgrounds. It is this underlying commitment to operate on a diverse sample of militant experiences that makes the emergence of invariances — both in our personal testimonies as well as in the projects developed by “subgroups” — relevant signals of the structure and challenges shaping the landscape of political struggle today.

However, the Circle has not as of yet produced an explicit and general theory of its own practical commitments — a conceptual framework where collective organization is thought as an experimental site which teaches us about the world in the same measure that it affects and transforms it. It is the hypothesis that political organization is intrinsically connected to the development of political thinking — in fact providing a support for it that is irreducible to the ideals of the people engaged with it — that truly motivates this research project and its two main theoretical objectives.

Previous results: 2016-2018

Though CSII exists for over ten years now, the current research project can be said to have begun in 2016, with the publication of two texts: *Freeing Thought from Thinkers: a Case Study*⁴ and *Phenomenology of Value: Badiou and Marx*.⁵ Let us briefly summarize the outcome of these two initial attempts to engage with this new theoretical approach.

*Freeing Thought from Thinkers*⁶

This first essay sought to give a first theoretical account of the work done by the Circle. In it, we argued for the philosophical relevance of conceptualizing political thinking in such a way that we might rigorously distinguish between the thinking that takes place at the level of collective organization from the individual thought of its participants:

“Our wager can be formulated as follows: there are ideas which can only be consistently thought of within certain forms of collective

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⁴ Tupinambá 2016

⁵ Yao 2016

⁶ Available at: https://www.academia.edu/24772227/Freeing_Thought_From_Thinkers_A_Case_Study

organization. That is, there are ideas which can only be properly developed if their conceptual construction is tied together with the practical construction of a given institutional space.”⁷

Mobilizing different philosophical approaches — most notably, the works of Agamben, Rancière, Žižek, Sohn-Rethel and Badiou — we tried to demonstrate that the hypothesis of different forms of thought that are commensurable with different forms of social consistency can in fact be found in Marx’s own account of the value-form, though it remains mostly constrained there to his theory of commodity fetishism. However, the argument that Marx’s theory of the commodity-form is a *special case* of a general theory of how different social forms can consistently think ideas that we, as individuals, are incapable of directly grasping or conceiving —while other organizational forms might be able to provide alternative epistemological mediations — already brought together the two basic objectives of our overall project. On the one hand, we sought to present the capitalist social form as one amongst different forms of such access to organizational thinking. On the other, we already pointed to the role that concrete experimentation with the rules and designs of collective organizations can have in helping us learn about the social space we are embedded in.

Furthermore, this line of argument — albeit extremely abstract and philosophical — gave particular importance to the displacement, operated by the value form, of immediate forms of *measure* and *evaluation* of social reality to the mediating role of commodities themselves, especially the money-commodity. That is, it was already at stake, in this early stage of the research, that a general theory of collective organization would also have to consider social organization as a means to measure aspects of social reality which are directly inaccessible to us — a point which would later bring us into a debate with Friedrich Hayek and his theory of the price-system as a solution to the social coordination problem.

Still, *Freeing Thought From Thinkers* emphasized almost exclusively the political and organizational stakes of the research, doing little to rethink the intrinsic role that science already plays in the Marxist critique of political economy or to suggest how such an alternative understanding of collective organization might transform political theory and strategy.

*Phenomenology of Value*⁸

Part of this theoretical lacuna was addressed by the second foundational text, *Phenomenology of Value: Badiou and Marx* (Yao, 2016), which assumed a more analytic perspective — leaving matters of political

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7Tupinambá 2016

8 Available at: <http://crisiscritique.org/political11/Yuan%20Yao.pdf>

organization and experimentation aside — and focused on arguing for the benefits of recasting Marx’s theory of value and fetishism in terms of Alain Badiou’s “objective phenomenology”, presented in *Logics of Worlds*.⁹ Once more, the theory of value is taken as a privileged point of intervention, but this time there was an attempt at implementing the strategy of recomposing the critique of political economy in a more axiomatic framework — that is, of seeking to situate the logic of value as a particular case of a broader formalism:

“The following work argues that Marx’s version of the law of value can and should be formulated in the language of Badiou’s phenomenology. Most expositions about the law of value usually focus on its explanatory force or its empirical undecidability. This is because, as a foundational question in Marxist political economy which continually attempts to establish itself as scientific, its value seems to reside in validating (or invalidating) Marxist political thought as such. This text takes a different approach: rather than attempt to prove or disprove the law of value, we ask what sort of questions can be possible on its basis.

In other words, what does a world where this law is operative look like? It is important then to qualify in what sense value (as delineated by Marx) can exist within a world, which is where Badiou enters. We show how his philosophy can be utilized as a tool for extracting the important features of our question and transforming them into new vantage point on the theory of value. Specifically, we wish to show that the phenomenology of Badiou is a framework suited for studying value because value is phenomenal in the strict sense.”

Alain Badiou’s work had already been paramount in *Freeing Thought from Thinkers*, where his theory of thinking as a special sort of formal invariance that emerges within different material supports served as the philosophical backbone of our defense of the epistemological dimension of collective organization.¹⁰ In *Phenomenology of Value*, however, a different aspect of his work started coming into play, namely, the fact that an important part of his philosophical project has been the development of a general theory of “worlds”, that is, a theory of how different logical spaces, constrained by a minimal set of axioms, already display properties that we associate with appearance and phenomenological consistency — even though these spaces are not formed by our perception or conceptualization, and might very well be incommensurate with our individual existences.

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9 Badiou 2006

10Tupinambá 2016, p.171

In short, Badiou offers a rigorous framework within which to discuss what it means for something to *objectively appear in a world* as well as what is formally at stake in constructing maps which, preserving certain structures of a world, can therefore extract and organize information about it. Reformulating Marx's theory of value with the tools provided by Badiou — in particular, the theory of localic topoi — would therefore allow us to specify the *particular* type of constraints involved in the value-form within a richer formalism which is also capable of expressing other similar forms of consistency and measure for complex social worlds. Furthermore, insofar as Badiou's theory is also concerned with providing the means to think about different practices as forms of inventive thinking — politics included — to recast the critique of political economy within its bases is to also make political economy commensurate with other forms of political organization.

In *Phenomenology of Value*, however, the main focus was on showing the basic compatibility between Marx's project and Badiou's objective phenomenology — and this was accomplished by showing convincing correlations between the logic of value and Badiou's theory of atomic logic from *Logics of Worlds* — culminating on the suggestion that the perspective of labour, in capitalism, offers a singular standpoint from which *more information* about the social world is visible than from the standpoint of the mediation of commodities and commodity exchange. These correlations, however, did not lead yet to transformation in any concepts or ideas — nor did they concern the social world today, restricting themselves, in this first proposal, to establishing the validity of the connection between the critique of political economy and the categorial framework of Badiou's project.

*The Mismeasure of Thought*¹¹

Two years later, in 2018, another publication — *The Mismeasure of Thought: Some Notes on Organization, Scale and Experimentation in Politics and Science*¹² — tried to continue the original insights from *Freeing Thought From Thinkers*. Unlike the previous installment, however, this new proposal sought to bridge the gap between the theory of collective organization as a consistent means to think different aspects of the social and the parallel developments of the project in *Phenomenology of Value*, where the focus was mostly on the possibility of embedding Marx's critique of political economy in the framework of Badiou's *Logics of Worlds*.

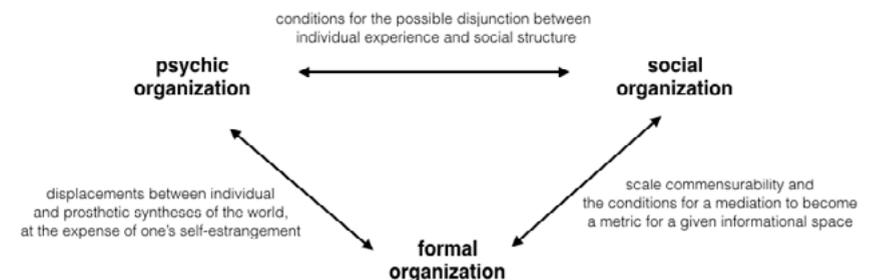
Here, the strategy for approximating the two strains of our research was to take up Fredric Jameson's theory of *cognitive mappings* — of the different ways the totality of our social space can be made commensurate

11 Available at: https://www.academia.edu/36174215/The_Mismeasure_of_Thought_Some_Notes_on_Organization_Scale_and_Experimentation_in_Politics_and_Science

12Tupinambá 2018

with our figurative powers and given contours through different aesthetic objects— and demonstrate that Jameson's theory is actually much more consistently applied to the thinking of collective organizations and social forms themselves as local models of global organizational structures. This shift in perspective — benefiting from Jameson's idea, but removing it from the field of aesthetics — allowed us to propose a much more intrinsic approach to the connection between political economy and political organization and to reframe our previous philosophical enquiry into the forms of social thinking in more concrete political terms: under which conditions can a particular social form allow individuals to access and produce information about the social totality that they could not directly think?

In order to further develop this question, we reformulated Jameson's theory in a more general form by first distinguishing three different but interconnected components in the operation of cognitive mapping — the organization of psychic spaces, the organization of social spaces and organization of formal mediations — and three different types of relations: (1) between individuals and society, relations that have historically tensioned the commensurability between our experience and social structure, (2) between society and mediations, relations between technological advancement leading to more complex social forms and the technical and organizational means that are capable of extracting consistent information about society, and (3) between individuals and mediations, relations of engagement and estrangement without which individuals cannot shift their perspective to that of the mediating device or apparatus, thus acquiring the means to see society in a more intelligible way.



Recasting Jameson's theory in this way, we equipped ourselves with the means to think Marx's theory of value as a theory of a particular form of social organization — one where money functions not only as a means of circulation, measure of value, world-money and hoarding object, but also as a cognitive mediation for individuals to access information that is not made in their own measure. This last property, we argued, was the one Hayek focused on in his theory of prices.

Finally, in line with *Phenomenology of Value*, we suggested that this general theory of cognitive mappings could find an explicit formalization within Badiou's framework:

“Even though Jameson helped us to introduce the epistemological value of cognitive mappings, it was by moving back from aesthetics to political economy, with Hayek and Marx, that we were able to address the ontology of such a practice, dissecting its basic components not in terms of types of practice - aesthetic, political, and so on - but of organizational spaces and finding in the questions of scale and complexity a homogeneous measure to deal with the constraints of multiple mappings between them. But, as we stated in our introductory remarks, our main concern is not with the development of critical theory, but rather with renewing the approach to collective organization, proposing that we recognize the capacity of certain social institutions to introduce us into dimensions of the political space which are inaccessible from our own direct cognitive stance. And this constructive or propositive view cannot be found either in Hayek nor in Marx, even though it is clearly palpable in Jameson's formulation of the challenge. It is perhaps only in Alain Badiou's thinking that we can find the appropriate tools to bring together Jameson's propositive view while simultaneously exiting the domain of aesthetics as an ideological or superstructural realm. In fact, the three terms we have been trying to implicitly track in this study all have explicit correlates in Badiou's *Logics of Worlds*, a book which remains mostly unexplored in terms of its implications for political practice. There are striking similarities between Badiou's theory of the subjectivized body and our approach to the question of “organization”, between his objective phenomenology and the way we want to consider the question of “scale” and the theory of organs and decision points and the question of “experimentation” - even though the proper assessment of these ideas will have to wait another opportunity”

It is important to state that, more than applying Jameson's theory as means to further develop the connection between Marx and Badiou, *The Mismeasure of Thought* operated a profound conceptual shift in our approach to the project, one that placed the problem of social scales at the center of political concern. This, in fact, is the motivation behind the use of cognitive mappings: since Badiou's theory of thinking is formally treated as a theory of *immanent models* where parts of a world can model aspects of that world itself - becoming capable of expressing new properties of it through the expansion of that world's logical space - finding a way to think the problem of political thinking in terms of the relation between between local and global, "small" and "large" parts, between different degrees of complexity, etc, implies also finding the

means to think collective organizations as possible models of social organization as a whole. The shift to a “scaling” approach to the problem of politics was a crucial step in bringing together political action and political economy under a single theory of political thinking as the space of possible modeling strategies.

Still, the text did not do more than suggest certain concepts that could orient us in this new perspective — ideas like “impersonal emancipation”, the problem of “autonomization” of social forms or the idea of collective organization as an “experimental” apparatus. The issue of how this approach would transform the Marxian critique of political economy, or how these political “mappings” of society would be formalized in Badiou's theory remained untouched.

*From Cognitive Mappings as Sheaves*¹³

In that same year, we published another text, *From Cognitive Mappings to Sheaves*,¹⁴ which also attempted to bridge the gap between the original two essays, but now starting from the previous work done in *Phenomenology of Value*. In that earlier text, we explored the connection between Marx's theory of value and Badiou theory of worlds in terms of conceptual correspondences, but the increased expressive power attained by recasting Marx in Badiou's broader framework was not yet explored. Here, however, we begin from the mathematical theories of localic toposes and sheaves, employed by Badiou, in order to construct a new approach to the price structure and the global coherence of markets.

By far the most ambitious of our four contributions, *From Cognitive Mappings to Sheaves* begins by recasting the problem of social determination within the scalar paradigm of *The Mismeasure of Thought*, depicting social theories or perspectives in terms of how the choice of different scales of analysis organize the differential structure of data spaces. This allowed us to address the price-structure as a specific strategy for selecting “points” in social space such that these points might preserve and combine information about the underlying structure. And since Badiou's use of category theory as formal means to think about worlds and objective phenomenology makes ample use of the duality between topology and logic, between the ‘shape’ of topological spaces and their corresponding logical consistency, the reframing of the theory of cognitive mappings in terms of the passage between local and global properties of spaces — a process called “sheafification” — showed itself to be a promising route of investigation into the ways prices might allow for more or less consistent “gluing” of exchanges in such a way as to preserve the global consistency of markets.

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13 Available at: <http://crisiscritique.org/2018h/yao.pdf>

14 Yao 2018

The text concludes with a different view on the shortcomings of market capitalism — one that, in line with our axiomatic strategy, is not so much concerned with expressing the immorality of capitalism's political premises, so much as the *poverty* of its particular solution to fundamental social problems:

“If we assume that the space of value is well-understood (where, for example, one can distinguish independent random variables), we can join Hayek in celebrating the miracle of price system. However, if this space is non-trivial, then we cannot trust that a sheaf of prices exists. This seems to be the case when we consider the role of credit in sustaining the system and the culpability of complex financial instruments in recent crises. Instead of thinking of the market as always in the process of converging to equilibrium, we should think of it as attempting to stave off crisis by producing its own formal means of consistency. By identifying the market as a continual process of sheafification, we may be able to computationally map this process and therefore find critical points of intervention. To do this, we have to shed our assumptions about convergence of prices and instead incorporate data generated by global crises.

What Hayek's approach misses is how the price system restructures the very knowledge that sustains it. This restructuring is generally taken as a form of progress - as technology improves, workers are freed to specialize, which gives rise to the “knowledge-class”. This in turn leads to increased productivity as business firms transform under a confluence of different fields. However, knowledge is a form which inherently resists commodification. Attempts to create boundaries around it in order to make it rentable are transient, as it has (near-)zero reproduction cost. Businesses quickly adopt the latest technologies and automation techniques, and the outcome is that less workers are needed. The correlate to the knowledge class is therefore the transiently or permanently unemployed class. In assigning prices to the space of value, human society achieves dynamic growth and coordination, but this process then transforms value itself. Along these lines, what if the value space has topological properties which prevent a consistent global assignment of prices? This is not simply asserting that conditions are never ideal due to external factors. It is asserting rather that the sheafifying process inherently fails because of factors which are not visible in local assignments (which may appear efficient after all). These topological factors only appear as singularities, or points where the sheaf of prices break down.”

Scale and the pandemic: a local intervention

Beside the theoretical attempts outlined above of a general framework within to understand the problems of pricing, scale, and cognitive

mapping, the current health crisis provided an opportunity for a quick intervention on the debate, mobilizing a similar approach. In *Contagion and Visibility: notes on the phenomenology of a pandemic*¹⁵, the issue of the visibility of a threat that is spread along the multiple levels and scales — having potential influence over personal ethics, to government policies, to the global economy is tackled from the point of view of the relationship between this *hyper-phenomenon* and the cognitive mapping that is possible from the individual point of view:

The transition between worlds here being examined is not just a transition between two *visible* worlds, but it is also the emergence of something out of *invisibility*. An invisibility that is the result of a difference of *scale* amongst phenomena. The virus itself, as a token of this invisibility, makes itself visible through its effects only: both the disease, if one gets it, and other effects at different time-scales, spatially scattered - the effects on the herd dynamics and on the economy. The effects that were missing, although were expected, in my stroll on the streets of Rio de Janeiro four days ago, that were starting to become present two days ago.

And the text proceeds by questioning “How should one respond to an invisible menace? How should we respond to the creeping effects of its dissemination? What kinds of sheaves are to be constructed from these phenomena to our sensibility?”. In a way, this intervention was an attempt to insert the problem of the *subjective* phenomenology within the *objective phenomenological* camp of the formalisms being mobilized in the extant installments of the series that is being reviewed here. This subjective phenomenology makes use of the difference between *seeing*, a simple sensible affectation and *seeing-as*, which places the sensible contents within a broader conceptual framework that enables to see it as *something else*. So the question “how to see the pandemic as a pandemic” makes sense within this framework, once it is evident that the pandemic as such lacks an objectual character that enables being directly detected.

[The] mobilization of pure globality and pure locality expresses well the predicament of a phenomenology of the pandemic - that between the necessity of believing the reality of that which is invisible - that is, maintaining a minimal “thickness” to the hypothesis of the existence of the virus, without succumbing either to anxious paranoia, or to its reverse - projective denegation of its existence. The predicament is not exclusive to the present pandemic, but is ubiquitous in the experience of contemporary global capitalism, wherein processes with causal efficacy supersede our capacity of making sense. In a sense, we are

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15 Available at: <https://identitiesjournal.edu.mk/index.php/IJPGC/announcement/view/15?fbclid=IwAR0eJDduut5XSA4vikZ7DP-g7CNkgNZ0-RiSnvuk6CNglzG51vu9V7ycEWrY>

not inhabiting different worlds in the sense of Goodman here, diachronically switching between the worlds of art, scientific theories and philosophemes, but we are inhabiting a split between an *intrusion* to our abilities of worldmaking and the worlds we fashion to try and make sense of it. The phenomenon/noumenon split is *immanentized* within the situation.

This illustrates the purchase of the problematic pursued here also to specific topics such as the current health crisis, and by doing so, also demonstrates the urgency of conceptual and formal frameworks that are not only multiscalar but explicitly tackles the relations and mappings between scales in order to advance an extended causal picture, wherein Capital itself is seen as an efficient cause even if the proper level of its action greatly supersedes any immediate capability of individuals.

General comments on preliminary results

The first two cycles of our research, summarized in these four contributions, plus the local intervention in the health crisis already form a suggestive picture and set out an orientation for our next steps. We believe that one of the provisory outcomes of our investigation has been to give some substance to the hypothesis that it is possible to defend the sort of perspective shift in political thinking which we mentioned as a general strategic aim. A shift that allows for a much more integrated articulation between political organization and political economy, and which we might now decompose into several connected theoretical movements:

Firstly, it motivates us to look for a formulation of both political practice and economical systems where the distinction between collective organization and social coordination problems becomes a matter of restrictions within our theory, rather than two separate domains without any conceptual means of articulation. Our strategy here was to recognize that both political action, political economy and coordination mechanism deal with *forms of organization*.

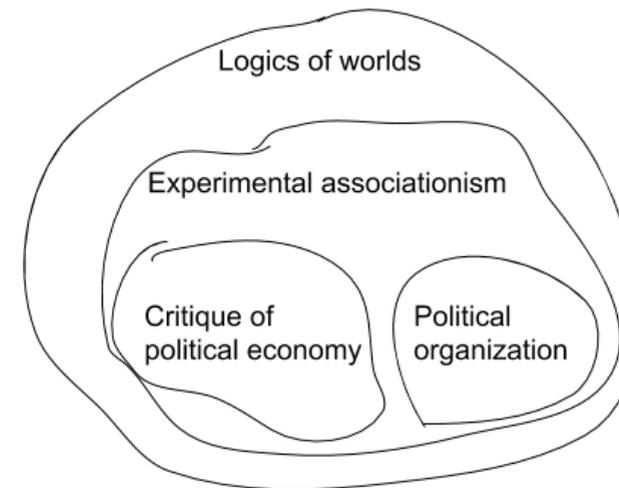
The insight that a theory of organization provides us with the appropriate perspective to render politics and economics commensurable has a long (and silent) history in Marxism: it dates back to Alexander Bogdanov and his "tektology", or science of organization, which sought to provide a general framework for thinking about nature, society and knowledge in terms of organized systems and their relations. In a way, we also start from his original axiom, presented in *Essays in Tektology*, namely, that the concept of "production" is a special case of the concept of organization.¹⁶

Secondly, adopting the "organizational point of view", as Bogdanov called it, implies accepting the task of reformulating *both* the theory

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¹⁶ Bogdanov 1980

of political action and the theory of economic systems within one homogeneous theoretical space and developing, within this framework, specific operators that allow us to pass from the general theory to specific social formations, as well as move between the global analysis of a society and the local practices of collective organization and social mediation — all the while accounting for how these different strata and domains relate to one another.

Though the aim of Alain Badiou's project far exceeds this already ambitious project, it is our belief that his *Logics of Worlds* offers the most consistent framework within which to construct our political theory. This does require us to take considerable care with the move from his general theory of worlds to a more restricted theory of social and political spaces, which must itself be "smaller" than his project, but still "bigger" than the theoretical space of Marx's critique of capitalist political economy:



However, a third conceptual movement is needed. After all, finding a conceptual perspective that allows for a homogeneous treatment of political action and political economy — through the concept of organization — and choosing an adequate framework to accommodate it — Badiou's philosophical use of the mathematical machinery of category theory — is not enough. We must be able to recompose what we already know of both integrated poles — politics and economy — within this new theoretical space. This implies finding a new conceptual language which is expressive enough to give us the necessary predicates to describe economic categories such as price, value, labour, commodity and capital while also leaving room for the definition of tactical and strategic operators at stake in militant work, such as strikes, communes, cooperation, organizational design, etc. This is what the shift towards a *scalar* description and analysis allows us to do: not only is it perfectly cogent with Badiou's own project — arguably the most consistent attempt to think phenomenology in a scale-sensitive way — but it is also intimately linked to the problem of how to connect local and global

efforts, both in economic theory as well as in political practice.

To evaluate how transformative the turn to a "scalar" language for politics can be, we should consider that the history of socialism until now can be mostly divided in terms of two paradigms or fundamental metaphors. The "utopian socialism" of the seventeenth and eighteenth centuries thought itself first and foremost in *spatial* terms: it provided a moral condemnation of capitalism, which it countered with a communitarian practice that should lead us "outside" of capitalist relations. Later, in the nineteenth century, "scientific socialism" departed from the realization that there is no "outside" to the ever-expanding social structure of capitalism — and it shifted its fundamental metaphor to a *temporal* one. Instead of a moral critique, based on our immediate perception of the market and its effects, this new program offered us a "scientific" view of capitalist social relations — which makes sense, since it was no longer a matter of describing specific relations in a given place, but the structure of an underlying logic or system that was itself inaccessible to us individually. Not only was this new analysis of capitalism based on the way labour time is measured and stolen in the process of valorization, but this temporal regime was also countered with by a temporal and historical rift, a revolution, which should discern a "before" and an "after" — just as utopian socialism distinguished between an "inside" and an "outside" — leading not to a new space, but to a whole new economy of time, called communism.

As previously stated, our own project, however, seeks to deploy a third fundamental metaphor: neither spatial nor temporal, our project privileges the scalar distinction between large and small, between the increasingly fragmented and incommensurate shards of social space and the different strategies that might allow us to create a common global social form. Communism, here, is neither a community "outside" of market relations, nor a future economic system that comes "after" capitalism, but a set of theoretical and practical tools for the construction of common spaces out of the multi-dimensional fragments of social reality that can be glued together in different and non-trivial ways. However, so much of our political vocabulary, political tools and means to assess victory and failure are deeply indebted to these two previous metaphors — which means that a lot of work will have to go into rethinking political practices from this new standpoint.

Finally, the recasting of political economy and political practice in terms of organizational spaces, the investigation of philosophical and formal means to positively construct a theoretical framework capable of accommodating this organizational perspective, and a recomposition of well-established results of Marxist critique and communist practice through a new political grammar — here, shaped by problems of scale — serves the ultimate objective of enriching our capacity for political action. If our research departs from the political experience of the Circle of Studies of Idea and Ideology, it seeks to return to the political sphere,

where its true merits and shortcomings can truly be evaluated.

This implies that that our research project must be able to not only remain open to the interlocution with other political thinkers and militants, but also that we devise actual experiments — in the very singular sense the term acquires within this framework — that are informed by this new conceptual perspective. This aspect of the research is not as far fetched as it seems, since this investigation remains tied, in part, to CSII, where new subgroups and projects are constantly being contemplated and carried out. Still, it has become increasingly clear that, as argued in *The Mismeasure of Thought*, political experiments can only learn about aspects of social reality that are commensurate with their own complexity: some ideas and inventive hypotheses can only be put to the test through political movements that exceed the small scale of local collectives and party cells.

General problems for further research

Evidently, the four conceptual movements described above bring with them a series of new challenges and open threads in need of detailed development. Let us consider some of them.

Alain Badiou, his philosophy and its limitations

If Badiou is to offer us a general interpretative framework within which to construct our theory, it is important to understand if his own selection of certain fragments from topos theory are not imbued with philosophical and political prejudices that are incompatible with our own approach. For example, it is well known that, as an old maoist, Badiou thinks "the primacy of the political" in slightly different terms than us: rather than seek to recast political economic theory as a particular case of a general theory of political models and mappings, he tends to treat economy and its own problems as irrelevant for political action. Is this something that affects his theory of worlds or is it — against his own personal preferences — capable of helping us express an alternative approach to political work, where "organization" is not so tied to personal relations and can take up both characteristics we currently assign to capitalist social forms or still unknown forms?

This question requires not only to further investigate the formalism deployed by Badiou, but also to demonstrate that other consistent presentations of his system are possible, where his own emphasis on personal fidelity, eventual conversions and political autonomy can be downplayed without us also losing in the process all the virtues of his philosophical project¹⁷.

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17 A careful reassessment of Badiou's philosophy — with a focus on his deeply underappreciated *Logics of Worlds* — was carried out by the *Subset of Theoretical Practice*, a research group inside CSII. All meetings are available at: <https://stp.ideaandideology.com/>

Politics, formalism and the category theoretical point of view

Exploring the conceptual power of the formalism deployed in *Logics of Worlds* is not only an exegetical task. In fact, it sets us, at least on a first moment, in a collision course with a tradition of political thinking which has privileged other formal tools as means to work through problems of social organization, namely cybernetics and complex system theory. Besides the task of understanding category theory and what it can offer us, we must therefore also investigate if the gains from complex theory — which, as a restricted theory of local and global interactions, has found a central place in economic thinking today — can be maintained in this new framework, and if its own formal shortcomings can be recognized and overcome within our own approach.

Another crucial problem for us is that, as stated in our initial objectives, we are not looking for a scientific theory — our main motivation for this research is eminently political. This means that we are not interested in constructing a new language for political economy, one that merely describes our current world better than previous ones. Instead of looking for scientific *predictions* of economic quantities or social phenomena — the criteria of social theories looking to imitate the hard sciences — we believe that the true criteria for evaluating the validity of our theory is its capacity to pose questions that can only be answered by empirical experimentation through political practice. This implies that our formalism must also be amenable to corrections and to an interplay with an experimental apparatus that is singularly political — and not borrowed from the methods of physics, for example. However, we still lack a general theory of what it means to "experiment" — without which the idea of "political experiments" remains mostly metaphorical.

Finally, both the categorial treatment of social organization as well as our theory of political experiments cross at the point of a theory of measure and of metric spaces — that is, once given a certain space, how to construct an immanent mediation which allows us to extract information from it in a consistent way.

Marx, the critique of political and the theory of social formations

Though a lot of work has been accomplished in showing that there are important correlations between Marx's project and Badiou's system, most of our analyses have been focused on the first volume of *Capital*, which does not deal with Marx's own theory of how value is represented in capitalism — that is, his theory of "production prices", which brings into the picture the famous "transformation problem". This famous issue, which deals with the relation between value and price structures, is a privileged point of enquiry for us, as our conceptual language should allow us to reformulate this polemical point in a new way.

Furthermore, there is a long tradition of thinkers who have tried to formalize Marx's critique of political economy with different

mathematical tools — especially linear algebra and, more recently, dynamic systems analysis. This tradition is mostly concerned with the economic soundness of Marx's project and with demonstrating the consistency of the labour theory of value. However, this is not our purpose — in fact, our theory of social organization should allow for the conceptualization of social systems where value is not measured in accordance to any one single fundamental determinant — there is still a lot of work to be done in understanding the relation between this project and our own.

Another line of enquiry connected to Marxism concerns the issue of world history and of the singularity of social worlds. Even though we privilege a scalar account of social spaces, we still need conceptual resources to think through historical change and with which to distinguish singular historical formations. Here we have been invested in the work of Kojin Karatani, whose theory of social formations as the articulation of different "modes of exchange" opens up a promising route to refine our account of social worlds, while also preserving several insights from Marxism, history, anthropology and social sciences.

The study of Karatani's alternative take on historical materialism is also connected to an investigation of the limitations of our current theoretical means. For example, an important development of our research has been a reassessment of Marxism and communist politics from the standpoint of the inherent duality between the analytic resources — dedicated to the understanding of capitalism — and the political ones — the concepts we use in our political practice. Following Karatani, Slavoj Žižek has called this the "parallax" of politics and economy in Marxism: the fact that an unconceptualized shift of perspective must take place when we move from the categories that help us analyze the capitalist social formation — value-form, money, circulation, etc — to the categories that are effective in political practice — agitation, propaganda, engagement, discipline and so on.

Finally, there is a very concrete motivation that, together with the work in CSII, underlies our current research project, namely, the recognition that the historical conditions which gave Marxism's previous incarnation its validity have shifted significantly. Here, a promising hypothesis we are pursuing is that of the "peripheralization" of the social world — in short, the thesis that the fringe-conditions of social spaces in the periphery of the advanced core of capitalism are now slowly expanding towards the centre, bringing with it its hybrid spaces of law and non-law, the social fractures that divide urban spaces between incommensurate social fragments, the ubiquity of social violence and forms of exploitation which do not rely on the previous organization of the labour force — "regressive" characteristics which nonetheless make a better fit for financial speculation and new forms of crisis-based profit making. This drastic increase in social heterogeneity — accompanied by a similar increase in social complexity — presents a fatal blow to any theory which seeks to provide, in one consistent expression, the general

law of social cohesion of capitalist reality — a predicament which, for Fredric Jameson, underlies our current crisis of a communist cognitive mapping of the world.

The hypothesis of the peripheralization of the world does not only offer us a consistent account of the social transformations that led to the saturation of our previous theoretical tools, but it also gives us an account of the context that pushed us to develop a laboratory for organizational practices that seeks to rethink how collective organization might give us new and valuable insight into our social totality — the Circle of Studies of Idea and Ideology. To find a theory that answers to the demands of this experimental collective is also a starting point to conceive of a theory that answers to some of the larger demands of our times.

Most recent developments

During the last few months, a larger research group has formed around this project, proposing regular meetings and discussions around specific components of this "bigger picture"¹⁸. We offer here a series of brief summaries of these complementary lines of enquiry, still under investigation.

The transformation problem and the representation of capital¹⁹

A particularly interesting application of our general approach to economics is the possibility of considering Marx's four different definitions of price in *Capital* as four delimited ways of organizing capitalist sociability. What does that mean? We can say that Marx uses the same "algorithm", the same three-step script in each definition of price, but he considers different aspects of capital organization each time – incommensurable aspects among themselves, such as the production of surplus through absolute surplus and relative surplus in a capital singularly considered and the appropriation of surplus through the equalization of the rates of profit of the totality of capital.

The structure that Marx presents in the initial chapter on commodities – the first definition of price – takes as its starting point what is most elementary for Political Economy: exchange value, the quantitative relation between two different commodities. Two qualitatively different things can only be related if they are expressions of a common substance. Putting aside the use value of commodities, that is, the human needs that they satisfy regardless of the way they are

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¹⁸ We dedicated two meetings to the discussion of the project as a whole. The first is available here: https://www.youtube.com/watch?v=PYm34ZWZ2k4&list=PL8OmIRZsRoAJTkiC16JB0xe4_fXd8aio8&index=2 — and the second, more recent, here: https://www.youtube.com/watch?v=NAasXNXZyM0&list=PL8OmIRZsRoAJTkiC16JB0xe4_fXd8aio8&index=8

¹⁹ Meeting recording available at: https://www.youtube.com/watch?v=3pu06Ny97ys&list=PL8OmIRZsRoAJTkiC16JB0xe4_fXd8aio8&index=1&t=170s

produced, it is only the property of being products of labor that remains in common between them. Here we have the second step of the script: two commodities can only be opposed in exchange because they can be reduced to different amounts of abstract labor, or, as Marx says, productive human expenditure of brain, muscles, nerves, hands. But it is not enough to say that abstract labor creates value. For Marx, the value of a commodity is determined by the average labor time required for its production in the sector to which it is linked (the average is an element that reappears at various scales). From the immediate form, the exchange value, therefore, one passes to the common substance between two commodities, the value. The last step, the one that Political Economy did not go through, is to return to exchange value no longer as a purely causal quantitative relation, but as a form of expression of value. It is for not taking that step that Political Economy behaves as a knowledge that is external to its object, incapable of unfolding more complex determinations from the simplest ones. In note 32 of the first chapter, Marx explains that his difference with Political Economy consists in the fact that Adam Smith and David Ricardo did not go back to exchange value as a form of expression of value.

It is one of the chief failings of classical economy that it has never succeeded, by means of its analysis of commodities, and, in particular, of their value, in discovering that form under which value becomes exchange value. Even Adam Smith and Ricardo, the best representatives of the school, treat the form of value as a thing of no importance, as having no connection with the inherent nature of commodities. The reason for this is not solely because their attention is entirely absorbed in the analysis of the magnitude of value. It lies deeper. The value form of the product of labour is not only the most abstract, but is also the most universal form, taken by the product in bourgeois production, and stamps that production as a particular species of social production, and thereby gives it its special historical character. If then we treat this mode of production as one eternally fixed by Nature for every state of society, we necessarily overlook that which is the *differentia specifica* of the value form, and consequently of the commodity form, and of its further developments, money form, capital form, etc.

The structure of this script – starting from an immediate form, elaborating an abstraction from it and returning to the immediate form as concrete in thought, or, as a necessary form of a given content – is what repeats itself in the definitions of cost price, price of production and market price. In these last three definitions of price from Book III of *Capital*, the relation between capital and labor is no longer internalized in the relation of a singular capital with a group of cooperating workers, but in the reciprocal relation of capital in competition. What we see in competition is that capital impose on each other the internal determinations of capital, such as the increase of productivity, for example. This means that none of the categories from the internal sphere of capital becomes effective except through the reciprocal action of

capital. It is important to note that the content of each of the steps in the script proposed by Marx in the chapter of the Commodities changes when we consider the three definitions of price in Book III of Capital: the immediate form is the surplus that relates itself to the totality of the capital employed, the rate of profit; the abstraction is the global surplus value produced by all capital; and the return to the rate of profit as concrete in thought means that the profit that the capitalist appropriates is a share of this mass of global surplus value.

Thinking about Marx's definitions of price as a scale problem could allow us to consider the possibility of a future point (more in terms of geometric perspective than in terms of time) capable of circumscribing the market, the division of labor and the form of distribution of surplus as forms of organization that, despite their breadth and complexity, can be localized and contingent.

Compositionality and generative effects²⁰

A central problem in the scalar approach to organization is that of passing between scales, namely, achieving a desirable or coherent compositionality of systems. Certain properties of a system may not hold as we pass from local to global, creating effects whose causes are occluded. A generative effect, as per the work of Elie Adam,²¹ is a certain "loss of exactness" in the mapping between different systems, or between a system and its observables. Adam shows how these effects can be characterized using tools from modern mathematics and systems theory. For us, this is a crucial step in conceptualizing the disjunction between political action and economic complexity. How might decentralized organizations coordinate to achieve global objectives without solely relying on the price mechanism? How do we formulate connections between localized interventions and a global economy? What are the modes of investigating such connections? These are the sorts of questions that a theory of generative effects can be brought to bear on.

The logics of historical worlds²²

One of the main impediments on the way of recasting Marx's conceptual framework in a richer theoretical space, as mentioned in our general overview, concerns the necessary fine tuning both of the philosophical and formal machinery brought from Badiou's philosophy and category theory, on the one hand, and from Marx's analysis of capitalism, on the other,

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20 Meeting recording available at: https://www.youtube.com/watch?v=7FJZuR3dHX0&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=3

21 Adam 2017

22 Meeting recording available at: https://www.youtube.com/watch?v=MMo12Rox0Cg&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=4&t=17s

so that the former might be adequately restricted while still providing a broader framework for the consideration of value, capital and economic relations, one that opens space for a more structural and compatible outlook on collective organization and action. A first step in this direction was taken through an investigation of Kojin Karatani's "transcendental" analysis of social formations in *The Structure of World History*.²³

Building upon the results of a reading group centered around his work²⁴, we investigated the possibility of using Karatani's theory of the four modes of exchange as a means to specify the formal make-up of historical social formations — a way to restrict Badiou's theory of the transcendental structure of worlds in general to model exclusively the multilayered structure of the capitalist world, itself dominated by commodity exchange, but also dependent on State, communal and National dimensions of sociality. To investigate this possible theoretical bridge, we proposed a new reading of Karatani's work, centered on the correlation between spatial and logical dimensions of exchange structures, as well as on the interplay between scalar and informational thresholds in the consistency of social formations.

This investigation led to interesting results, two of which are worth mentioning, since they exceed the reach of Karatani's own work. Firstly, the hypothesis that the field of multilayer network theory can function as a formal restriction to the complete Heyting algebras studies by Badiou, allowing us to code the different modes of exchange as transcendental *subsystems* dominated by one of them. Secondly, the critical engagement with Karatani's theory of free association led to a fruitful discussion around the distinction between *principal* and *non-principal ultrafilters* in set theory as a way to work through the distinction between the money-form and other possible economic systems that do not rely on a single exclusive commodity as means of circulation.

Causal powers, consciousness and scale²⁵

In the field of neuroscience, theories of consciousness face the challenge of explaining how subjective experience can appear out of brain matter and neural mechanisms. Incidentally or not, Integrated Information Theory (IIT)²⁶ – currently one of the main candidate theories – attempts to tackle this problem through a mathematical account formalizing the relations between notions like organization, causal powers, information,

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23 Karatani 2014

24 All meetings from the Karatani reading group are available here: <https://www.karatani.org/>

25 Meeting recordings are available here — part one: https://www.youtube.com/watch?v=iUFeegU7Jhk&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=5&t=7s — and part two: https://www.youtube.com/watch?v=q7365bwlM7c&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=6

26 An overview of the recent formulation of IIT 3.0 can be found at: <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1003588>

scales and phenomenology. One can't help wondering whether this theory could also speak to the problems posed by our research project – not of neuronal, but of political organization. At its center, IIT posits an isomorphism between subjective experience and the structure of integrated information specified by a system's internal organization and current state. In order to arrive at this statement, it argues that it is by *unfolding* the set of causal powers – understood as cause-effect constraints quantified by probability distributions over its state space – of a system's internal mechanisms, that one can understand, in an immanent way, its relation to subjective phenomenology.

The analysis of causal constraints of an integrated system, according to IIT, reveals an intrinsic space of informational relations whose compositional structure constitutes a space of phenomenological appearance. In other words, it is the inner self-consistency produced by an organized system which *makes it* phenomenologically self-appear. An intriguing hypothesis then, is whether we can consider IIT as a restriction of Badiou's Logics of Worlds, where appearance is also the result of the inner consistency of a transcendently organized space, supplement it with a calculus of causal powers in a way that it can productively inform our developing framework of political organization and political economy – while being mindful of unwarrantedly contrabanding scientific metaphors and straightjackets to it. The wager is that endowing a world with causal powers and informational consistencies can give us tools to think about problems of scale that appear throughout social systems and also grasp the double perspective of political/economical binomial through the causal power/information duality. Moreover, this might help us come closer to the reality of political organization, where an assessment of the dispositional profile of an organization (what it can do under certain situations) in addition to a descriptive account of its internal norms (which rules govern its functioning), is paramount to an evaluation of its political *effectiveness*.

An example of the potential value of this approximation, is the recent work on causal emergence developed by Erik Hoel²⁷ based on the IIT framework, which shows that against the presuppositions of physical reductionism but also of political localism, the “macro can beat the micro”, and that certain systems can process information more effectively at higher and more abstract scales of organization than finer ones even if this means reducing the state space of a system, i.e. collapsing the complexity of a local spatiotemporal reality into a coarse-grained version of it. Indeed, at the expense of the reduced resolution of social space, the social systems can get rid of its internal uncertainty and noise, thus increasing its overall capacity for effective information being processed at a higher scale. With this, the passage from smaller

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27 Hoel 2016

to bigger scale stops being one of necessary loss and estrangement, but becomes a matter of designing the right coarse-graining function that operates the relevant change in scale: choosing what one wants to *lose*, by collapsing fine grained social descriptions onto a lower dimensional space, in order to *gain* a certain type of informational effectiveness. Here, the market price system may appear as one of many solutions, in which local spatiotemporal knowledge of the “man on the spot” is collapsed in a price signal reflecting changes in supply and demand that is globally and effectively available to the system.

A theory capable of thinking the passage from local political organization to global political economy, must deal not only with the scalar problem but with the discontinuous shift from politics to economy. In our theoretical space, social organization should be differentially seen depending on whether we use political or economic lenses to observe it. If from an economic standpoint, social organization can be seen as an information system for communicating local knowledge and coordinating resources through a principle of exchange of equivalents, where information flows through a channel as Shannon's information theory of communication would want, from a political standpoint, the sites which were symmetric according to equivalence exchange give place to the asymmetry of power relations, where sites relate to each other insofar as they differentially constrain each other's state space (e.g. of actions, beliefs and resources); power is not only a matter of actually acting (e.g. controlling the flow of resources and information through plunder and redistribution), but also the potential to act, imposing causal constraints of domination (restriction of action space) and protection (causally preempting the influence of third ones to dominate). Conceptually, we are dealing with the very definition of *causal information* formulated by IIT and which can be seen as a reinterpretation of Shannon's information under the light of the development of causal inference (Judea Pearl). At the juncture of political economy, causality may meet information again.

*Space and Logic*²⁸

Badiou's objective phenomenology gives an account of how the “space of appearing” is governed by a logic that nonetheless is grounded to a material base. Already there is an interplay between space and logic that governs how sufficiently expressive worlds function. This justifies the view that the logic of a space is completely immanent to the space itself and that it can be recovered from the gluing and compatibility conditions of its subobjects.

This brings up the question: how do we leverage this connection to interpret truth on a phenomenological space? Badiou's answer

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28 Meeting recordings can be found at: https://www.youtube.com/watch?v=NpB8lsmNIA&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=7 — for part one, and: https://www.youtube.com/watch?v=NtKTuqsPE7Q&list=PL8OmIRZsRoAJTkiCl6JB0xe4_fXd8aio8&index=9 — for part two.

in *L'immanence des Vérités*²⁹ is through non-principal ultrafilters. An ultrafilter is in a sense a “maximally consistent set of propositions”-- a choice that decides the truth of every statement given in such a way that all choices are mutually compatible and non-contradictory. It forces a space to obey the law of the excluded middle. But ultrafilters come in two distinct varieties: principle and non-principal. Principal ultrafilters are generated by a decision at a point, always taking the form of “all sets containing this point.” They are dictatorial in that everything is filtered through a singularity, the primary example of this being Capital. Non-principal ultrafilters though, whose very existence require a weak form of the axiom of choice, derive their power from an infinite covering that is not reducible to any finite choice.

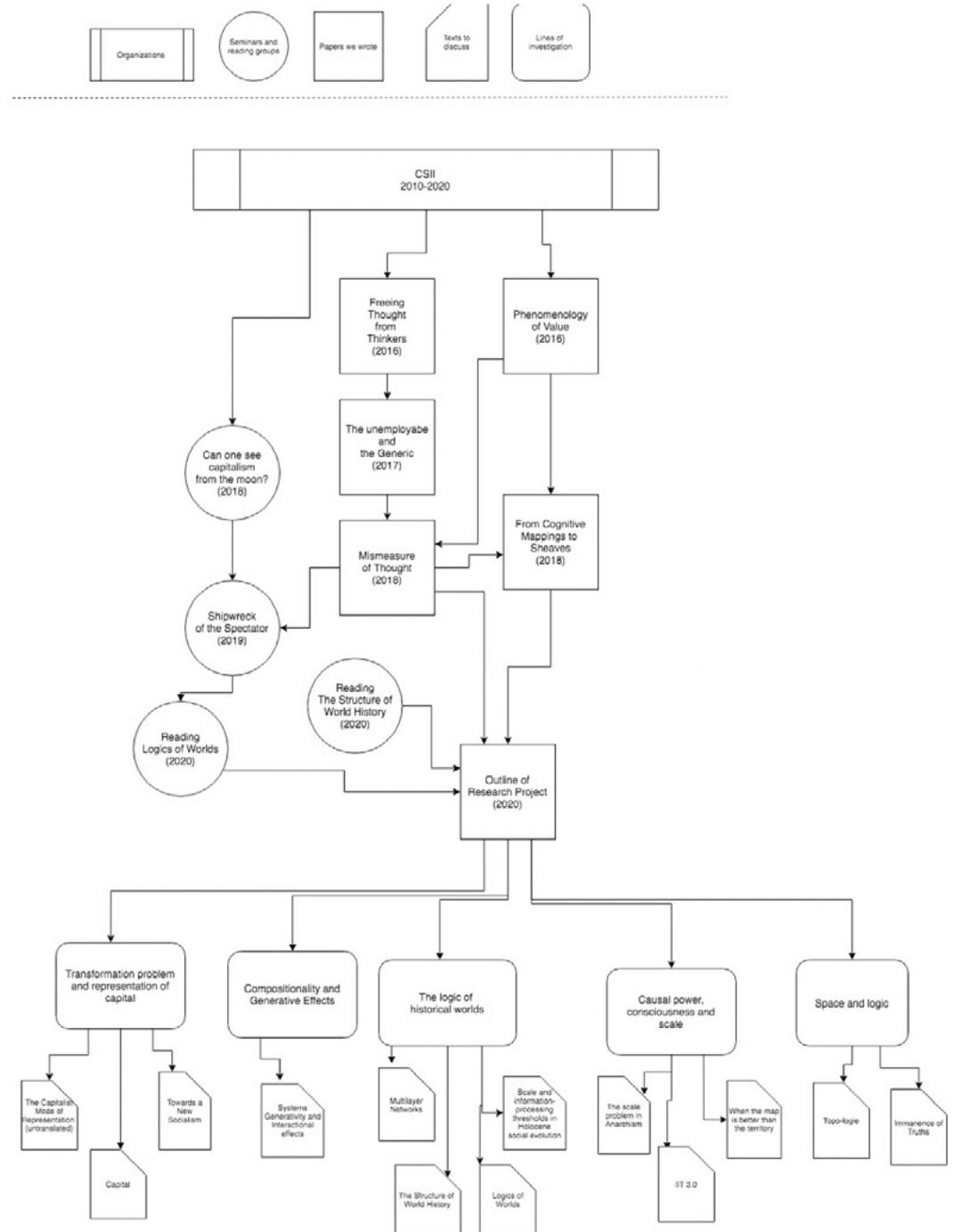
So non-principal ultrafilters represent an infinite break with the state of things as they are-- an infinite singularity if you will, but what does this have to do with our axiomatic approach? Badiou's claim that the construction of a non-principal ultrafilter is the goal of any emancipatory politics is all well and good, but it does not give us the tools to construct such a thing, only that if we could base our politics in it then it would transcend the power of the One. To remedy this, we turn our attention to model theoretic forcing where the non-principal ultrafilter is generated by an infinite set of axioms whose intersection is nil and will thus naturally extend to a non-principal ultrafilter. By gluing models together indexed on the base space along the ultrafilter, Łos's Theorem³⁰ gives a new model that forces those axioms to be true.

This is of interest to us since it gives an algorithm to build new models out of old ones in such a way that certain axioms are true. It gives us the tools to, for example, think of models of capitalism as a special case of a larger space of modes of exchange and value-forms. The use of this line of inquiry is not the mathematics itself, but how it can open horizons to shift our perspective from a critical to an axiomatic one. Non-principal ultrafilters give the framework for the thought of an infinite singularity, but it is in mass politics that this thought can enter the real.

29 A translation of the relevant chapter into english can be found at: <https://stp.ideaandideology.com/notes/the-infinite-by-immanent-dimensioning-of-parts-excerpt-from-immanence-of-truths>

30 A clear treatment of ultrafilters over spaces of propositions and Łos's Theorem with a philosophical inclination can be found at: <http://www.u.arizona.edu/~jasonturner/storage/Ultrafilters-Web.pdf>

Visual overview



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