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Ouroboros, Part One: Systems Theory and Marx

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ABSTRACT: In this article—the first of two—I reconsider Marx's dialectical method through the problem of systems and circularity, intervening in a twentieth-century impasse between technocratic systems theory and anti-systemic fragmentation. As I'll argue, the stakes remain pertinent. Attempts to theorize social systems have tended to oscillate between closed, equilibrium-oriented models that treat society as a self-regulating whole open to expert management and relativist or anti-totalizing approaches that dissolve structure into local interactions, contingency, or plural standpoints. Despite their opposition, both neutralize the problem of historical transformation by foreclosing a concept of *totality* as internally contradictory. Against a theory of static structure or linear causality, I reconstruct Marx's critique of political economy as a science of dynamic social forms. Following Marx's movement from the *abstract* to the *concrete*, I argue that capitalism is a historically-specific, self-reproducing totality whose coherence depends on antagonism rather than equilibrium. Circularity here isn't mere closure but the medium through which contradictions are generated, displaced, and intensified. The wage-form is the decisive hinge: it unifies circulation and production while inverting *appearance* and *reality*—equality and exploitation—thereby producing the fetishized forms through which capital appears self-moving. By tracing these inversions, I show how Marx turns circular feedback from a figure of stasis into a lever of *critique* and *practice*. The result is a Marxist conception of totality, and a materialist conception of history, in which social forms persist only by being reproduced through conflictual transformation. Part One establishes this epistemology of dynamic form; Part Two shows how the same oscillation reappears within Western Marxism—partly as a symptom of the same historical pressures that also shaped cybernetics—and argues that dialectical materialism provides resources for overcoming these impasses while further developing Marx's metamorphology of social forms.

KEYWORDS: Marx, totality, systems theory, materialist dialectics, social form, circularity, wage-form, cybernetics, metamorphology

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The Ouroboros is a creature of myth. It's a serpent that eats its own tail—an ancient symbol of circularity, self-sufficiency, and the unity of opposites. It represents the collapse of beginning and end into a single motion of self-consumption, a process that sustains itself by consuming itself. In philosophical terms, the Ouroboros expresses a dialectic without transcendence: the negation of the external, the conversion of difference into identity. It appears in alchemical, mystical, and modern materialist contexts as a figure for *totality*, but its meaning depends on whether that totality is living or dead. As a living totality, it suggests immanent transformation—becoming through internal contradiction. As a dead one, it signifies self-enclosure, the stasis of a system that mistakes reiteration for renewal. Capitalist circulation, for instance, can be seen as an Ouroboric process: it appears self-generating, but it devours the social and natural conditions that make its movement possible. Thus, the Ouroboros dramatizes the ambiguous logic of systems that sustain themselves by consuming their own ground, oscillating between dialectical renewal and nihilistic recursion. This ambiguity—the difference between a living dialectic and a dead circuit—provides the vantage from which Marx's own method can be reread as a *science of form* rather than a model of equilibrated stasis. A driving question remains: how feedback relates to shared intentions and democratic planning in order to produce outcomes that people want.

Throughout the twentieth century—whether in the natural sciences, systems theory, or Marxist debate—two opposing models emerged: on one side, a universalizing totalization that figured the whole as perfectly knowable and manageable; on the other, a counter-reaction that exalted the singular, the local, and the aleatory. Early system-builders like Bogdanov and the mid-century cyberneticians conceived of social systems as self-regulating, engineerable wholes, downplaying conflict in favor of planned coordination. In response, later theorists made a virtue of fragmentation, individual agency, or rupture. That is, where the closed totality that denied agency prevailed, pure-hearted innovative individualism arose to reclaim agency and the dignity of the overlooked, unconsidered, and oppressed.[1] As Mikhail Lifshitz puts it, "[O]rdinary bourgeois consciousness constantly vacillates between two poles of modern mythology, long since expressed by its rhapsodists in the form of 'Apollonian' and 'Dionysian' principles, principles of organisation and chaos,

1. The tension between order and justice is a real one, with high stakes. However, if it were as easy as either planning our way to utopia or merely allowing everyone to do whatever they want, then no problems would remain.

neat order and spontaneity" (Lifshitz 2018, 58). The former treats the whole as given, discounting emergence from complex relations—especially the contingency of parts' development. The latter falls short by failing to explain how the part comes to be as it is, why it does what it does, and how it persists in the face of its environment. Both camps—of technocratic coherence and anti-structural dissolution—sought to address the apparent problem of social reproduction's circularity. However, each attempt failed to grasp the contradictory dynamism that Marx theorized at the core of capitalist totality. Without a way to hold structure and struggle together, social theory oscillates between fatalism and chaos. In each case, what's foreclosed is how the social form, as a whole, can change and adapt over time. The former presumes that all changes to the "system" are mere internal modifications, while the latter fails to explain how change can be sustained and scaled into structural transformation. Neither provides a path to intentional, meaningful change.

To be clear, some recent discussions of complex and ecological systems have begun to approximate the level of explanatory power that Marx's dialectical account already achieved—capturing, in partial or formalized ways, the dynamic, historical character of systemic reproduction and transformation. Such authors as Yuk Hui, Ilya Prigogine and Isabelle Stengers, Stuart Kauffman, and Brian Goodwin converge on problems Marx already formulated as the dialectics of contradiction and reproduction, but these authors often abstract them from the historical antagonisms that make systemic transformation possible.[2] These internal critiques have, so far, done nothing to resolve the broader epistemological impasse between totalization and fragmentation that shaped twentieth-century social thought. Nonetheless, I focus on the twentieth-century framing of the problem, leaving aside a fuller account of Marx's relation to contemporary systems and complexity theory. While the scientific frameworks themselves may now seem dated, the stakes are symptomatic. That is, the twin tendencies of the twentieth century still predominate in social and cultural thought, so political possibilities remain largely determined by the conflict between top-down totalization and anti-totalization.

2. Yuk Hui. 2019. *Recursivity and Contingency*. London: Rowman & Littlefield; Prigogine, Ilya and Isabelle Stengers. 1984. *Order Out of Chaos: Man's New Dialogue with Nature*. London: Heinemann; Kauffman, Stuart. 1995. *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity*. New York: Oxford University Press; and Goodwin, Brian. 1994. *How the Leopard Changed Its Spots: The Evolution of Complexity*. London: Weidenfeld & Nicolson.

This is the first of two articles. In this one, I argue that Marx's dialectical method resolves a core epistemological impasse: how to think a self-reproducing social totality without treating it as either a closed, equilibrium system or a fragmented field without structure. By examining Marx's analysis of capitalism as a science of dynamic form, I show how his method conceptualizes a totality that's internally contradictory, self-reproducing, and historically dynamic. First, though, I trace how both technocratic totalization and anti-totalizing fragmentation fail, arguing that Marx's dialectical approach outstrips both. It anticipates many insights of later systems theory and complexity science but surpasses their explanatory power partly by grounding them in a specific, historical totality—*capitalism*—riven by class antagonism. In so doing, Marx's method transforms circularity, itself, into *contradiction in motion*. Marx explains how different aspects of capitalist social forms relate to one another, suggesting that feedback between them could be differently mobilized in order to achieve liberation and justice. Through ideas of *fragmentation*, *practice*, and *multitemporality*, Marx conceives of a living totality that reproduces and undoes itself. The argument that follows reconstructs this epistemology of form as Marx's distinctive science of forms.

Systems Science and Its Desystematization

For better and for worse, Alexander Bogdanov was ahead of his time. In *Tektology* (Bogdanov 1984), he attempted to conceive of a cross-domain grammar of organization—biological, technical, social—while remaining self-consciously Marxist. In hindsight, Bogdanov's work was resonant with classical systems theory (developed independently and in a distinct context)—especially in his notion of the "organizational dialectic" (Bogdanov 1984). He thus opened a research program that later systems theorists and cyberneticians would, in part, retrace; real debts are owed. Still, the very universalizing impulse that makes his work visionary also primes the technocratic logic analyzed below. In this section, I assess the two tendencies—over-totalization and desystematizing fragmentation—both in the context of important scientific frameworks and of those frameworks' supposed "critiques." I use "classical systems theory," regardless of precise chronology, to denote the equilibrium-focused, conflict-erasing models that sought to treat society as a functionally integrated whole—one that's determined, in a sense, from above, basically predicated on systematic stasis.

The first model presents society as a circular, self-regulating system that can be engineered into harmony through technical expertise. Early

systems thinkers, like Bogdanov, tackle the problem of social coordination by replacing class struggle with scientific organization. Bogdanov imagines a universal "science of organization" that would unite humanity into a frictionless collective, effectively solving conflict as if it were a mere engineering hurdle (Bogdanov 1984). Who needs class struggle? Taken as a general model, this technocratic vision collapses under its own logic: by assuming that antagonism can be designed away, adherents to this model lose sight of conflict's generative role in social development. Bogdanov even imagines industrial "self-regulating mechanisms," in which workers function as their "living control" (Ibid., 32–3). In this vision, labor would become "more and more homogeneous," while the distinct tasks of production would increasingly be taken over by machines, pushing the system toward the coordinated "world union" that he anticipated (Ibid., 33). Bogdanov thus drifts from Marx's focus on conflict toward a quasi-Hegelian faith in inevitable integration—effectively an "end of history" achieved by expert planning.

Norbert Wiener (1985), founding theorist of cybernetics, similarly casts society as an information-feedback machine to be steered by experts. By this view, crises and social upheavals become simple signal "errors" for technocrats to correct, sidestepping the messy question of power. Cyberneticians even attempted to realize this vision in practice. For instance, in his Cybersyn project in 1970s Chile, Stafford Beer tried to run an entire economy via real-time feedback loops, treating political decisions as technical inputs (Beer 1972; Medina 2011). While Wiener warns against authoritarian misuse, his maxim—"information is information, not matter or energy"—abstracts communication from social relations and invites the fantasy that signals alone could steer a society (Wiener 1985, 132). The broader planning vogue—input–output equilibrium models and national cybernetics schemes—treated "optimal" order as a solvable technical problem, leaving aside the question of who sets the inputs, and in whose interest (Leontief 1941; Medina 2011).

Declaring society "operationally closed" and wholly self-referential, Niklas Luhmann (1995) pushes technocratic circularity to its extreme.[3] Confronting the problem of agential unpredictability, Luhmann's theory simply eliminates agency: for him, every action is just the system observing and adjusting itself, with no external influence possible. This yields a totalizing loop outside of which no one can stand (Luhmann 1992, 100)—neither a planner nor a revolutionary class. What began as

3. Luhmann here adapts Maturana and Varela's (1980) concept of "operational closure."

a vision of expert steering thus ends in a chilling inversion: a social machine with no point of conscious intervention at all. In Luhmann's own terms, "there are no exempt positions" (Knodt 1995, xxxiii):[4] any perturbation is processed as the system's event. "Structural coupling" thus permits "openness" while forbidding purposive transformation (Luhmann 1995).[5] The promise of this model is a perfectly ordered social machine; the failure is that it renders any meaningful human agency or resistance null and void. By treating conflict as a solvable bug or by denying an outside point of leverage altogether, technocratic circularity ends up naturalizing the status quo. It shows a society smoothly circling in on itself, but only by banishing the very forces that drive historical change.

Opposed to this stands a second model, one that flattens all hierarchies and perspectives in reaction to systemic thinking—one that attempts to undermine the very coherence, or systematicity, that systems theorists try to explain. In other words, the second model is one that desystematizes. Through relativist flattening, some thinkers put the observer back into the system, hoping to resolve the problem of objectivity and control by embracing complexity and partial viewpoints. Gregory Bateson (2000), for instance, includes the observer in the feedback loop to show that no system can escape self-contradiction.[6] He demonstrates that communication systems produce inherent paradoxes (famously, the "double bind") that first-order control can't fix, highlighting an internal limit to any smooth equilibrium (Bateson 2000, 246). Bateson's insight was that, by acknowledging reflexivity, one uncovers contradictions within the system, itself—a clear rebuke to technocratic confidence in perfect order. However, because he presents these contradictions as timeless quirks of mind and communication, they appear as inexplicable phantasms—the proverbial ghost in the machine. He exposes the ineradicable contradiction within feedback, revealing cracks in the closed system's façade, but he does so as a timeless epistemic paradox rather than as a conflict with a history. The result is that Bateson reveals the

4. In her foreword to *Social Systems*, Eva Knodt translates another of Luhmann's works: "Wer immer beobachtet, nimmt daran teil—oder er beobachtet nicht. Es gibt keine exempten Positionen" (Luhmann 1992, 86).

5. *Structural coupling* is another concept that Luhmann (1995) borrows from Maturana (1980).

6. To be clear, this insight had already been established in various ways. For instance, in Kurt Gödel's *incompleteness theorems* (1967), Alan Turing's *halting problem* (1936), or even in Jacques Lacan's discussion of the *lack* at the heart of any human language (1977) or Derrida's concept of *différance* (1976).

fact of systemic contradiction but offers no account of its cause, mystifying origins and impeding decision-making.

Subsequent scholars in science studies took the flattening move further, explicitly rejecting any "God's-eye" vantage point on society (Haraway 1991). Donna Haraway (1991) famously criticizes the technocratic ideal of total knowledge, arguing for "situated knowledges" instead—truth from a partial, embodied perspective rather than a view from nowhere. She seeks to solve the problem of authoritative objectivity by insisting that all knowing is local and accountable. In so doing, Haraway squarely attacks the old totalizing stance, but her alternative harbors its own impasse. By valorizing only fragmented, situated perspectives and shunning any overarching standpoint, her approach can't explain how those fragments add up. She tells us that everyone *sees something from somewhere* but never asks how these somewheres intersect or how a collective understanding of the whole might be achieved. The consequence of this failure is profound: without a way to link partial perspectives, any sense of a structured social totality drops out of sight. Haraway isn't totally unaware of the problem, but she approaches it by a sleight of hand. She frames the problem by the juxtaposition of what she calls two "god-tricks" (Haraway 1991, 191). If her solution is to argue that we always see something from somewhere, then the totalizer sees "everything from nowhere" and the relativist—"the perfect mirror twin of" the totalizer, Haraway informs us—sees nothing "from everywhere" (Haraway 1991, 189; 191). Is this right, though?

While Haraway conveniently avoids citing any particular relativist, canonical self-avowed relativists have never claimed to see *nothing*. Their point is always that all seeing is context-bound—*something from somewhere*—and that justification is internal to vocabularies, forms of life, paradigms, or interpretive practices.[7] As Thomas Kuhn insists, "There is […] no theory-independent way to reconstruct phrases like 'really there'; the notion of a match between the ontology of a theory and its 'real' counterpart in nature now seems to me illusive in principle" (Kuhn 1970, 206). By his relativism, he may declare the relationship between a claim and its reality "illusive," but he never denies that we see *something*. Similarly, Clifford Geertz observes that "what we call our data are really our own constructions of other people's construc-

7. From Protagoras to Sextus Empiricus to Michel de Montaigne to Paul Feyerabend to Richard Rorty, no one who would normally be called a "relativist" claims that we see nothing.

tions" (Geertz 1973, 9). Even if Geertz denies any necessary correspondence between claim and reality, his point concerns how we see. Far from claiming that we see *nothing*, his interest is in how we conceive of what we see.

Relativists deny an unmediated, "God's-eye" access to the world; they don't deny access altogether. Every relativist, then, makes a truth claim: the world really, truly, actually does work in a certain way. Each (for good reasons) takes for granted that we see something real, but always through historically-specific forms of life. Haraway's description of relativism as seeing *nothing from everywhere* is, therefore, a mischaracterization, and in her "situated knowledges" she simply reproduces the relativist position that she admonishes (1991).

The consequence is thus predictable: Haraway's account, like that of the relativist, strands us with a politics of fragments—richly situated pieces of truth that can't be marshaled to confront the structures that shape them. Her critique of relativism lands back on her own head. If the relativist sees nothing, it's because they fail to think through the very conditions by which they frame the world. That is, the relativist fails to account for how the frame *through* which they see the world necessarily relates *to* the world. To see the world through any frame whatsoever is to really *see something* definite, even if it's wise to pause and ask what it is we see and how. In this sense, Haraway commits the same error as the relativist.

Bruno Latour extends this flattening into a principle of ontology, denying any fundamental distinctions or levels in the social world. In response to the modern habit of splitting *Nature* from *Society* (and, by extension, micro from macro), Latour argues that everything consists of *hybrid* actors operating on a single plane (Latour 1992; Latour 2005). His objective is to solve the problem of arbitrary divides by showing that what we call "society" is nothing more (or less) than a vast web of human and nonhuman associations.

However, the supposed "cure" becomes its own disease. By abolishing any hierarchical or structural levels, Latour eliminates the very resources needed to account for large-scale patterns, enduring contradictions, or systemic domination. *Actor-network theory* (ANT) forbids appeal to any overarching structure or unifying logic; it can acknowledge only chains of associations. As Latour writes, "Scale is the actor's own achievement" (Latour 2005, 185). Everything must be kept "flat," and what look like structures are redescribed as nothing more than longer or more ramified chains of connection (Latour 2005). Power becomes a

matter of extension and reach rather than structural position or antagonism.

The result is predictable. Structural domination and social conflict become conceptually invisible, since anything that appears to persist across contexts is reclassified as another cluster of local interactions. Everything becomes "local at all points" (Latour 1992, 117); even inequality, which Latour concedes to be "rugged," must be treated only by tracing associations, never by invoking structural relations (Latour 2005, 63). ANT's practitioners can map elaborate trajectories of influence, but they can't explain why certain patterns hold, how contradictions shape action, or how structural phenomena bridge multiple systems. Explanation collapses into inventory. We receive exhaustive maps of what exists, but no account of why it persists or how it might be fundamentally transformed.

Now, we see the other side of the coin. Latour's actor-network empiricism is the inverted image of the renounced classical systems theory. Systems theorists such as Bogdanov, Wiener, and Luhmann imagined society as an integrated totality tending toward equilibrium—a self-regulating machine that effaced antagonism. Latour, by contrast, sees only hybrid multiplicity and effaces coherence. Each model absolutizes one pole of the dialectic: systems theory translates contradiction into control, while science studies dissolves it into dispersion. In Latour's hands, Haraway's epistemological relativism—intended as a limit on knowledge—becomes a *metaphysics* of flattening: the viewpoint that began as "situated knowledge" becomes an ontology that denies any mediating or hierarchical structure whatsoever.[8] Ouroboros might hiss, except that Ouroboros is already gagging on its own ass.

Each of these two models of systems (or even anti-systems-as-systems) thinking offers an alluring solution and runs aground on its own contradiction. The hyper-systematic technocratic model promises coherence but neutralizes the agency and conflict that drive social dynamics. The desystematizing relativist model usefully emphasizes complexity and difference. However, this model can't provide a meaningful account of the whole or how that whole forms; it also can't account for how different macro-systems relate to one another. The first sees too much order—smoothing over antagonism in the name of stability; the second sees only flux—dissolving structure in the name of inclusivity. Each, in

8. Ray Brassier writes, "For just as epistemology without metaphysics is empty, metaphysics without epistemology is blind" (Brassier 2011, 49). Such a flattening of ontology deprives knowledge of any purchase—phenomenological or otherwise.

its way, disarms critique, practice, and politics: the technocratic vision naturalizes domination as a feature of a well-oiled machine, while the relativist vision diffuses domination into innumerable micro-events, making it appear futile to challenge.

The stakes of the impasse are high. One might object that contemporary work in complex adaptive systems, ecology, or related sciences no longer falls so neatly into the dichotomy I've described. That may be true enough, but the point here isn't to adjudicate the present state of these fields. Instead, it's to clarify the social force of the arguments inherited from the twentieth-century false binary between overgrown structure and structure's absence. As I hope to have made clear, the problem is that, on the one hand, the first way of thinking determines a technocratic social attitude by which minor reforms within an unjust system paper over real social problems experienced especially by the struggling, oppressed classes. This is due, in no small part, to the lack of feedback's influence on the direction of society. The second way of thinking, on the other hand, retreats from any attempt at coherence. Where the second way might have an advantage with respect to locating injustices, it seriously challenges any attempt to form a resistance or an alternative in order to change society and improve conditions for everyone.

As these models have permeated social and cultural discourses, their effects have multiplied: they frame the terms through which theorists and policymakers imagine change. When we can't conceptually hold together structure and struggle—a coherent social order that is nonetheless driven by conflict—we lose the capacity to understand how systemic transformation occurs or how it could occur. One side gives us a world of self-correcting circuits with no lever for conscious action; the other offers endless fragmentation with no purchase on structure. Without a framework capable of keeping totality and contradiction in view at once, we oscillate between fatalism and disintegration, either treating the status quo as an immutable machine or resigning ourselves to cataloguing its wreckage.[9] This unresolved tension—how to think totality and con-

9. On this basis, it's unsurprising that, in recent years, a popular scholarly book has been Anna Tsing's *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. How could a subtitle be more resigned to capitalism's brutality? It's hard to imagine that those for whom capitalist ravages appear most acute in their daily lives would very easily accept that we shouldn't try to change the world. Tsing, Anna. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, Princeton, NJ: Princeton University Press.

tradiction together—stands as the central question for any serious account of social systems. For now, much social and cultural theory remains trapped within this abstract—indeed, fantastical—impasse.

Against the technocratic systems thinkers, Marx refuses the notion that contradiction can be engineered away or smoothed out; against the romantic rupturists, he rejects the idea that liberation must descend from beyond the social terrain. Instead, Marx turns contradiction into a lever of practice: *conflict* becomes the means by which society is both understood and changed. Marx shows that the very forms which oppress and mystify (commodity, wage, capital, state) also generate counterforces (workers, crises, collective knowledges) that point beyond the status quo. In his analysis of capitalism's "organic" totality, every mediation is a site of tension and every stability hides a potential upheaval. This dialectic of conflict and mediation is Marx's alternative to the sterile choice between system and rupture. It makes contradiction both a diagnosis of how capitalism holds together and a tool for prying it apart. In Marx's hands, the *totality* is neither a fate to accept nor a cage to simply escape; what might otherwise appear as a viciously self-devouring circuit becomes a *terrain of struggle*—one that can be comprehended, challenged, and transformed from within.

From this impasse emerges an algorithmic form of the Ouroboros—a self-devouring feedback loop that synthesizes the mirror tendencies. In the push toward algorithmization, we see technocratic, top-down control fused with pervasive social fragmentation. Massive data-driven systems act like technocracy by code, imposing order from above, yet they thrive on breaking society into increasingly isolated bits of increasingly specific information. In Pasquinelli's terms, machine learning is a "social calculus": an extensive "modelling of collective knowledge" that "[encodes] individual behaviours, community life, and cultural heritage" as "vast architectures of statistical correlation"—thereby consolidating "a monopolistic regime of knowledge extractivism" (Pasquinelli 2023, 236).

If, a few decades ago, we might've discussed the transition from the *disciplinary society* (Foucault 1995) to the *society of control* (Deleuze 1992), it's now clear that contemporary digital power works precisely through rhizomatic, decentralized networks by which we understand ourselves to be acting as agents, while the panoply of our freely-made choices is as commodified as ever. In other words, today, we see a perfect marriage between top-down technocracy and ever-increasing freedom in

the form of fragmentation. The algorithms that promise objective efficiency feed on and amplify social disunity. Ouroboros strikes again: control and chaos continuously reinforce each other, producing a sense of political stuckness—a paralyzed social order lurching between false unity and fractious fecklessness. Such dire political consequences are increasingly evident in our era's flirtation with authoritarian logics, even if they arrive in high-tech garb (perhaps, something like hoodie, four-digit running shoes, fair trade yoga pants, "tech wearables," and whatever other manner of cringe-inducing, undignified, and juvenile "gadgets").

This contemporary impasse cries out for deeper critique—a lens to unravel how a system's rational façade conceals irrational cycles.[10] Here, we turn to Marx, whose analysis of capitalism's contradictions provides a prescient framework. Marx's insights into how a system can simultaneously centralize power and spawn chaos prove illuminating in diagnosing our current deadlock. By revisiting Marx's critique, we can begin to grasp whether and how the Ouroboros might be confronted or transcended in the search for a viable way forward.

Marx's Alternative: Unity-in-Contradiction

Marx's answer to the above impasse (after all, it's nothing new) was methodological: he reconceived the social system as a unity of opposites. Instead of a closed, self-equilibrating loop or a chaos of fragments, he cast capitalist society as a living totality held together by internal conflicts—a dynamic field that can be comprehended, challenged, and transformed from within. Marx's dialectical method resolves the tension in three ways. First, it treats social structure as conflictual rather than rigid (addressing the issue of totality vs. fragmentation). Second, it roots systemic change in practical agency from within (addressing the role of practice). Third, it recognizes history's layers within the present (addressing the issue of timeless structure vs. change). This epistemological reframing—understanding society as a unity-in-contradiction—is the core of Marx's science of dynamic forms.

In *Capital* (1982a), Marx demonstrates his scientific approach, rising "from the abstract to the concrete" (Marx 1972, 206; 1993, 101) and reconstructing reality through "concrete concepts"—"concrete because it is a synthesis of many definitions, thus representing the unity of diverse aspects" (Marx 1972, 206). By that method, Evald Ilyenkov observes,

10. One could find it shocking how persistently Horkheimer and Adorno's classic critique continues to function (Horkheimer and Adorno 2002).

thought must "reproduce […] the development of reality" as it "occurs through the emergence of contradictions and their resolution" (Ilyenkov 2002, 274). By starting from simple, abstract categories and progressively incorporating more complex and concrete aspects—aspects realized as "the concentration of many determinations" (Marx 1993, 101)—Marx's method mirrors the real development of the capitalist system. This approach allows Marx to expose why the dominant economic theories of his day (and of ours) ultimately fail: they take surface appearances (prices, exchanges, equilibria) as given, rather than seeing them as *forms* that actively distort and reproduce the underlying social relations. Marx, by contrast, seeks to uncover the generative form at the heart of the system that makes it both stable and changeable.

Marx begins by showing what capitalism isn't. He sketches a series of simpler social arrangements—Robinson Crusoe's island economy, feudal dependency, a patriarchal peasant household, and a freely associated commune—to illustrate societies where the "social character" of labor is transparent (Marx 1982a, 169–73). In each of these cases, people recognize how their labor relates to the community: Crusoe directly records his labor-time, the feudal serf knows his labor obligation, the patriarchal family shares a household product, and associated producers plan their work collectively. None of these scenarios conceals the social relations of production. Capitalism, by contrast, does. It is, Marx insists, a peculiar "social form" defined largely by its opacity: it's the first social order in which relations among people consistently take the form of relations among things (Marx 1982a, 164).

Marx writes, "Since the producers do not come into social contact until they exchange the products of their labour, the specific social characteristics of their private labours appear only within this exchange" (Marx 1982a, 165). The *fetishism* of commodities isn't a mere illusion or psychological quirk, but the system's social necessity. Labor becomes social only through the act of exchange, so the network of exchanges makes private labors appear commensurable and independent of the people who perform them. Marx's critique is thus not a *theory of value*, in general, but a *theory of capital*: a mode of production in which value takes on an inverted, objective form, obscuring its basis in human labor.

The secret of this inversion lies in the *wage-form*. Marx shows that money's conversion into capital "must, and yet must not, take place in the sphere of circulation" (Marx 1982a, 269). For value to expand, something in exchange must generate more value than it started with—but pure exchange of equivalents can't accomplish this, since swapping

equal values produces no surplus (Marx 1982a, 266). The transformation of money into *capital*, therefore, requires a special process in some unique aperture joining the *sphere of circulation* and the *sphere of production*. The secret, Marx notes, is the discovery of a "special commodity […] whose use-value possesses the peculiar property of being a source of value": labor-power itself (Marx 1982a, 270). When capitalists purchase labor-power (the capacity to work) at its value (roughly, the cost of the worker's subsistence), and set that labor-power to work, the result is unique: labor, in the course of being expended, creates new value. This moment—when the owner of money first buys living labor-power and puts it to use—marks the logical and historical threshold of capitalism.[11] It's the point at which a previously "circular" process of simple exchange (selling in order to buy) transforms into a self-expanding process (advancing money in order to get back more money). Capital's self-valorization (self-expansion of value) depends on this one peculiar commodity, whose consumption produces more value even though its price (the wage) is fixed by the cost of reproducing the worker.

Marx thus calls the wage-form "decisive" (Marx 1982b, 1022); it fuses the sphere of circulation and the sphere of production into one process while simultaneously hiding the source of surplus-value.[12] In Marx's analysis, the wage-form is both the mechanism that makes exploitation possible and the reason exploitation can appear fair. Marx observes, "The wage-form […] extinguishes every trace of the division of the working day into necessary labour and surplus labour," such that "even surplus labour, unpaid labour, appears as paid" (Marx 1982a, 680). In this way, the money relation conceals the unpaid surplus labor of the worker, making the reality of exploitation appear as fair and equal exchange.[13] The wage-form, then, "makes the actual relation invisible, and indeed presents to the eye the precise opposite of that relation," giving

11. Marx writes, "The procedure of abstract reasoning which advances from the simplest to more complex concepts to that extent conforms to actual historical development" (Marx 1972, 208).

12. Many thinkers have emphasized Marx's insistence that the wage-form inaugurates capitalism. See, for instance: Mandel, Ernest. 1971. *Marxist Economic Theory, Vol. 1*, tr. Brian Pearce. New York: Monthly Review Press; Rubin, Izaak. 1972. *Essays on Marx's Theory of Value*, tr. Miloš Samardžija and Fredy Perlman. Detroit: Black & Red; Lebowitz, Michael. 2003. *Beyond Capital: Marx's Political Economy of the Working Class*. Palgrave Macmillan; Callinicos, Alex. 1981. "Wage Labour and State Capitalism: a reply to Peter Binns and Mike Haynes." *International Socialism 2*(12): 97–118.

13. Ernest Mandel furthered the point: "Landowners and tenants, employers and wage-earners, meet on the market as free owners of commodities, and the fiction of this 'free exchange' hides the continuation of the old relationship of exploitation under its new money forms" (Mandel 1971, 97).

rise to "all the notions of justice" and "all the mystifications of the capitalist mode of production" that portray it as a fair exchange of equivalents (Marx 1982a, 680). In reality, the worker has sold not a fixed amount of labor, but a capacity to labor for a given time, and the capitalist extracts as much work as possible within those hours. Equality in exchange thus masks inequality in production: the worker seems to receive a fair price for a day's labor, but part of that day is unpaid labor that the capitalist appropriates as profit. The wage-form is both the technical mechanism of exploitation and the perceptual medium that distorts it, making an exploitative relationship appear to be an equitable one.[14] That is, because the wage contract both results in an unequal exchange and because it appears to take place between two free and equal parties, the wage-form "conceals a quantitative as well as a qualitative aspect of exploitation" (Rubin 1972, xxv). Contradiction is thus built directly into this basic social form.

Accordingly, Marx described this process in visual terms. The forms of appearance that arise from the wage relation—*the value-form*, *money*, *profit*, *interest*—don't simply reveal capital's movement; they *invert* it.[15] What seems transparent is, in fact, an optical illusion produced by the very medium through which it appears. Marx likens this to an "ether" that determines how everything within it looks and behaves:

> There is in every social formation a particular branch of production which determines the position and importance of all the others, and the relations obtaining in this branch accordingly determine the relations of all other branches as well. It is as though light of a particular hue were cast upon everything, tingeing all other colours and modifying their specific features; or as if a special ether determined the specific gravity of everything found in it. (Marx 1982a, 206)

The "antediluvian forms" of capital like merchant's or usurer's capital anticipated the circulatory motion of capital, but they lacked this inner productive necessity and integrative medium (Marx 1982a, 267–9). Through the medium of the *wage-form*, relations in production are thus "disguised as social relations between things, between the products of labour" (Marx 1982a, 170). Every major category of political economy in Marx's critique—commodity, money, capital itself—emerges veiled by

14. This helps to explain why Walter Benjamin emphasizes what he calls capitalism's "mode of perception" (Benjamin 2002, 104).

15. Of course, one might here think of the metaphor employed by Marx and Engels: "If in all ideology men and their relations appear upside-down as in a *camera obscura*, this phenomenon arises just as much from their historical life process as the inversion of objects on the retina does from their physical life-process" (Marx and Engels 1998, 42).

the wage-form. In this medium, freedom is fused with coercion, equality with domination, and appearance with essence, all on a single, continuous, yet inverted surface.

Thus, the wage-form both reveals and conceals exploitation's structure. Capitalism's stable appearance as a self-regulating, objective system is constituted by this pervasive distortion—not separate from it. Michael Lebowitz stressed, "*The totality presented in* Capital *remains incomplete—incomplete at the very point that the reproduction of capital is revealed to require something outside of capital*" (Lebowitz 2003, 63). The renewal of labor-power (the maintenance and reproduction of the working class), for instance, is a necessary condition for capital's continuation, but this occurs outside the direct circuit of capital. By assuming this essential reproductive labor as given (left to the worker's own self-preservation), capital conceals its dependence on an external process. Again, it's the wage-form: workers use their wages to buy necessities, regenerating their labor-power for sale, closing the loop and making it seem as if capital's expansion is self-sustaining. In truth, capital relies on and perpetuates the social subordination of the worker (Lebowitz 2003, 62–63). The solid crystal is shot through with cracks, and this openness of the capitalist totality permits meaningful politics.

In Marx's theory, then, value, money, and profit are derivative expressions of capitalism's fundamental *social relation*. The wage-form is the hinge that makes the system both intelligible and opaque—the aperture where circulation becomes production, where freedom becomes necessity, and where value takes on the inverted form that sustains capital's apparent self-motion. This explains Marx's use of the term "inverted" [*verkehrte Form*]. This inversion isn't something vague or merely rhetorical; it's not about a feeling or a shared sense of things. The inverted form, like all forms in Marx's theory, is active. It's inverted because the relationship between material reality and idea switches places. Normally, one acts on the basis of what material reality dictates, and ideas are produced to correspond with one's experience of reality. In the inverted form of activity, one starts with an idea—with no necessary corresponding reality—and performs it into existence. If, as we've discussed, the concrete form is defined by the way that, in it, varying relations come to stabilize that form, this explains why activity can be abstract and, thus, inverted. When the idea is performed into existence, the thinness of this one-sided, singly determined form of this activity makes it abstract, as in the case of abstract labor. Marx wrote, "This reduction appears to be an abstraction, but it is an abstraction which is

made every day in the social process of production. The conversion of all commodities into labour-time is no greater an abstraction, and is no less real, than the resolution of all organic bodies into air" (Marx 1972, 30). Appearance and essence, then, really trade places**.** What seems to be happening is, in critical respects, the opposite of what's actually happening. What's "natural," or concrete, is, in fact, completely contingent and abstract.

The wage-form is precisely where the abstraction of equal exchange meets the concrete reality of unequal exploitation—the point at which the abstract becomes real and the material practice becomes abstract. Marx has, in effect, identified a circular process (the self-reproduction of capital through the wage exchange) that turns back on itself and upside-down: a social Ouroboros in which the very act that keeps the system going also mystifies its content.

The Möbius Inversion

A useful analogy here is the Möbius strip: a one-sided surface where what seems to be two opposite sides (inside versus outside) actually constitute one continuous loop.[16] The wage-form that appears as an equal exchange of labor for wages (the bright, visible side of the strip) is simultaneously the site where unpaid labor is extracted (the dark, hidden side; Marx 1982a, 680). As Marx urged, to grasp this truth one must leave "the noisy sphere, where everything takes place on the surface," and follow the actors into "the hidden abode of production" where "the secret of profit-making" is laid bare (Marx 1982a, 279–80). He reminds us that the "production process, taken as a whole, is a unity of the production and circulation processes" (Marx 1982b, 117). The wage-form is what unifies those two processes into one self-reinforcing loop: it bridges the apparent gap between the market (where exchange seems fair) and production (where value is actually produced), making their inversion continuous and self-sustaining. That is, it's the locus of what Marx refers to by "Freedom, Equality, Property and Bentham": the wage contract is freely signed between two equal people, trading the property that they own, for the sake of their own benefit, and this is the key by which the capitalist unlocks the door to surplus-value (Marx 1982a, 280). We see a double-bind: the worker's formal freedom and equality

16. Here, the analogy is relatively exact. Marx writes, "In and for itself, the exchange of commodities implies no other relations of dependence than those which result from its own nature. On this assumption, labour-power can appear on the market as a commodity only if, and in so far as, its possessor, the individual whose labour-power it is, offers it for sale or sells it as a commodity" (Marx 1982a, 270–1).

enable the capitalist's continual appropriation of unpaid labor. Put more starkly, the very wage contract that empowers the worker as a free individual also ensures the worker's subordination and exploitation. This structural inversion continually regenerates "notions of justice" and "mystifications" that keep the system running on consent as much as coercion.

This flies in the face of those dialecticians who posit an external "outside" to capitalism: a set of uncorrupted tools set to magically appear before us. In spite of some Western Marxists' dreams, only the master's tools will dismantle the master's house.[17] For Marx, the needed contradiction was internal. The wage-form is perhaps the exemplary dialectical form: it doesn't just include a contradiction—it *is contradiction in motion*. Because of this, Marx could start from the most ordinary economic phenomenon—the wage contract—and, by unfolding its implications, reveal the structure and dynamics of the entire mode of production. The deceptively simple illusion that all labor is paid labor becomes the anchor for a whole network of further inversions: commodity fetishism, the apparent autonomy of market forces, and the naturalization of capitalist norms and categories. By exposing the contradictory unity hidden in the wage-form, Marx turns what seems like a closed circle of social reproduction into a spiral of historical development.

For Marx, then, critique begins with the tracing of how the existing social forms internally distort and, yet, enable their own reproduction. To this end, the analysis of the wage-form is crucial: it's the prism—responsible for the "mode of perception"—through which the entire capitalist system is refracted and sustained. To misread this form is to misread the whole; to grasp it is to see how a single, everyday relation contains the power to illuminate (and upend) an entire social world. A proper reading of the wage-form shows how a simple relation gives rise to a world in which the abstract and the concrete seem to occupy each other's homes. In that world, forms like the wage don't merely *reflect* or symbolize labor relations—they actively (indeed, "decisively") reshape and *refract* the conditions of labor and its possibilities.[18] The wage contract is the form in which labor itself becomes *abstract*—socially validated and interchangeable—a *real abstraction* that molds workers' and

17. It's well-known that Audré Lorde argues the opposite (Lorde 1983).

18. Brassier (2020) reinforces this point by describing capitalism as "a system of real abstractions" generated by social practices rather than by mere thought. For Brassier, real abstractions like *value* or *money* are objective social forms—material patterns of mediation—and not just ideological illusions. See also: Marx 1993, 100–2; Marx 1982a, 275–80; Marx 1972, 206.

capitalists' behavior even as they think they're just pursuing their own interests. People take the wage relation (and the myriad terms of the "free" labor market) as given and "natural," reenacting them daily in routine economic activity.[19] By performing these roles, workers and capitalists reproduce an inverted world: their ordinary actions continually regenerate the surface of projections, illusions, and ideological distortions that give capitalism its stable facade. Perhaps, an Ouroboros can always tell up from down, but, too often, we cannot.

Hence, Marx's method isn't only dialectical but morphological. That is, Marx is really practicing a metamorphology of social form—understanding structure through its ongoing transformations. The capitalist order holds together only by continuously reshaping itself, and Marx's analysis is attuned to that plasticity. If the wage-form generates distorted appearances from within, then the system's coherence must be sought not in static structures or fixed equilibria (as classical systems thinkers assumed) but in dynamic form-relations that bend, stretch, and reposition themselves over time. The pliability of these forms—their loose and refractive character—is key to understanding how strategy, sedimentation, and rupture operate in Marx's account of systemic change.

Conclusion: Living Totality and the Next Coil

Marx's dialectical method resolves the impasse between technocratic over-totalization and anti-totalizing fragmentation. By placing contradiction at the core of social form, he embraces an epistemology built on dynamic morphogenesis rather than on static equilibrium or rupture for rupture's sake. The social whole emerges as a living totality—internally fissured but coherent, continuously reshaped by its own tensions. This approach preserves what was vital in many Western Marxist critiques—the imperative to expose the "false whole" and the passion for the unprecedented—while avoiding their paralysis by grounding these impulses in concrete historical agency. Marx shows that the very forms which mystify and oppress (commodity, wage, capital, state) also generate counter-forces that point beyond the status quo. Ironically, however,

19. Every *real abstraction* is an inverted form of practice—the self-alienating enactment through which the abstract becomes real (Sohn-Rethel 1978). In Marx's analysis, the equivalence of labors is enacted through people's performance: through the quantification of *labor-time*, the translation of time into money, and the circulation of money as *value*, society objectifies its own activity as an independent measure. In this circuit—C–M–C, M–C–M′—labor's living motion returns as its own abstraction: a real, temporal form that governs those who produced it (Marx 1982a, 125–30; 163–9).

many Marxist currents, especially in the "West," slipped back into the same oscillation, vacillating between an over-determined whole and the romanticization of its collapse. Marx's enduring insight lies in refusing this false choice: he reveals that the system's capacity to continually recreate itself is also its vulnerability—the internal fracture through which transformation begins.

Marx's morphological lens (a kind of metamorphology of form) provides a way to grasp systemic change without the blind spots of static systems-thinking or fragmentary relativism—a theme that I will expound in Part Two. The Ouroboros, in this light, is no mere symbol of doom but a figure of potential—a circle that, in Marx's grasp, twists into an open-ended spiral. It becomes a fitting emblem for a totality that survives by transforming itself and for a critical method that finds in every apparent closure the seeds of new openings. In Part Two, we follow this serpent into new territory, tracing how capitalism's form continues to morph beneath its stable façade and asking how this dialectic of form and transformation might yet unfold across the East–West divide. Ouroboros's next coil points toward new horizons.

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