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On the Individual: Metaphysics & Politics

A Thesis submitted in partial satisfaction of the requirements  
for the degree Master of Fine Arts

in

Visual Arts

by

Ryne Heslin

Committee in charge:

Professor Benjamin Bratton, Chair  
Professor Morana Alač  
Professor Lisa Cartwright  
Professor Ricardo Dominguez

2020

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University of California San Diego  
2020

# ACKNOWLEDGEMENTS

Bibi Samreny

My committee

Mateus Guzzo

Alexandra Neuman

Alan Brecht Skelton

Athanasios Tsoipidis

Mariana Wardwell

Zebulon Zang

Mom & Dad

Thank You

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ABSTRACT OF THE THESIS

On the Individual: Metaphysics & Politics

by

Ryne Heslin

Master of Fine Arts in Visual Arts

University of California San Diego, 2020

Professor Benjamin Bratton, Chair

The individual--as well as the subject and ideology--have two modes of existence. One is that of potentiality, of the collective ontogenetic content of the individual as it is shared with the universe; animated by the constitutive power of material reality; developing and progressing towards subjecthood; ideologically making sense of its environment; constructing social organizations which respond to this “making sense of”; capable of building a collective individual and thus a collective ideology--responding to and resolving social incompatibilities. Another is that of reality, of the singular and totalizing real world expression of the individual as it is institutionally implemented; alienated by the ideology of the ruling class; falsely abstracted into a mathematical and economic model of rationality; intentionally inundated in information that emphasizes individual freedom; increasingly global in scale, increasingly unstable--an incompatibility waiting to be resolved. The following text attempts to present a lineage of this development over time, beginning with the universal qualities which construct the former mode in Part I, and progressing to the institutions and historical tactics which helped construct the totalizing latter mode in Part II. Ultimately I wish to demonstrate that the individual, the subject, ideology, and even the State have the potential to be implemented for the mutual flourishing and free development of the collective individual.

# INTRODUCTION: INITIAL CONDITIONS

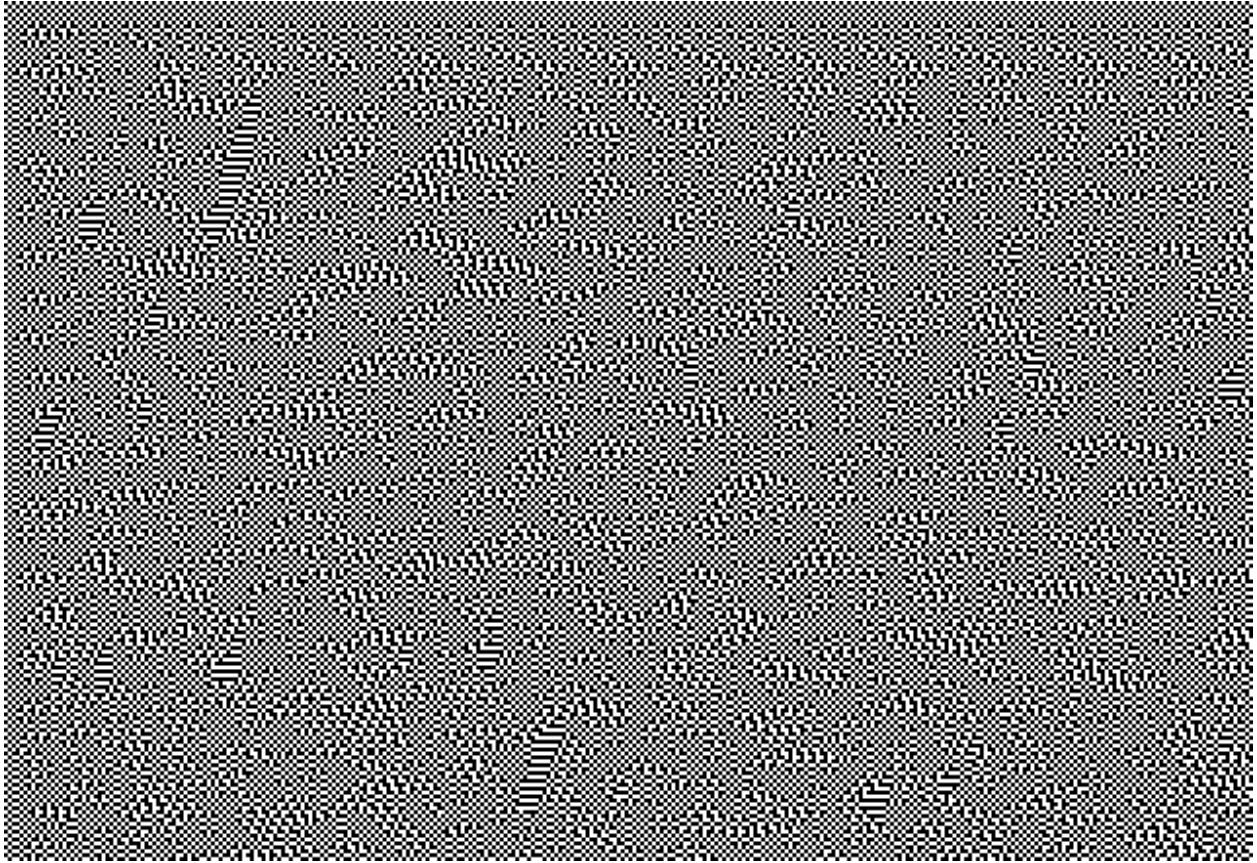


Figure 1: *Untitled error-diffusion, 2020*

Here we consider only the key metabolic reactions, and attempt to use these to demonstrate that life's emergence can be explained as a continuum from the Earth's inorganic geochemical processes through to organic biochemical processes.<sup>1</sup>

Individuation in its collective aspect makes a group individual, one that is associated with the group through the preindividual reality it carries within itself, conjoining it to all other individuals; it individuates as a collective unit.<sup>2</sup>

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1. Russell and Hall, "Emergence of Life," 383.  
2. Simondon, "Genesis of the Individual," 308.

Of course, presented in affirmative form, this thesis is unproven. I simply ask that the reader be favourably disposed towards it, say, in the name of materialism.<sup>3</sup>

*On the Individual: Metaphysics & Politics*, sets forth to synthesize Gilbert Simondon's concepts of individuation and transduction with Louis Althusser's general theory of subjectification and ideology, presenting a heuristic for viewing the developmental lineage of the individual from primordial physical process, upwards in complexity to the institutions which shaped its present form; the way in which the singular thing of the individual comes to be, how it becomes life, how it develops consciousness, and thus ideology--and how that ideology shapes the social relations in which the individual is embedded, which as I hope to present, is itself a process of individuation dependent upon its spatiotemporal contingencies as it develops.

More in depth definitions will follow, but for the moment this is to say: individuation (the process by which an individual comes into being as the partial resolution to an incompatibility or tension in a system), subjectification (the ends after which an individual in its development becomes aware of its separateness from its milieu--that is, an incompatibility with its milieu, or material environment: a subject), and ideology (the means by which an individual becomes a subject by way of the awareness of this *difference* from its milieu) are *universal* in that they are propelled by the same being, or process: the preindividual (the preconditional tension and self incompatibility that individuates all of reality--leaving behind its inherent tension and potentiality by way of inheritance to each subsequent individuation).<sup>4</sup>

This lineage of inherited complexity is always dependent upon spatiotemporally specific conditions which feedback on the process of individuation, subjectification, ideology, and ultimately *social relations and their institutional makeup*. This process of structuration (materially dependent

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3. Althusser, "Ideological State Apparatuses," 258.

4. This section is synthesizing various elements from Simondon, "Genesis of the Individual," and Althusser, "Ideological State Apparatuses," which will be explained in greater detail throughout the essay.

historical unfolding) of a system is what Simondon calls transduction,<sup>5</sup> which is both a guiding analytical tool and formal organizational method for this text. In many ways, this work is to be understood as an individuation in progress; the transductive making sense of my reality; the partial resolution of an incompatibility; and thus, an attempt at developing a coherent ideology through which I will shape my reality.

Adding an additional conceptual heuristic, in *The Savage Anomaly*, by Antonio Negri, in his discussion of the development of Spinoza's metaphysics, presents two concepts: one is the *ascending path*, which "follow[s] the constitutive power of the collective imagination and its material density. The result of the process is not the absolute, nor even the democratic, but the collective constitution of reality";<sup>6</sup> the other is the *descending path*, which he uses to describe what he calls an inaccurate reading of Spinoza: instead of moving upwards from the constitutive force of reality towards the absolute, it descends downwards from the totality of substance to the constitutive force of the modes, constraining and limiting their potentiality.<sup>7</sup> While understanding the specifics of Spinoza's metaphysics is not important to the larger scope of the project,<sup>8</sup> I wish to slightly modify and implement these two concepts in what follows to help present the two modes of the individual as they exist in the world.

The ascending path--that of *the individual*--will be used to visualize this aforementioned transductive developmental lineage from what is called the preindividual upwards in complexity, presenting in this "path" of transduction what is in effect a universalizing, *collective individual*, the achievement of which being the true revolutionary subject of the universe. Constructing this being should be a unified planetary goal.

The descending path presents the opposite of this: a historically constructed, totalizing and singular path of subjecthood (*given*, not achieved) in the image of what I will refer to as *The Individual*: a

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5. Simondon, "Genesis of the Individual," 313.

6. Negri, *Savage Anomaly*, 112.

7. Ibid., 83.

8. Simondon is similar to Spinoza but states on numerous occasions how his theory of the preindividual differs from substance; the distinction is ultimately not important for the purposes of this project.

subject divorced from its true functioning in the universe; rather than unified collectivity it perpetuates atomism and individual freedom; ultimately, in its mystifying inaccuracy, alienating the individual from the very constitutive force it needs to become unalienated. This is by way of the perpetuation of ideology, not by the individual, but in the *image* of The Individual through the present day result of millenia of societal structuration--that is, the State Apparatus (which in itself is understood to potentially exist along the ascending path, as opposed to its present iteration as a downward force of totalizing subjectification).<sup>9</sup> Destroying this path is imperative in order to adequately construct the ascending path.

What is presented below is a text in two parts: the first focusing on the universalizing way in which individuals come into existence via individuation, develop subjectivity through ideology, and how this development is shaped by the milieu or social order in which the individual is embedded--that is, not predetermined or the only possible outcome; followed by a discussion of the totalizing way in which the present outcome of this organization of society has alienated the subject to such a degree (via the institutional transmission of ideology by the ruling class in the image of The Individual by way of what Althusser calls the Ideological State Apparatuses)<sup>10</sup> that the resolution to this incompatibility is placed in arrested development. In the first half I will develop a metaphysical framework with which to understand the production of reality; in the second half I will cover specific historical events which have affected the transduction process of what is always already an individual, towards the false image of The Individual.

In sum, by way of discussing the various modes of existence of the individual, both in general and specifically in the present, I hope to present a case for universalism: that only once we have adequately universalized our collective ideology can we direct it downwards, totalizing the "collective imagination and its material density" back onto the individuals which propel it. In this way I believe that through metaphysics, we can present alternative political trajectories, or as Negri puts it:

Politics itself is metaphysics. It is not a decorative addition, but the soul of metaphysics. Politics is the

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9. Althusser, "Ideological State Apparatuses," 239-42.

10. Ibid., 242-43.

metaphysics of the imagination, the metaphysics of the human constitution of reality, the world. The truth lives in the world of the imagination; it is possible to have adequate ideas that are not exhaustive of reality but open to and constitutive of reality, which are intensively true; consciousness is constitutive; being is not only something found (not only a possession) but also activity, power; there is not only Nature, there is also second nature, nature of the proximate cause, constructed being.<sup>11</sup>

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11. Negri, *Savage Anomaly*, 97-98.

## Part I: Potentiality



# INDIVIDUATION

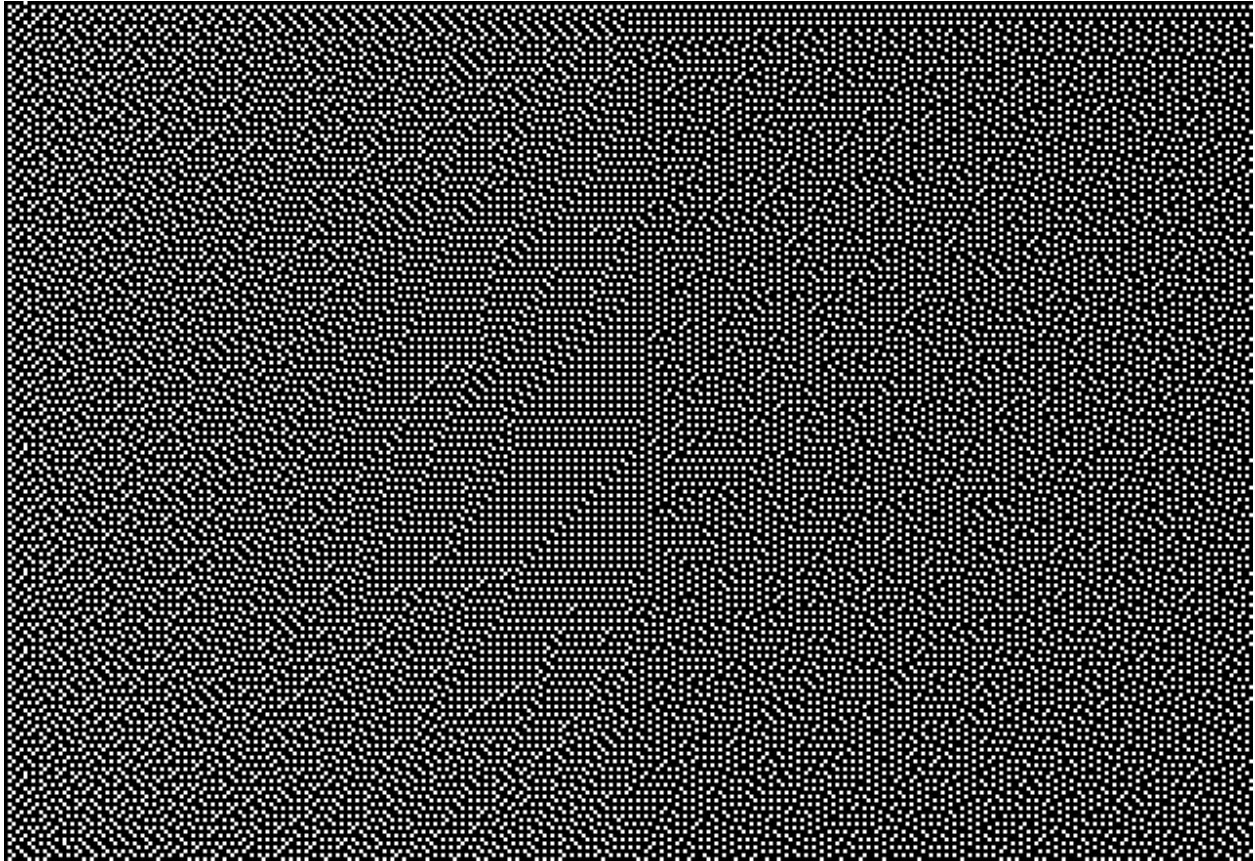


Figure 2: *Untitled error-diffusion*, 2020

The process of individuation must be considered primordial, for it is this process that at once brings the individual into being and determines all the distinguishing characteristics of its development, organization and modalities.<sup>12</sup>

By singular things I understand things that are finite and have a determinate existence. And if a number of individuals so concur in one action that together they are all the cause of one effect, I consider them all, to that extent, as one singular thing.<sup>13</sup>

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12. Simondon, "Genesis of the Individual," 300.

13. Spinoza, "The Ethics," 116.

[Life] is as much a metastable thermodynamic process as it is a stable molecular object or thing.<sup>14</sup>

In order to study “the individual,” we must first analyze what it means to be an individual, or a “singular thing”--which is to say, analyzing the *process* of what Gilbert Simondon in *Genesis of the Individual* calls “individuation,” as they are one in the same (and are intended to be read as synonyms for the purpose of this text). In a word, individuation is the genesis of a singular thing; more specifically, it is the process by which an individual (living or physical/inert) comes into existence via “a partial and relative resolution manifested in a system that contains latent potentials and harbors a certain incompatibility with itself.”<sup>15</sup> It is through this resolution, or phase change as it may be conceived,<sup>16</sup> that novel singularities (singular things, individuals) come to be. Examples of a system simultaneously falling out of phase with itself, and resolving itself in the very act of falling out of phase can be found anywhere in the universe, and analyzed at any “level” of reality as a simple motor of ontogenesis,<sup>17</sup> be it an electron, a bacterium, a human individual, or society; all possess aspects of individuation functioning at varying degrees of complexity, levels, or phases.<sup>18</sup>

For example one may understand this at a lower level--or lower energy,<sup>19</sup> rather--as similar in description to a basic thermodynamic approach to systems biology, or even chemistry: viewing reality as

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14. Margulis and Sagan, "Wind at Life's Back," 210.

15. Simondon, "Genesis of the Individual," 300.

16. Simondon, *Technical Objects*, 173. “By phase, we mean not a temporal moment replaced by another, but an aspect that results from a splitting in two of being and in opposition to another aspect; this sense of the word phase is inspired by the notion of a phase ratio in physics; one cannot conceive of a phase except in relation to another or to several other phases; in a system of phases there is a relation of equilibrium and of reciprocal tensions; it is the actual system of all phases taken together that is the complete reality, not each phase in itself.”

17. The genesis of the individual (singular) thing.

18. Simondon, "Genesis of the Individual," 300-01, 312. Simondon uses matter, life, mind, society, and the preindividual as some of these dimensions. See also notes 19, 61, 65, and 70 for additional information regarding levels, modes, or instances of a system.

19. As a flat ontologist, I believe *all things* contain within them equal levels of existence and constitutive potential. It pains me to use terms such as “lower level” when referring to beings, as I believe all of reality exists on the same “plane”--that is, horizontally in terms of *being*. Please rest assured the writer is speaking in terms of lower energy levels as is commonly used when describing different types of physics, with lower energy levels generally being understood as easier to predict than higher energy quantum systems. Ultimately, it isn’t a difference of level per se, but that of *modality*, or the way in which the level expresses itself. See Crowther, "Emergence and Reduction." for an interesting discussion on “levels” of reality via Effective Field Theory.

a constellation of gradient reductions,<sup>20</sup> which evade full exhaustion but are nevertheless *productive*. This is the story of the origin of life on earth and shows how easily lower level phases individuate upward in complexity, or, how “the incompatibility within [an] unresolved system becomes [the] organizing dimension in its resolution.”<sup>21</sup> The individuation/speciation of a being learning to metabolize new gradients previously seen as toxic, as is the case with the process of biomineralization,<sup>22</sup> presents a "real life" example of this falling out of step with oneself, and resolving it in a productive manner that encapsulates individuation. This is the simplest, albeit helpful, understanding of the process, however it only analyzes a miniscule fraction of the whole concept; we must add an element of tension to our pre-existing criteria of self-contained potential and incompatibility, and begin to think more abstractly.

A higher level/higher energy reading is needed when the aforementioned framework of incompatibility and potentials are expanded to encompass the “preindividual” being:<sup>23</sup> a meta-stable system which simultaneously has no phases, while containing within it all individuated phases in existence, together forming both the origin point and the sum total of reality, and thus *an inherent and productive self-contradiction within the system*.<sup>24</sup> This contradiction creates a perpetual tension, or element of instability in the system, in effect priming it for individuation if sufficiently pushed past a key-point of incompatibility. Whereas the previous example used low energy physics, the inherent incompatibility of the preindividual requires the implementation of high energy physics more akin to the wave-particle duality of quantum mechanics to more clearly communicate that *to understand the preindividual is to understand the preconditions for individuation*. The similarities are noteworthy: the preindividual being demonstrates the superposition-like tension, potentialities, and self-difference of a

---

20. Temperature gradients; pressure gradients; these are differences which naturally dissipate--that is, neutralize. To reduce a gradient is to reduce an incompatibility or difference within oneself or within a system. As we will discuss, not all gradients reduce entirely, some reduce partially and productively; this is the realm of individuation.

21. Simondon, "Genesis of the Individual," 311.

22. Margulis and Sagan, "Wind at Life's Back," 210, 213. Biomineralization refers to life's ability to incorporate ambient chemical elements into its evolving structure as a method of energy degradation--that is, gradient reduction.

23. Sometimes called the concrete being, the full being, or preindividual nature.

24. Simondon, *Technical Objects*, 301.

quantum system in a state of meta-stable coherence--that is, it has not yet collapsed, and it remains outside of spacetime, “supersaturated” as a “wave” and a “particle” simultaneously (also read “individual” and “milieu”, “matter” and “energy”), rife with the infinite potential to collapse *productively*. The resolution by way of collapse of a quantum system is due to decoherence,<sup>25</sup> or disturbances within the system pushing it past a *key point of instability*. In the act of collapse, the quantum reality continues to exist and perpetuate physical reality; in many ways this is similar to the ontogenesis of individuation from the preindividual being due to the way in which the aforementioned tension, potential, and self-incompatibility are resolved, but not exhausted, via individuation.<sup>26</sup> This is to say, the preindividual lives on after individuation, both continuously as the preindividual and within every individuation ever by virtue of being the precondition for individuation.

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25. Hameroff and Penrose, "Consciousness in the Universe," 51-54. See entire article for discussion of decoherence and coherence as they relate to the quantum wave function, as well as their larger relation to the possibility of quantum states being generated by way of sustained coherence of the wave function within cytoskeletal microtubules inside neurons--which is posited may be the physical process through which human consciousness is generated, as opposed to existing *outside* of the mind. Presenting a strangely materialist view on the neurological shielding of the wave function in “warm, wet, and noisy” conditions of the human brain, when traditionally they are only thought to exist in a vacuum. This shielding of the wave function by life processes--that is, *individuation processes*--as a means of turning inward the quantum potentialities of the universe as a mode of reasoning served as a major point of inspiration for this text.

26. Simondon, "Genesis of the Individual," 300.

# TRANSDUCTION

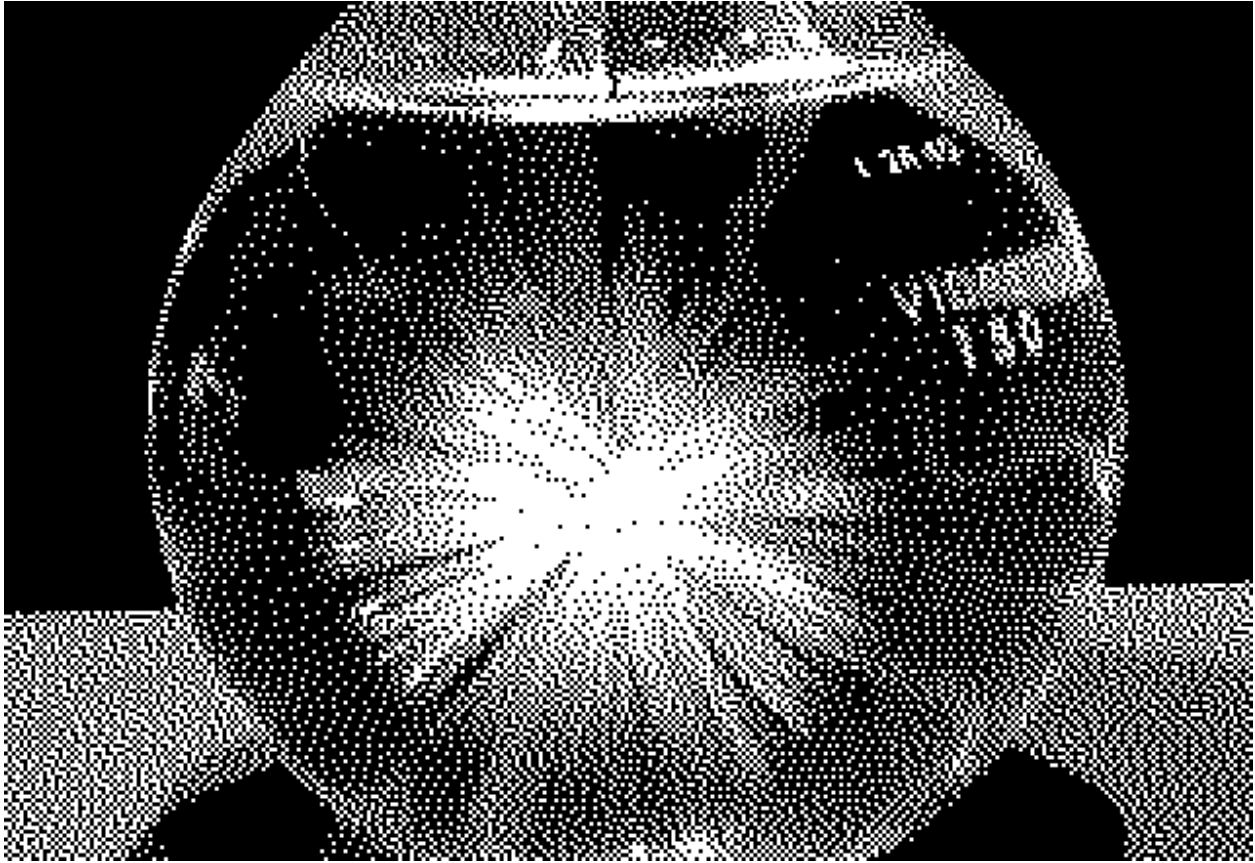


Figure 3: *Crystallization of a supersaturated fluid*

Entropy, a ratio and statistical measure, should not be reified, but recognized as a measure of energy spread; like an odometer that does not drive a car, entropy does not drive anything, but reflects a naturally telic process in which energy moves from being concentrated to spread out in space. This applies to sound waves emitted from the cone of a loudspeaker, to hot coffee equilibrating with the temperature of a surrounding room, and to life as cells, organisms, ecosystems, and the Earth System.<sup>27</sup>

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27. Margulis and Sagan, "Wind at Life's Back," 208.

Now that the complex process of two separate regimes of individuation have been expounded on, regardless of which "spatial" level you are analyzing (high energy, low energy, or some admixture), the concept of time must now be implemented, as up until now only the moment of individuation and its preconditions have been discussed, and it is not only ontogenesis, but what happens as the individuation unfolds over time that is of importance to this project. To help illustrate this, Simondon uses (and returns to several times as a helpful heuristic for individuation) the process by which a supersaturated fluid crystallizes.<sup>28</sup> This "tautly extended and supersaturated system"<sup>29</sup>--tautly extended in that any significant disturbance my spur crystal individuation--can be understood as similar to the inherent contradiction within any individual or system in question, and the ensuing crystallization process is the cascade of partial resolutions. Simondon calls this immediate record of individuation "transduction":

This term denotes a process - *be it physical, biological, mental or social*- in which an activity gradually sets itself in motion, propagating within a given area, through a structuration of the different zones of the area over which it operates. Each region of the structure that is constituted in this way then serves to constitute the next one to such an extent that at the very time this structuration is effected there is a progressive modification taking place in tandem with it. The simplest image of the transductive process is furnished if one thinks of a crystal, beginning as a tiny seed, which grows and extends itself in all directions in its mother-water. Each layer of molecules that has already been constituted serves as the structuring basis for the layer that is being formed next, and the result is an amplifying reticular structure. The transductive process is thus an individuation in progress.<sup>30</sup>

Transduction, as a visualization of the material historicity and responsive dynamism of reality, allows us to develop a spatiotemporally robust heuristic of ontogenesis as it develops over time and responds to its emergent tensions and contradictions. This process of becoming is present at every level of reality, not just in the formation of crystals, but also in the formation of everything from spacetime to human consciousness and reasoning; in this way it is universalizing: it brings in more preindividual nature

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28. Figure 3.

29. Simondon, "Genesis of the Individual," 301.

30. Simondon, "Genesis of the Individual," 313 (emphasis added).

as it unfolds. Transduction allows us to visualize this development of the preindividual, presenting its own genealogy as it propagates through the crystal, each new structuration inheriting varying degrees of the preindividual metastability without exhausting its potential,<sup>31</sup> thus allowing it to continue along the path of partial resolution in a series of incompatibilities--a bifurcation cascade of becoming.<sup>32</sup> In this way, if we imagine what might be called the primary transduction, or, the originary ontogenesis, unfolding and developing over time, inheriting more and more of the preindividual reality as it experiences phase change after phase change, reducing gradient after gradient only to be presented with more incompatibilities, we may begin to see what appears to be an individual being. This individual is the sum total of physical individuation: the collective individual; all of reality,<sup>33</sup> as it individuates itself as a collective unit.<sup>34</sup>

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31. Simondon, *Technical Objects*, 177. "Those which precisely manifest the greatest spontaneity of organization, are systems of metastable equilibrium; the discovery of a structure is indeed at the very least a provisional resolution of incompatibilities, but it is not the destruction of potentials; the system continues to live and evolve; it is not degraded by the emergence of structure; it remains under tension and capable of modifying itself."

32. Simondon, "Genesis of the Individual," 300; Goodwin, *Leopard Changed Its Spots*, 96. "The technical term to describe the transition from a state of higher symmetry (lower complexity) to one of lower symmetry (higher complexity) is bifurcation." Thus a bifurcation cascade would be a series of bifurcations.

33. *Ibid.*, 307.

34. *Ibid.*, 314. In many ways, all of what has been discussed in this section, in the opinion of the author, does not differ from ideas advanced by historical materialism and the dialectic, and will be used for similar purposes, the only difference in the mind of Simondon is:

"the process of individuation does not seem to correspond to the appearance of the negation that follows as the second step, but rather to an immanence of the negative in the primary state, the precondition for what follows, in the ambivalent form of tension and of incompatibility." (Simondon 1992, 314)

Processes still "produce their own gravediggers," (Marx and Engels (1888) 1992, 26) however the gravediggers are a precondition of the process, not an effect. If anything it is a development and expansion of the existing framework, and does not rule out its implementation in the construction of class politics as will be discussed later.

## THE ASCENDING PATH

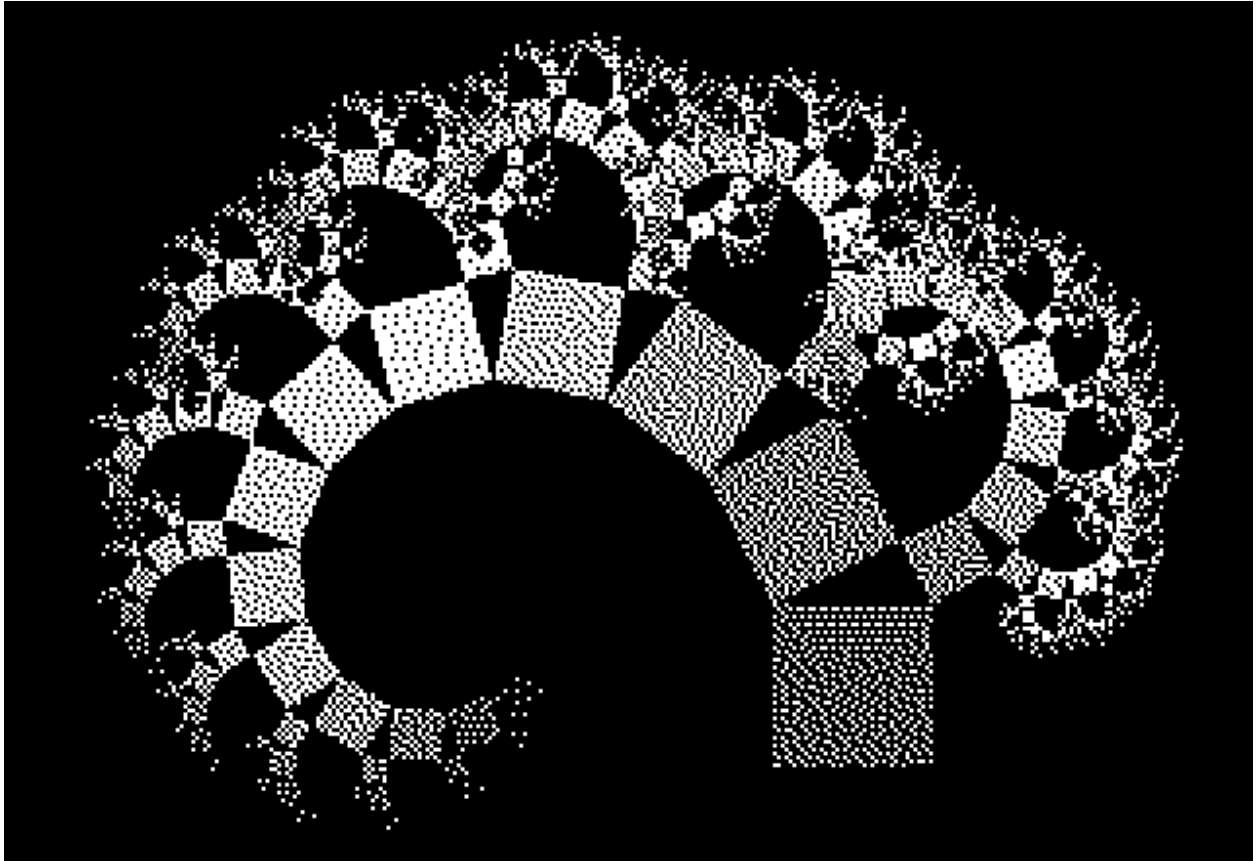


Figure 4: *Pythagoras tree fractal*

We are finally within the constitutive dynamic of being-of the inclusive being that the human consciousness and human world reveal.<sup>35</sup>

[H]uman beings become individuals only through the process of history.<sup>36</sup>

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35. Negri, *Savage Anomaly*, 147.

36. Marx, *Grundrisse*, 496.



Imagined differently, if instead of following the path of crystal formation as Simondon suggested, we followed the unfolding transduction of a Pythagoras tree fractal:<sup>37</sup> as you move upward from the first individuation (the largest square) we may imagine the continuation of a path of transduction, with each new phase inheriting ever more of the pre-individual potentialities and building a larger collective unit, spiraling continuously upward,<sup>38</sup> while every preceding step continues to exist independently of the collective at its respective “phase”; each element simultaneously retaining its own reality while constructing a larger aggregate.<sup>39</sup> (This heuristic is doubly effective, as the negative space, or milieu of the form is what dictates the parameters of the squares; much like with the interplay of the originary individual-milieu dyad, it is equally a component part and constitutive force of the total structure.) We may begin to imagine this fractal as a spiral staircase, an *ascending path* upward in complexity from the primary individuation. It is this sustained pathway of preindividual inheritance that universalizes the infinite potential and transductive capacities within every individual--physical, living, or otherwise.

What this means is the potential to further individuate is present in all of matter--to different degrees of intensity--or else nothing would have occurred in the first place. While it can be said that living beings perpetuate individuation inward in a way that physical matter cannot, the mere existence of living beings is proof of physical matter’s ability to follow paths of transduction which bring about phase changes from the physical to the living individual, as well as from the living individual to the conscious individual. This is the ascending path. It bears clarifying that at every point of development--even at the emergence of the first phase, all of reality is contained; it is suggested, rather, that as the ascending path develops, more of the preindividual is materially incorporated into the being, and novel singularities emerge which contain within them heretofore unseen levels of preindividual potentiality materially

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37. Figure 4.

38. Metaphorically of course, we are to understand a reduction in scale in this instance to be a higher "level" individuation and thus higher along the “path,” similar to how a smaller scale produces higher “energy” physics.

39. The contradiction that at every stage of extension, all of reality is contained within the structure, even as more preindividual reality is spread into each new phase presents a self contained infinity--once again, universalizing.

expressed at the level of their individuation, while continuing to individuate the potential of the collective individual.

As suggested, there reaches a point along the ascending path where in order to resolve an instability in the system (what we will discuss later to be an awareness of one's milieu), the individuation gets retained inward, in an act of endosymbiosis no different than the joining of exogenous mitochondria with its host bacterium, or the acquisition of a holobiont's gut microbiota.<sup>40</sup> The resulting conscious "psychic being" can be conceptualized as the individuation of a central node in a line of communication between the pre-individual nexus of potentialities and the lower energy physical individuations of which it is composed.<sup>41</sup> (As we will discuss in a later section, the emergent self awareness and situatedness of the psychic being that consciousness necessitates--the interpretation of the aforementioned communication between levels--has effects on the successive transduction of that individual.) There is always already an "open dialogue" between all levels of physical reality in terms of information exchange, interrelation, aggregation, and individuation--however this dialogue does not exist in the preindividual itself.<sup>42</sup> This inability to interact across vast swaths of reality is the source of the contradiction at the heart of the preindividual, *which is the precondition for each successive phase change of structuration and communication*, bringing more and more preindividual into relation with physical reality, in effect producing more of the ascending path. This is what the psychic individual and psychic individuations are capable of.

The coexistence and interrelation of collective individuation and psychic individuation create what Simondon calls the "transindividual," or "the systematic unity of internal individuation (psychic) and external individuation (collective)"; the transindividual allows us to conceptualize a collective

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40. Gilbert, Sapp, and Tauber, "Symbiotic View of Life," 334. "Our bodies must be understood as holobionts whose anatomical, physiological, immunological, and developmental functions evolved in shared relationships of different species. Thus, the holobiont, with its integrated community of species, becomes a unit of natural selection whose evolutionary mechanisms suggest complexity hitherto largely unexplored."

41. Simondon, "Genesis of the Individual," 318 n4.

42. Ibid., 304. "The true principle of individuation is mediation, which generally presumes the existence of the original duality of the orders of magnitude and the initial absence of interactive communication between them, followed by a subsequent communication between orders of magnitude and stabilization."

psychic being, capable of responding to its perceived incompatibilities and maintaining metastability in its measured response. In this way, it is as if the concept of collective consciousness were merged with the natural teleological processes which construct reality, being revealed as one in the same process: that of the transductive pathway of the preindividual's sustained development over time as it resolves contradictions in the system.<sup>43</sup>

Developing this transindividual agency is a goal of constructing the ascending path. We will return to the transindividual below when we discuss the resultant alienation of subjectification by way of ideology later in this text, presenting an alternative to the totalizing descending path of “The Individual” as it is perpetuated by ideology in the present day manifestation of the inescapable subjectification process, striving instead towards a concept of the universalized transindividual subject.

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43. Simondon, "Genesis of the Individual," 307.

## DEGREES OF FREEDOM

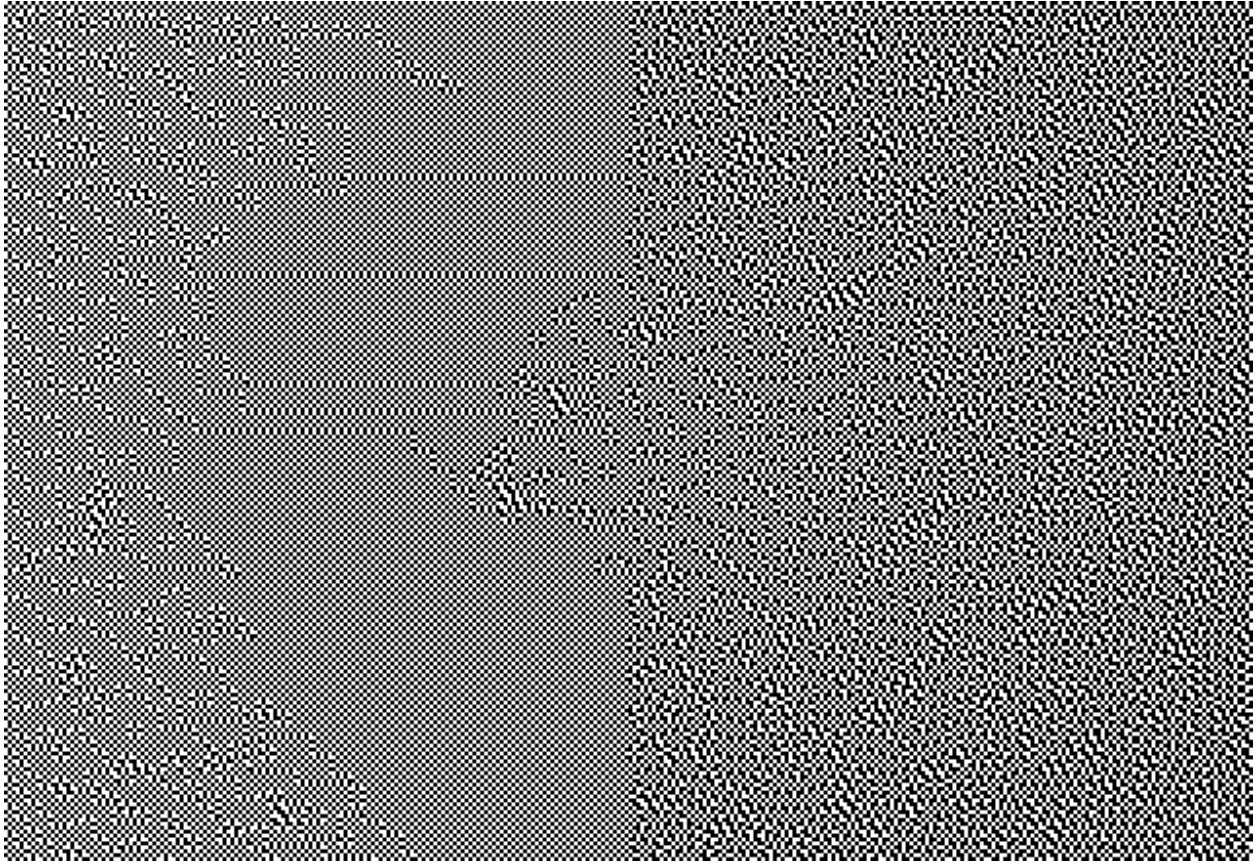


Figure 5: *Untitled error-diffusion*, 2020

Chaotic behavior is the result of a system's sensitive dependence on initial conditions. Mathematically, all non-linear dynamical systems with more than two degrees of freedom, i.e., especially biological, meteorological or economic models, can display chaos and, therefore, become unpredictable over longer time scales.<sup>44</sup>

I would now like to return to the simple low energy individuations with which I began, discussing their difference from the form of inward psychic individuation that was just discussed from the perspective of *control*. The ascending path again serves as a useful heuristic. Lower energy individuations

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44. Bitsakis, "Physical Determination," 235.

will take place lower on the path, as they contain less of the inherited preindividual metastability within them and thus are easier to directly decode (i.e. such and such bacterium metabolizes such and such chemical). As you move upward along the path, the psychic being begins to be comprised of so many nested physical individuations that no one particular gradient can be said to have any one affect on the “host” individual.

These differences in complexity between psychic individuations and the comparably simple individuations of physical (and some "lower level" living) individuals are what make humans escape the realm of cybernetic control.<sup>45</sup> We are not a decodable array of metastabilities, but instead we address our problems, or incompatibilities, *mentally* via psychic individuation, as opposed to physically like a supersaturated fluid prior to crystallization. We may be born of the same process, but it is undeniable that the psychic being contains within it, as previously discussed, a sufficient amount of pre-individual nature to begin utilizing the process of individuation as a reasoning mechanism as opposed to a physical response mechanism.

To present an example of a physical response mechanism: NASA developed a specific frequency of near infrared (670nm) LED lamps for the purpose of growing plants in space. Near infrared light was used because it signals a response within the chloroplasts of plant's cells to flower larger and to elongate its growth.<sup>46</sup> It was later discovered that this same frequency of light, when exposed to human skin cells, signaled the mitochondria within the cells to repair the cell, in effect accelerating the healing process of the skin.<sup>47</sup>

Here we have two similar processes of individuation responding to an external informational stimulus--670nm LEDs--in a manner being conducted differently within each cell's specific biochemical

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45. Simondon, "Genesis of the Individual," 305. "There exists within the being a more complete regime of internal resonance requiring permanent communication and maintaining a metastability that is the precondition of life. This is not the sole characteristic of the living being, and it cannot be seen as an automaton that maintains a certain number of equilibria or that seeks to find compatibilities between its various requirements, obeying a formula of complex equilibrium composed of simpler ones." This will be discussed in greater detail later in this text.

46. Samuoliene et al., "Red Light Growth."

47. Eells et al., "Mitochondrial Wound Healing." Both these processes have been commercialized and are now available on Amazon to regenerate your skin or grow larger plants.

makeup. One can not confidently say, "670nm red light means x", without including "for y," meaning that information is always processed in the present depending on the specific individual in question.<sup>48</sup>

Interestingly, both of the organelles doing the responding are bacterial in origin, or what we would call a "low energy being"--debatably lower than the cells of which they comprise.<sup>49</sup> What this means is there are living individuals, within the living individuals of our cells, within the larger individual that is our self, responding to external stimulus in a cybernetic manner that has an influence upwards in levels of reality, *but only to a degree.*

The lights have an effect on our physical makeup in that they may accelerate our skin cell growth, but they do not control our psychic individuation in a way that goes beyond individually specific responses which are the result of a lifetime of permanent individuation creating subjective responses to red lights--that is to say, there is no universal control mechanism with humans and red light as there is with plant and skin cells; only *context dependent responses.*<sup>50</sup> The same difference in kind from lower level individual to lower level individual in their response to information is generally similar to the difference from psychic being to psychic being. What varies by what we might say species begins to vary by individual at the level of the psychic being, as there are simply too many processes containing the inherited residue of the preindividual to successfully program or decode.

What we have been discussing--this process of expanding the purview of the sign relation and resultant *extra-mental interpretation*--that is, outside of (or "lower" than) the mind--positing that sign relations are instead pervasive, and function contextually on various levels of reality, at varying degrees of complexity, is what is called "biosemiotics," and in many ways, it resonates very closely with the system we have already discussed as presented by Simondon and augmented by the ascending path: it posits that not only are sign relations not the creation of the human mind, but rather that *the mind itself is the creation of sign relations.*<sup>51</sup>

48. Simondon, "Genesis of the Individual," 311.

49. Margulis and Sagan, *Microcosmos*, 117-119. Both chloroplasts and mitochondria are bacterial in origin.

50. Fetterman, Liu, and Robinson, "Color Psychology."

51. Favareau, "Introduction," 9.

Signs in this instance are to be understood simply as something which comes to signify something "other than themselves."<sup>52</sup> The similarity of the self-incompatibility of the sign and the self-incompatibility of all individuals should not be lost on the reader. This is nearly identical to what was discussed previously in that the mind is achieved via nested extra-mental sign relations and individuations: sign relations are simply a response to an incompatibility--*a difference*; sign relations are individuations--a connecting link.<sup>53</sup>

Jakob von Uexküll, the 20th century founder of biosemiotics, once imagined that "[t]he meaning of the forest [could be] multiplied a thousandfold if its relationships [were] extended to animals, and not only limited to human beings"; to accomplish this extension, Uexküll envisioned a world in which each being is contained within a bubble-like *umwelt*, or "subjective universe."<sup>54</sup> This *umwelt*, "filled with the perceptions which it alone knows" can be conceptualized as the interface through which a being interacts with its world.<sup>55</sup> Only stimuli that correspond to a being's *umwelt* will penetrate this bubble of perception, provoking a sign relation--or interpretation--of some kind, the complexity of which is always determined by the material specificities of the being in question. This interpretation is of course much less "open ended" than that of a traditional human sign relation, but the sign, signifier, signified relationship of semiosis remains intact.

The most often used example when illustrating the *umwelt* is that of the tick, who has three simple response mechanisms within its *umwelt*: heat, scent, and moisture. The tick stands on the end of a piece of grass and waits for one of these stimuli, if the tick encounters something that has the capacity to affect its *umwelt*, it will leap off of the grass toward its stimulus, in effect resolving the emergent

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52. Ibid., 30n19.

53. Uexküll, "Worlds of Animals and Men," 105. cf. previous comment about psychic being existing as connecting link; individuation as connecting link. This helps illustrate the transductive development of the human mind in comparison to the "extra-mental" sign relations of the aforementioned bacterial organelles, while demonstrating their interconnectedness. (The variance in sign interpretation that comes from the phase change to psychic beings can be said to create subjectivity, which, as we will discuss later, affects the resulting transduction path of the individual.)

54. Ibid., 93.

55. Ibid., 90.

informational gradient. One can easily imagine a scenario in which this umwelt was exploited for the purpose of controlling a tick, or fooling it into jumping when there is no living being by simulating the specific temperature or olfactory triggers.

We may conceptualize this umwelt in scientific terms as the “degrees of freedom” of any given system. These are the parameters by which a system is governed and controlled. If we were to compare the three-dimensional (heat, moisture, scent) umwelt of a tick with that of a human, we would immediately see that the human has what may be considered *n-dimensional* degrees of freedom. This is to say, the number of physical individuations, as we saw with the near infrared light, that would need to be deduced in order to control a human is nearly infinite. The emergent psychic individual is far too complex to control in this manner--far from the biocomputer that was conceived of as programmable, and researched as so, for several decades. The ascending path again presents a visual of this developmental complexity where the lower energy individuations, *through their collective individuation*, pave the way for higher energy individuations that exist on levels of communication and interpretation different from them, while still belonging to the same collective whole-

In an upcoming section I will discuss in further detail the implications of this claim; how instead of futilely trying to program the individual, subjectification is far more effective at nudging the subject towards one specific goal: reproducing the existing mode of production and in effect the social relations. This subjectification process destroys the potentialities of the developed ascending path, instead constructing a totalizing descending path. Rather than programming individuals, it simply blocks certain aspects of the psychic individuation process of detecting the inconsistencies--the alienation--that it is in reality the false consciousness of ideology which reproduces them as subjects (abstract individuals),<sup>56</sup> as opposed to the universal consciousness of the pre-individual.

For this purpose, we will now shift our attention to ideology--the inevitable development in the

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56. Engels, "Letter to F. Mehring," 451. "Ideology is a process accomplished by the so-called thinker consciously, it is true, but with a false consciousness. The real motive forces impelling him remain unknown to him; otherwise it simply would not be an ideological process."



collective transduction of the ascending path, and how it is utilized nefariously for the inevitable process of subjectification. The inevitability of the means (universal existence) should not be taken to suggest the inevitability of the ends (current conditions of subjectification), which, as we will discuss, are not the only possibility. Under the conditions of a fully expressed transindividual consciousness, there is no need for a totalizing descending path of false consciousness, but instead a constitutive ascending path towards a subject that truly reflects the individual of which it represents.

# SUBJECTIFICATION

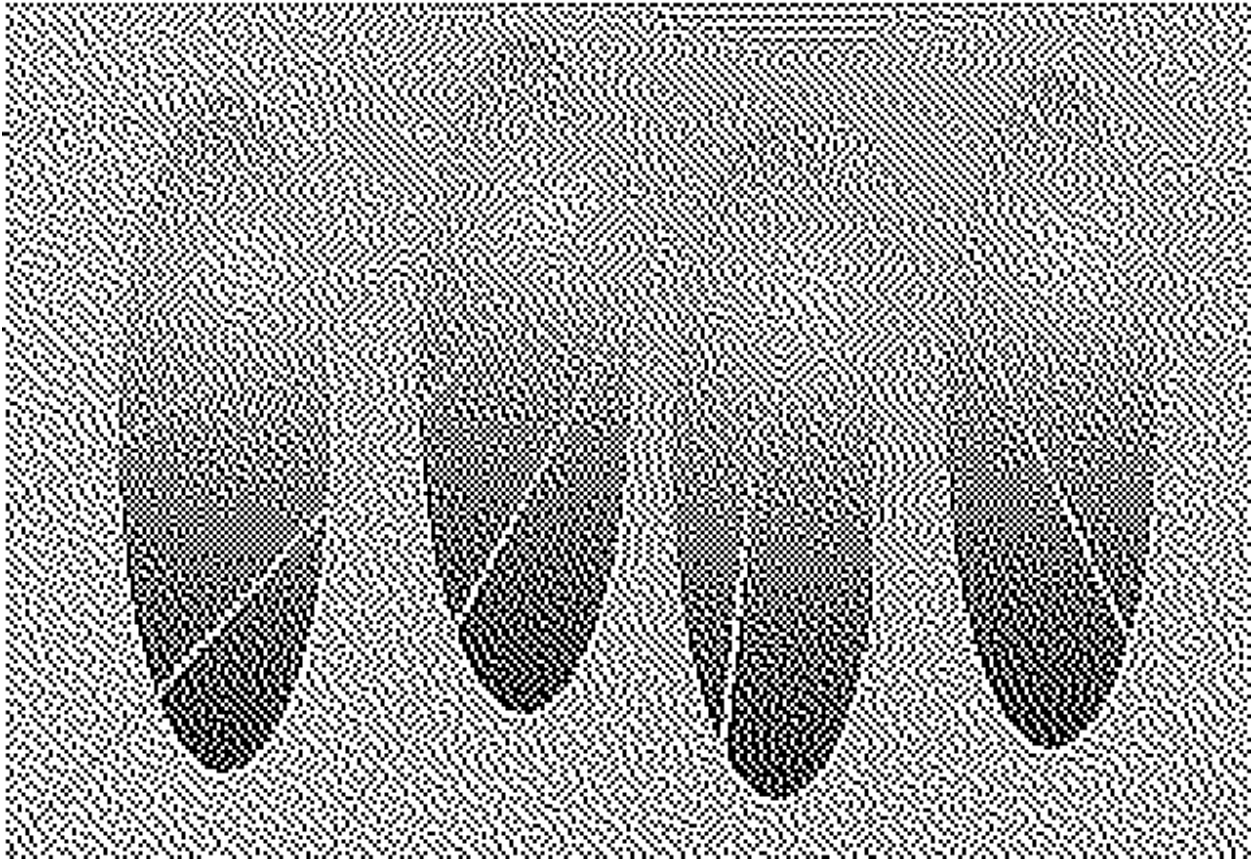


Figure 6: *Untitled error-diffusion, 2020*

The final result of the process of social production always appears as the society itself, i.e. the human being itself in its social relations. Everything that has a fixed form, such as the product etc., appears as merely a moment, a vanishing moment, in this movement. The direct production process itself here appears only as a moment. The conditions and objectifications of the process are themselves equally moments of it, and its only subjects are the individuals, but individuals in mutual relationships, which they equally reproduce and produce anew. The constant process of their own movement, in which they renew themselves even as they renew the world of wealth they create.<sup>57</sup>

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57. Marx, *Grundrisse*, 712.

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.<sup>58</sup>

Up until this point, in an effort to instead focus on the individual, individuation and the primordial processes which propel them, I have only briefly discussed subjectivity, or the inevitable consequence of the aforementioned turning inward of the preindividual unfolding (the creation of the psychic—that is, conscious, being). This self awareness is the implementation of the human's preindividual inheritance of the individuation process. For example, Georg Lukacs describes a process called *teleological positing* as being that what separates human creation from the creation of, say, a beehive;<sup>59</sup> it can be described as the goal oriented reduction of mentally generated gradients.<sup>60</sup> This can be understood simply as the intentional (mental) *creation* and *implementation* of the inherited preindividual process of resolving incompatibilities which formed the (human) mind in the first place. In this way, subjectivity presents a cognitive phase change, shifting the resolution of incompatibilities from a purely physical response, to that of choice and problem solving.<sup>61</sup> Where subjectivity becomes productive for the scope of this project, is its role in making sense of the act of materially reproducing oneself and the material conditions which constrain and enable this act. I intend to argue that subjectification, just like individuation, is inevitable; however, just as the type of "individual" created by individuation is dependent on the unfolding of the path of transduction, as is the result of the process of subjectification.

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58. Marx and Engels, *German Ideology*, 42.

59. Marx, *Capital*, 284. The beehive example from capital has long served as a point of contention for me, I believed it to present an example of an overly mechanistic bee, and in some ways it may. Many of the scientific theories which undermine the mechanistic view of biology have emerged relatively recently in comparison to the quote in question, which locates the view in history. If anything, this shows the variety of what may be considered "subjective" behavior in nature: what is making a beehive if not "making sense of" one's environment? This should hopefully present even more wonder to the reader to ponder; what separates the human mind from that of a bee; what processes of individuation do we contain that they don't; how can we further build an understanding of this mutual constitutive force which reproduces both the bee and the human--and everything.

60. Lukács, *Ontology of Social Being*, 5.

61. This is not to say that lower level beings function as automatons, they experience the world through their umwelt just like we do--it is simply a matter of degrees of freedom.

That is to say, *subjecthood is always spatiotemporally situated and produced by this emplacement.*<sup>62</sup>

First, it is worth mentioning the looming incompatibility (to be articulated in further detail in Part II) in my metaphysics as it unfolds, perhaps I may try to partially resolve it now, in an attempt to continue individuating my argument. The aforementioned "making sense of one's material conditions" does not exist in a vacuum, the human must be understood as a *social animal* "which can individuate itself only in the midst of society," and these societies are constantly changing.<sup>63</sup> Thus, in lieu of presenting an entire history of the unfolding of clans, families, societies, economies, the State, and their emergent class relations and modes of production, *at the very least* a survey of individuation and subjectification must account for the psychosocial domain (by which I mean the subjective human mind, the physical human body, and their always already embeddedness in the social--however that social structure is politically organized, i.e. the State) and the way in which the historically and regionally specific resolution of its incompatibilities organize psychic beings (individuals) into groups or classes; this process is itself transductive in its unfolding. That is, if all of history is a history of class struggles (conflict),<sup>64</sup> this is in effect a purely psychosocial read on our pre-established understanding of transduction and individuation: all of history--all of time itself--is the history of struggle in that it is the history of inherent incompatibilities of metastable systems and their partial resolutions.

What we have been discussing thus far is the material form of the *base*, what is necessary now is the ideological component of the subject, or the *superstructure*,<sup>65</sup> the combination of which forming the whole of the collective individual. Humans share the productive forces of the constitutive properties of

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62. Pink, *Doing Sensory Ethnography*, 25. "While the paradigm of "embodiment" implies an integration of mind and body, the emergent paradigm of emplacement suggests the sensuous interrelationship of body-mind environment...accounting for the relationships between bodies, minds, and the materiality and sensoriality of the environment."

63. Marx, *Grundrisse*, 84.

64. Marx and Engels, *Communist Manifesto*, 13.

65. Althusser, "Ideological State Apparatuses," 237."Marx conceived the structure of every society as constituted by 'levels' or 'instances' articulated by a specific determination: the infrastructure, or economic base (the 'unity' of the productive forces and the relations of production) and the superstructure, which itself contains two 'levels' or 'instances': the politico-legal (law and the state) and ideology (the different ideologies, religious, ethical, legal, political, etc.)."

physical matter, but contain more preindividual metastability (an ability to resolve an incompatibility without exhausting all potential energy), and thus exist on a higher level of reality, which ultimately determines the conditions within which the lower levels individuate themselves. In other words, the physical processes produce the psychic being, but in the last instance it is the "single thing" of the psychic being that is the milieu (or context) which *sets the conditions* of the individuations of their constitutive parts.

Similarly, the social and its complex structurations--while composed of humans--exist on a higher level of reality, a level that is constructed and perpetuated by its lower levels (individuals), while simultaneously determining the conditions in which they reproduce themselves. These transductive psychosocial structurations, unfolding as the perceived resolution of incompatibilities in the mind of the historically and regionally specific psychosocial unit, form this history of society and the history of class struggle—the continuation of the ascending path. However, this is only part of the problem--to return to the aforementioned looming incompatibility: in certain cases, the transductive path is easily blocked by the very development of the psychosocial structurations of society, affecting the way in which the individual comes to understand the larger social whole of which it is a *subject*. This is all to say: in a way, at the present moment in history, the individual, subjected to the contexts of its larger social whole, is as constrained within subjecthood as a skin cell within the contexts of its larger human whole.

In the construction of regionally and historically (spatiotemporally) specific societies, their particular organization--both in their productive forces and relations of production--will necessitate individuals to individuate a worldview or "ideology"; this is the attempt of a psychosocial constituency to make sense of its milieu--of its determining social order. What this means is how the social order is organized will determine the clarity of the resulting worldview. In this way, it can be argued that specific ideologies have a history that is determined by their structuration.<sup>66</sup> However, this basic function of ideology, much like the basic function of individuation, does not account for the precondition of

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66. Ibid., 255.

developing an ideology in the first place.

To once again zoom out before returning later in greater detail to the social, it can be argued that the genesis of the (subjective) psychic being was the genesis of ideology, an epiphenomenon of the individuation that necessitated the individual to make sense of its relationship with its surroundings--the individual-milieu dyad becomes the subject-object dyad in the individuation of ideology.<sup>67</sup> In this way ideology is eternal, in that there is nothing "outside" of ideology, it is omnipresent throughout history as being an individuation of the individuation of the individual itself."<sup>68</sup> This is to say, ideology in general is eternal, but individual ideologies will manifest and develop in spatiotemporally specific ways.

As Louis Althusser says in *Ideology and the Ideological State Apparatuses*: ideology (in general) is simply "the imaginary relation of ... individuals to the real relations in which they live."<sup>69</sup> Taken literally, this simply means ideology is the way in which humans come to understand the relation to their social structure, which will always be "imaginary", as it is based within the conscious mind, but as we set forth last section--and is similarly argued here by Althusser--in the last instance, ideas are articulated in the material, that is, by material processes, and in this way "*their existence is material*."<sup>70</sup> Thus, similar to how the human acts as a point of communication between two separate levels of reality (the preindividual and the physical individuations of matter), ideology *is* the relation between the human individual and the higher energy psychosocial dimension of social organization. This particular individuation is the creation of the subject: the individual which makes ideology real in its material enactment as a subject. In this way, the genesis of the psychic being is the genesis of the subject *and* ideology. Althusser calls this symbiotic relationship a double constitution:

I say: the category of the subject is constitutive of all ideology, but at the same time and immediately I add that *the category of the subject is only constitutive of all ideology in so far as all ideology has the function*

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67. Simondon, *Technical Objects*, 177.

68. Althusser, "Ideological State Apparatuses," 255.

69. *Ibid.*, 258.

70. *Ibid.*, 258 (emphasis mine). On the same page Althusser goes on to say "of course, the material existence of the ideology in an apparatus and its practices does not have the same modality as the material existence of a paving-stone or a rifle

(which defines it) of 'constituting' concrete individuals as subjects. In the interaction of this double constitution exists the functioning of all ideology, ideology being nothing but its functioning in the material forms of existence of that functioning.<sup>71</sup>

In this way the subjectification of the individual, and thus the subject, is as eternal as ideology; it is omnipresent through human history as it coexists with the individual, *interpellating* them as subjects with ideology.<sup>72</sup> Althusser compares this interpellation to being hailed by a police officer in the street; they say "Hey, you there!" and in responding you have been interpellated.<sup>73</sup> As mentioned, the subject is simply the enactor of a line of communication (by way of ideology) between the human and its social relations, the human and its material conditions, the human and its milieu; understanding them as they develop together in tandem. This line of communication is one's milieu saying "Hey, you there!" and the individual responding in kind.

In other words, as far as the inevitability of the genesis of the subject is concerned, it is to be understood as "the unity of the being when it is thought of as a living individual, and as a being that represents its activity to itself in the world both as an element and a dimension of the world."<sup>74</sup> In many ways, subjecthood--or the continuous process of subjectification (which always already also includes ideology) *acts as a mirror which reflects one's reality back to them*, showing them their simultaneous embeddedness and separation with their milieu. However, as with the difference between ideology in general and spatiotemporally specific ideologies, the subject has dual meaning: in general, it is the being ideologically becoming aware of its situatedness in the world, however, spatiotemporally specific ideologies and subjects (note respective pluralities) transductively develop *in tandem* due to the previously mentioned double constitution: ideology is how the subject is able to make sense of the world,

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71. Ibid., 262 (original emphasis).

72. Ibid., 264. "I shall then suggest that ideology 'acts' or 'functions' in such a way that it 'recruits' subjects among the individuals (it recruits them all), or 'transforms' the individuals into subjects (it transforms them all) by that very precise operation which I have called interpellation or hailing, and which can be imagined along the lines of the most commonplace everyday police (or other) hailing: 'Hey, you there!'"

73. Ibid., 264.

74. Simondon, "Genesis of the Individual," 307.

and specific ideologies exist insofar as they are enacted materially by specific individuals which have been subjectified as subjects by a specific ideology; and specific ideologies are always determined in the last instance by historical and social formations which shape the resulting worldview.<sup>75</sup>

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75. Althusser, "Ideological State Apparatuses," 254.



## REFLECTION

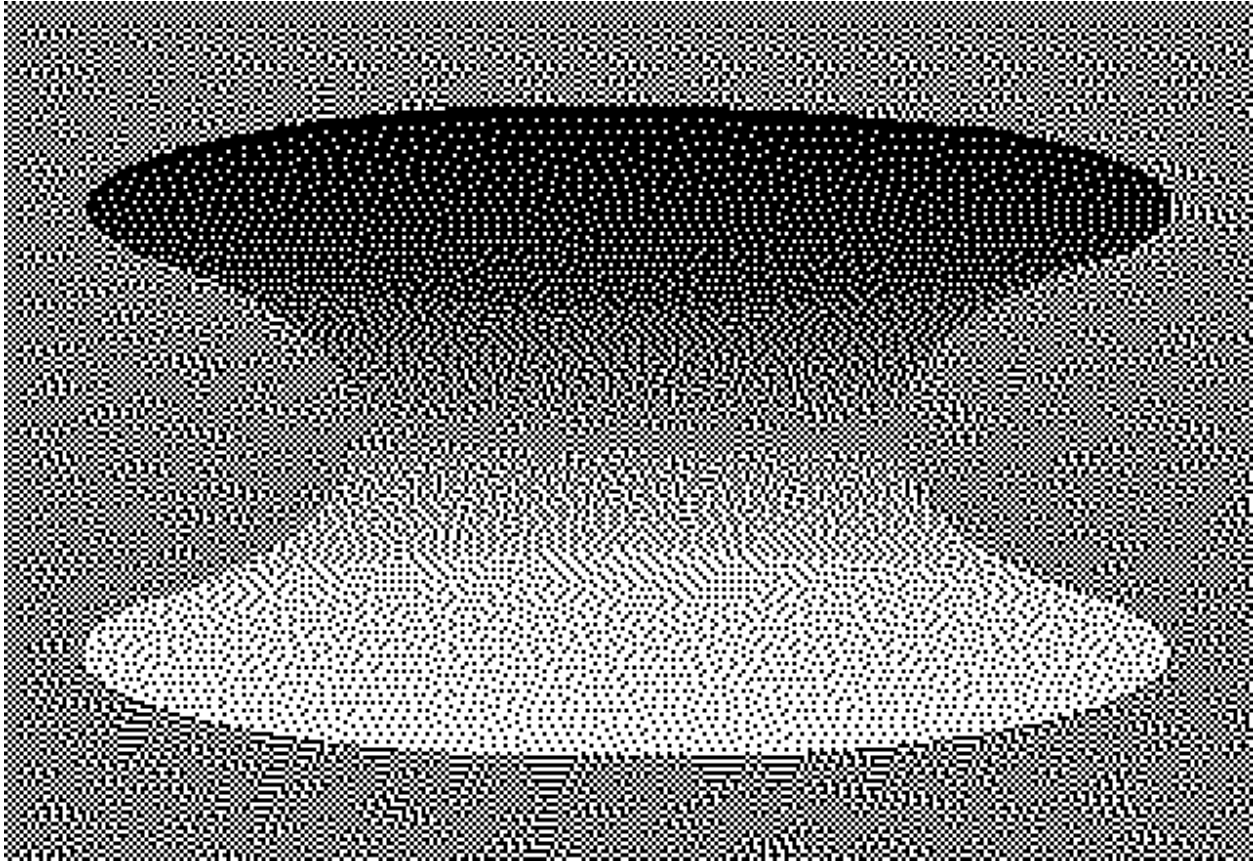


Figure 7: *Untitled error-diffusion, 2020*

The writing I am currently executing and the reading you are currently performing are also in this respect rituals of ideological recognition, including the 'obviousness' with which the 'truth' or 'error' of my reflections may impose itself on you.<sup>76</sup>

The mirror metaphor in the double constitution of the subject is important, because as we know, mirrors inherently distort to a degree, in that their image is always backwards, This slight distortion, in addition to what the mirror image reveals in the subject's simultaneous oneness and withoutness with the larger system, serves as the baseline incompatibility which drives the subject to transductively make sense

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76. Althusser, "Ideological State Apparatuses," 263.

of its place within the larger whole using teleological positing. Or in other words, as discussed above, the incompatibility is inevitable, it is part of preindividual inheritance and the motor through which individuation takes place; the incompatibility (inaccuracy) present in the mirror reflection is the precondition for the construction of ideology. It is one's milieu behaving as a sign relation: at once reflecting itself, and something other than itself, yielding an interpretation of the sign.

However, as we will discuss, the structure and presentation of this "mirror" will affect the subject's interpretation of the reflection and the ensuing transductive process of making sense of it. To describe how specific ideologies perpetuate, Althusser also uses a mirror metaphor; whereas in Simondon the individual inherits aspects of the preindividual through transduction, to Althusser the subject is interpellated in the image of a single *Absolute Subject*:

"all ideology is centered, ... the Absolute Subject occupies the unique place of the Centre, and interpellates around it the infinity of individuals into subjects in a double mirror-connexion such that it subjects the subjects to the Subject, while giving them in the Subject in which each subject can contemplate its own image."<sup>77</sup>

This presents an interesting interplay between two "individuals": the preindividual of individuation, and the Absolute Subject of subjectification as they are folded into the construction of the psychic being; the ratio of which determining one's ideological "accuracy." As we move from what may be described as basic lower level examples of this process, we may begin to imagine how specific social orders will perpetuate specific forms of ideology, with the Absolute Subject serving various purposes of subjectification.

Let us assume the previous examples of the genesis of the subject exist at a point on the ascending path topologically "closer" to the genesis of the psychic being than where we are now regarding the structuration of a globally oriented society of States. If we were to follow along the

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77. Althusser, "Ideological State Apparatuses," 268.

ascending path as specific subjects and ideologies develop transductively--some spinning off of the ascending path of collective development, others being blocked by the conditions which shape the subjectification process, we may begin to imagine different scenarios of subjecthood. Whereas a mirror always already "distorts" the image which it reflects, some instances of subjectification will more intensively distort the image of the subject and mystify it, alienating the individual from a subjecthood which in effect profanes its original being in the word. All ideologies are distorted in their reflection, this is the inherent incompatibility, *it is whether or not the subjectification process has rendered the subject capable of intuiting this incompatibility that is to be studied.*

For example, in societies where the ascending path (conscious collective flourishing) has been "blocked", incompatibilities are mystified in such a way that it is not visible to the subjected individual; the system is unresolvable; the preindividual potentialities stifled in order to maintain class incompatibilities, in effect reproducing a system which is actively detrimental to the subject upon which it relies. In this instance, ideology can correctly be understood as "upside down" or worse; however, this is only the result of the spatiotemporally specific transduction process which led to the particular social structuration in question.<sup>78</sup> In the next section we will discuss how the Absolute Subject of *The Individual*<sup>79</sup> is perpetuated by the psychosocial organizational order of the State Apparatus, the present day seemingly *immovable force* blocking the construction of ascending path, alienating subjects from their ability to truly make sense of the world.

First, I would like to re-emphasize that subjectification and ideology, like individuation, is inescapable. Just as the transductive path of individuation is dependent on its conditions so is the transductive path of subjectification. In this way, ideology does not have to exist upside down. If the desired ideology is to be imagined instead as a reflection of the preindividual of which the transindividual is ever increasingly incorporating, this goal will appear as a utopic incompatibility: a threshold which is

78. Marx and Engels, *German Ideology*, 42.

79. The Individual will be defined in greater detail below, but for the time being it is sufficient to know it is the historically constructed Absolute Subject of a particular manifestation of American capitalism and ruling class ideology that as we will discuss has been steadily dissipating across the globe.

unable to pass, but presents a constitutive and productive ascending pathway, and an incompatibility to partially resolve while developing and retaining the metastability of the system. The thermodynamic incompatibility of a hypothetical fully extended preindividual in *stable equilibrium*--as opposed to metastable equilibrium as previously discussed, is that in its genesis, it will exhaust *all of its potentialities*, finally reaching entropic heat death--the potentiality of which being one of the originary points of tension present in the preindividual to begin with.<sup>80</sup> This awareness of the potential to exhaust the preindividual can be seen as an awareness of the material constraints of a closed system, of the potential to exhaust resources, and of a manner of reproducing a collective transindividual aware of this scarcity, continuing what Lynn Margulis calls “the ancient struggle against thermodynamic equilibrium,” *collectively*.<sup>81</sup>

We must imagine closing the loop of reflection between the preindividual and the Absolute Subject making them one in the same, closing the metabolic rift of ideology and creating a circuit of subjectification and individuation which constructs the ascending path at the benefit of society. In such a transindividually centered society, incompatibilities would be immediately metabolized, gradients reduced productively at the benefit of the transindividual,<sup>82</sup> or as Marx described in *The German Ideology*:

Within communist society, the only society in which the genuine and free development of individuals ceases to be a mere phrase, this development is *determined precisely by the connection of individuals*, a connection which consists partly in the economic prerequisites and partly in *the necessary solidarity of the free*

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80. Margulis and Sagan, "Wind at Life's Back," 212. "Equilibrium—reduced gradients or a state of spread-out, used up energy—retrocausally influences the behavior of complex systems, living and nonliving. But there is nothing mystical about this natural purpose and purposefulness, nor does it depend upon natural selection (which may hone it). Neither conscious purpose nor natural selection is required to account for perceived “purposeful” processes such as thermoregulation”; cf. Simondon, "Genesis of the Individual," 301-02. “Stable equilibrium excludes the idea of becoming because it corresponds to the lowest level of potential energy possible; it is the sort of equilibrium that is attained in a system when all the possible transformations have been achieved and no other force remains to enact any further changes. With all the potentials actualized, and the system having reached its lowest energy level, it can no longer go through any more transformations.”

81. Margulis and Sagan, *What is Life*, 72.

82. To a degree in which basic teleological positing may become the primary mode of incompatibility resolution. Additionally, the transindividual should be understood as symbiotically incorporating natural and physical processes as well as human, in this way presenting an ecologically minded worldview.

*development of all, and, finally, in the universal character of the activity of individuals on the basis of the existing productive forces.*<sup>83</sup>

When I speak of the development of the ascending path, it is this free development for all that I speak of, not only of the human, but of the entire transindividual collective, utilizing the infinite potentialities of transduction to close metabolic rifts--both of energetic and ideological varieties. Whereas the original genesis of the subject simply reflected the subject's position in the world, it is the goal to build towards a transindividual subject which reflects back its preindividual origins, folding the fully expressed potentialities of the preindividual back into the material via the actions of the transindividual collective. In constructing the ascending path, our attempts to build individual consciousness from the ground up is always already superseded by the goals of the ruling class--which is where we will look next, in an attempt to better understand the methods of modern subjectification

As we move out of the realm of what truly constitutes a human individual: individuation, subjectification, and ideology *in general*, I would like to emphasize the goals of having spent the time doing so; this was ultimately intended to be a demonstration of: 1) the universalizing genealogy and potentialities of the "ascending path" that is the individuation process; 2) The dynamism and variance in expression of the universal process of individuation and transduction as it leads to various living and nonliving individuals; 3) a study of the effects of a particular individuation--that of the psychic being, which like the individual-milieu dyad before it produced the subject-object dyad, that of the self aware individuator understanding their world; and 4) discussing the similarities of the individuation process and the subjectification process, particularly its continuous unfolding and responsive development over time. Just as ideology is made material by the subject, the preindividual is made material by the individual, both of which contextually amalgamating to different degrees into a single being

Now that I have discussed the full preindividual potentiality of which we are an active participant and constituent, we must now view the ideological reality in which much of the world lives--the actual

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83. Marx and Engels, *German Ideology*, 465 (emphasis added).

state of the ascending path, the unfortunate alienating potentialities of subjecthood made actual. This means turning our attention more intently to the modern apparatuses of "class society," or more specifically: of the growing capitalist global hegemony which interpellates individuals into subjects in the image of "The Individual" at ever increasing levels. This is where the totalizing *descending path* of subjecthood, as it is wielded by the ruling class to maintain--as opposed to resolve--social incompatibilities, is actualized to undermine the universalizing tendencies of the preindividual: the true animating force of the individual.

## Part II: Reality

## THE DESCENDING PATH

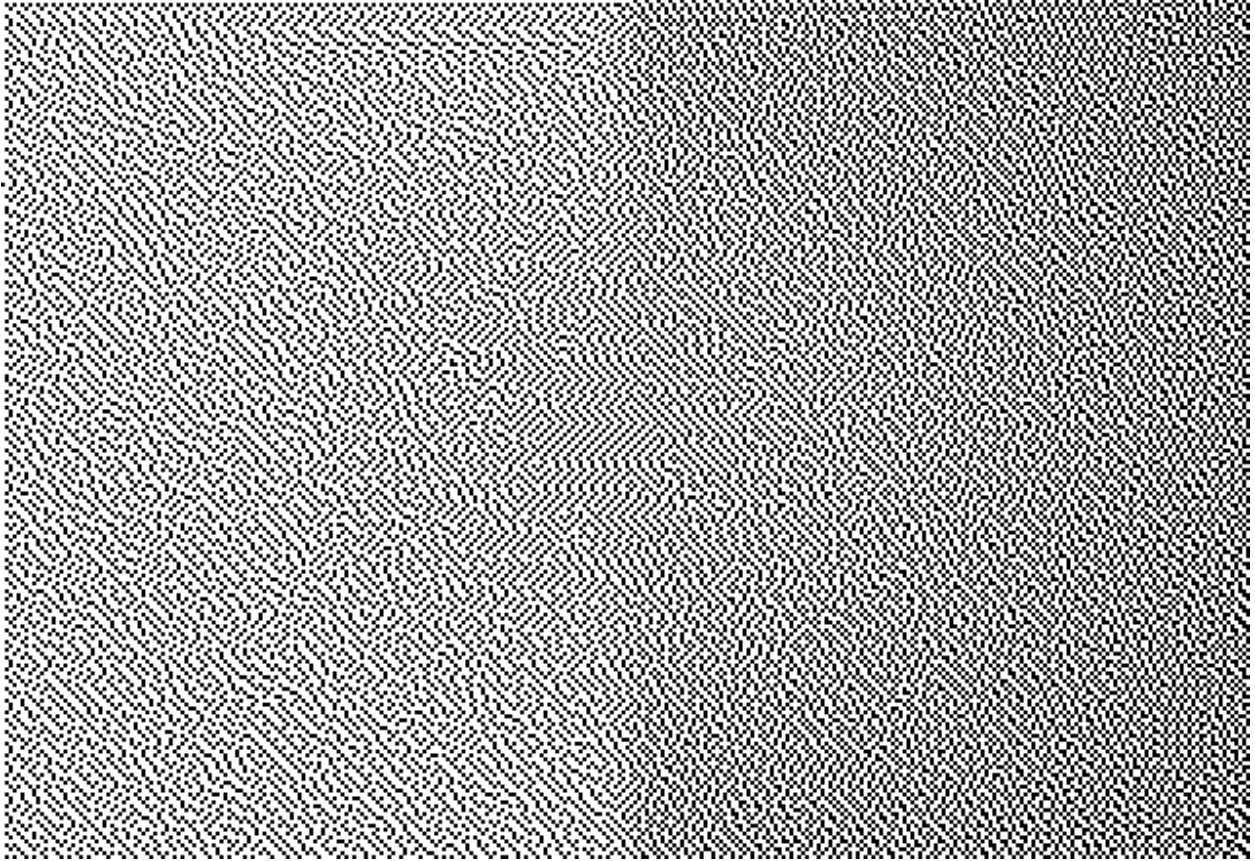


Figure 8: *Untitled error-diffusion*, 2020

In order to exist, every social formation must reproduce the conditions of its production at the same time as it produces, and in order to be able to produce. It must therefore reproduce:

1. the productive forces,
2. the existing relations of production.<sup>84</sup>

What is represented in ideology is therefore not the system of the real relations which govern the existence of individuals, but the imaginary relation of those individuals to the real relations in which they live.<sup>85</sup>

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84. Althusser, "Ideological State Apparatuses," 233.

85. *Ibid.*, 258.



Moving from the utopic potentialities of a theory of universality and collective becoming, we must now face the sobering incompatibilities of the present reality: an Absolute Subject which does not reflect the preindividual ontogenetic origin of the individual; in effect undermining its transductive ancestry, camouflaging glaring contradictions.

We may wonder what use there is in reflecting and perpetuating such a distorted image of the Subject; In *Ideology and the Ideological State Apparatus*, Louis Althusser argues that much like the equipment of a factory needing to be maintained and reproduced to continue functioning, so too do the subjects of a given system; this combined effort accounts for the continued reproduction of the productive forces of a society by the ruling class, and thus the system as a whole.<sup>86</sup> In this way it can be said that the subjectification process (much like individuation) is continuous, not a one time interpellation.

In order to achieve this continued reproduction of an alienated subject, severe modifications to the relations of production would have to take place, being subject production via ideology, as discussed earlier, is simply the individual's imaginary relation to the real relations in which it lives, and its imagination is in turn affected by its surroundings.<sup>87</sup> This would require the subject, in its making sense of the world, to develop the reflection of a Subject so distorted, that it mystifies the being's relationship to its relations of production, because *they are always relations of exploitation*.<sup>88</sup> If the individual were to be reflected its true conditions by The Subject, the incompatibilities would immediately be visible. This would increase the probability of a transductive unity being realized and a resultant class consciousness acting and responding to their world in unison--obviously not the desired outcome of the ruling class.

In this way it is crucial that the individual be engrossed at all times in an ideology which perpetuates the system; an ideology which conceals; an ideology which envelops the subject at every turn.

This is the process by which the superstructure intervenes in and shapes the base;<sup>89</sup> the superstructure of

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86. Althusser, "Ideological State Apparatuses," 233-36.

87. Ibid., 258.

88. Ibid., 270.

89. Ibid., 270.

the subject, by way of ideology, intervenes with the base of the individual, in turn modifying the being's ideological understanding of its being in the world.<sup>90</sup>

As previously mentioned, this phase change of ideology being turned inward against its constituents is similar to the phase change of the psychic being. Instead of the physical processes which comprise the psychic being simply being lone individuators, "making sense of their world" by reducing gradients which respond to their umwelt, they become part of a larger "social" whole which determines the limits of their existence--suddenly they are making sense of their environment as a means of continuing the function of their host psychic being. For example, my microbiome may play an active role in determining and maintaining my health as an individual, but in the last instance it is my decision whether or not to drink bleach.<sup>91</sup>

The subject in an exploitative class society functions similarly: it continues reproducing itself while consciously making sense of its environment--in so far as it exists to maintain the functioning of the system of which it is embedded; while ultimately it is the system itself which determines its conditions for reproduction. It follows, then, that particular societies, as they develop, certain individuations may occur which reframe and constrain the very act of making sense of one's world. In these societies, The Subject is *given*--it is not transduced, for the sole purpose of continuing the system; it is the *opposite* of the preindividual (as opposed to its reflection). This is the totalizing descending path which undermines the universality of individuation and subjectification: the current state of our world. It must function automatically, it must appear invisible--or better, those which perpetuate it, and those which are subjectified (which always become one in the same) must believe to exist *outside of ideology*; to be non-ideological.<sup>92</sup>

It should be noted that this functions outside of outright coercion or violence--that is, physical

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90. See note 65 regarding definition of base and superstructure.

91. This is of course hyperbolic. The goals of constructing a transindividual subject is constructing the awareness of the codependence upon these lower level processes, just as a society constructed by the transindividual would acknowledge this same codependence.

92. Althusser, "Ideological State Apparatuses," 264.

repression. The subject must not be aware that they are being produced. What becomes necessary, then, are private institutions, or *apparatuses*, to help modify the way in which individuals make sense of the world as subjects, thus modifying the image of the Subject. To help understand this distinction, let us look once again to *Ideology and Ideological State Apparatuses*, in which Althusser builds upon the pre-existing concept of the State Apparatus (the means by which state power is enacted and thus maintained by the ruling class),<sup>93</sup> which was traditionally viewed simply as physically repressive in its function, by demonstrating the State Apparatus is composed not only of what he calls *The Repressive State Apparatus*: which functions by violence and is traditionally *public* (the army, the police, prisons, etc); but also the *Ideological State Apparatuses*, which function ideologically and are traditionally *private* (education, religion, politics, culture).<sup>94</sup>

The entire history of class struggle which produces the subject revolves around the wielding of state power, and it is through the comingling of both the Repressive and State Ideological Apparatuses that this is accomplished,<sup>95</sup> they are not always clearly delineated as we will see later.<sup>96</sup> The Ideological State Apparatuses serve as various modes of intervention between the superstructure and the base, they are designed not *to program* in the traditional cybernetic sensor, but to *nudge* individuals toward reproducing ideology, by making the very force which reproduces them as subject appear as outside of ideology, or rather, "just the way things are."<sup>97</sup> Where individuation is about resolving disparities, subjectification as it is enacted by the Ideological State Apparatuses *maintains* disparities that would otherwise reflect the subjects alienation back to them.

The disparity between the descriptive functioning of reality (the universality of the process of

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93. Ibid., 239.

94. Ibid., 239-243. Althusser believes educational ISA to be most powerful, with the church serving as the previously most powerful. I will be dwelling mostly on other ISAs as they have shaped The Individual, which must be understood as a class-based *collective response*. Instead of an absolute transindividual collectivity it is a small collectivity of ruling class apparatuses, each of which contributing to subject production in different degrees.

95. It should be emphasized that the state, much like ideology, is not *inherently* repressive, it is the way in which the State has been organized which determines its repressive tendencies. Viewed in general it is simply what I referred to earlier in this text as the psychosocial domain and its organization. We will return to this later in the text.

96. Althusser, "Ideological State Apparatuses," 244-45.

97. Ibid., 242-43.

individuation we share with the universe; the way the universe actually functions) and the prescriptive form of reality (the separation of ideology from the control of individuals by the Ideological State Apparatuses; the universe as it is given) has been demonstrated; before getting into specific examples of the apparatuses which enact this incompatibility, I would like to spend a moment discussing the specific ideology in question, as it reflects "The Individual" as its Absolute Subject, and the characteristics of this subject.

# THE INDIVIDUAL

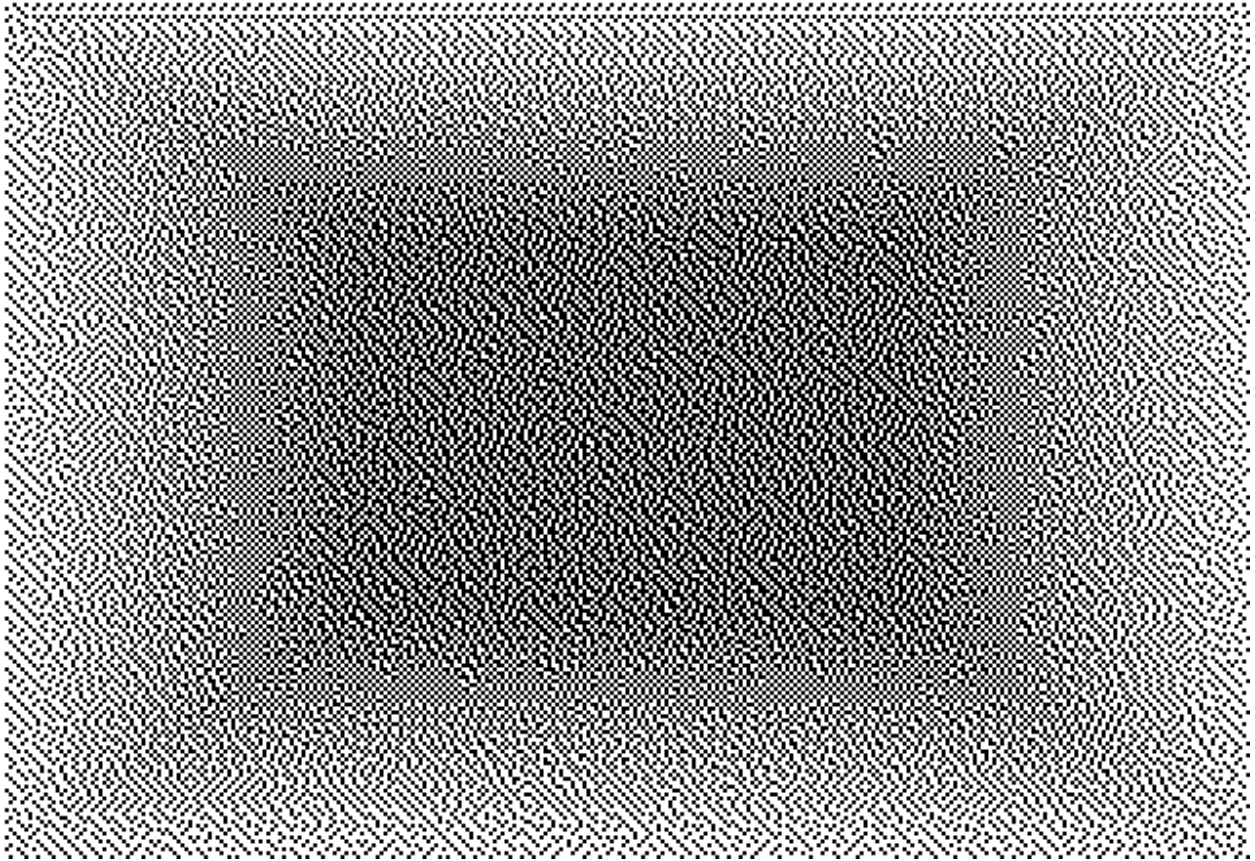


Figure 9: *Untitled error-diffusion*, 2020

Let me move straight on and see what happens to the 'individuals' who live in ideology, i.e. in a determinate (religious, ethical, etc.) representation of the world whose imaginary distortion depends on their imaginary relation to their conditions of existence, in other words, in the last instance, to the relations of production and to class relations.<sup>98</sup>

Production by an isolated individual outside society ... is as much of an absurdity as is the development of language without individuals living together and talking to each other.<sup>99</sup>

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98. Althusser, "Ideological State Apparatuses," 258-59.

99. Marx, *Grundrisse*, 84.

For The Individual to properly function, everyone in a society must be subjected to its image, not just the exploited.<sup>100</sup> In this way it is difficult to place the prime mover of The Individual. One may imagine the "making sense of the world" of early accumulators or capitalists some half millennia ago as the originators of this particular ideology; as the mode of production spread and they made their way into the ruling class, so did its ideology, morphing the imagination of all involved. While the ontogenesis of The Individual is impossible to locate spatiotemporally, and not functionally important, it was arguably born as early as the enlightenment, undoubtedly accelerated during the Cold War, further honed by Neoliberalism, and always functioned (and continues to function) within an apparatus.<sup>101</sup> (For the sake of this text we will be focusing on the historical period of mid-century America up until the present moment.) Currently, The Individual--that is, The Absolute Subject which interpellates individuals via the ruling class ideology of capitalism (Capital's very own "making sense of the world"), is poised and ready to continue to resolve any incompatibilities in its incredibly fragile and crisis laden system--*only insofar as the incompatibilities are inhibiting the continued functioning of the system*, rather than the increasing alienation of the concrete individuals which reproduce the system.

In this way, the Individual is incredibly talented at reducing gradients,<sup>102</sup> and has been doing so since its genesis, each crisis yielding a partial resolution which may temporarily resolve the crisis in the system, but always heightens the incompatibility and alienation of the working class, thus, the system itself. What is created in these purposeful gradient reductions is a larger and larger hidden gradient of

100. Althusser, "Ideological State Apparatuses," 236. "All the agents of production, exploitation and repression, not to speak of the 'professionals of ideology' (Marx), must in one way or another be 'steeped' in this ideology in order to perform their tasks 'conscientiously.'" Marx citation is contained within the original quote.

101. Althusser, "Ideological State Apparatuses," 259. "An ideology always exists in an apparatus, and its practice, or practices. This existence is material."

102. For a similar Marxist discussion of the "talents" of the bourgeoisie see Berman, *All That Is Solid*, 101. "Marx's imagery projects, here as ever, a sense of wonder over the modern world: its vital powers are dazzling, overwhelming, beyond anything the bourgeoisie could have imagined, let alone calculated or planned. But Marx's images also express what must accompany any genuine sense of wonder: a sense of dread. For this miraculous and magical world is also demonic and terrifying, swinging wildly out of control, menacing and destroying blindly as it moves. The members of the bourgeoisie repress both wonder and dread at what they have made: these possessors don't want to know how deeply they are possessed. They learn only at moments of personal and general ruin--only, that is, when it is too late."

alienation--these gradients are blocked by the Absolute Subject of The Individual. It should be our intent to make this gradient visible, to once again seize the means of subject production, this is the only way to build a transindividual subject capable of acting in unison to resolve its ambient incompatibilities. We will return to this topic soon, as it is not as simple as "changing people's minds," or individual action--for now, let us continue to unpack The Individual.

Instead of understanding the individual as set forth above, that is: 1) a universal process--not strictly a human; 2) comprised upwards and downwards in scale of more individuals; 3) not just the host and member of collectives of collectives, but embedded in a milieu--that is, not existing in a vacuum; and 4) partially reconciliatory of the perceptible incompatibilities within the nexus of systems within which it is emplaced.

The Individual, as it interpellates subjects in its image is always human,<sup>103</sup> always isolated (from society and from its milieu--acting independent), always rational (maximizing utility and acting on all available information)<sup>104</sup>; always free (to express themselves insofar as it maintains the system). This can be understood as *the logic of the system (ideology) made material and enacted via the concrete individual*, as these are qualities which both camouflage the alienation concrete individuals are experiencing in the world, and produce the means to continue reproducing the system. This is to be understood as a *continuous interpellation*,<sup>105</sup> beginning arguably before the individual's birth, to such a degree that depending on your level of subjectification, it could be argued that you are acting on behalf of the system, you are making flesh the invisible hand of the market, this is what Althusser means when he

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103. This is not to say the logic of The Individual and atomism *in general* isn't transposed onto other nonhuman objects, concepts, or disciplines; historically, the idea of isolation and reduction have dominated views both scientific and philosophical regarding the behavior of systems. These more general assumptions are the same as those which lead to the development of The Individual in the first place.

104. See Steyerl, "Why Games," and Fox, *Rational Market*, for discussions of this lineage of rationality.

105. Althusser, "Ideological State Apparatuses," 265. "Thus ideology hails or interpellates individuals as subjects. As ideology is eternal, I must now suppress the temporal form in which I have presented the functioning of ideology, and say: ideology has always-already interpellated individuals as subjects, which amounts to making it clear that individuals are always-already interpellated by ideology as subjects, which necessarily leads us to one last proposition: individuals are always-already subjects"

says subjects "work all by themselves."<sup>106</sup>

In the wake of all discussed previously in this text, the isolated human element of The Individual is an obvious inaccuracy: it Ptolemaically centers the individual, ignoring the milieu within which the being is emplaced and the individuals it constitutes and hosts, while normalizing atomism and isolation. This is not to say it isn't a targeted vector of subjectification of The Individual;<sup>107</sup> but rather, for the purpose of this work, we can locate a more generative pairing at the intersection of The Individual *as it represents the physical embodiment of American capitalist ideology*, and the fact that this ideology is viewed as *rational*. It allows us to view the historical unfolding and development of this particular ideology over time, as elements of the system (and understanding of the system) began to instead reflect the core tenets of The Individual onto the concrete individuals it subjected. In other words, the ideological framework of neo-classical economists as they sought to understand the market, and military Operations Research specialists as they sought to better strategize decision making via game theory and cybernetics (as well as the attempt to correct the emergent incompatibilities within the ideology), synthesized in a way to shape not only the way in which the human is understood and reproduced, but the market and military industrial complex as well; thus The Individual; thus the individual.

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106. Althusser, "Ideological State Apparatuses," 269.

107. I am referring to the intentional amplification of these characteristics in the overall transmission of ideology through the ideological apparatuses.



# PROGRAMMING THE CYBERNETIC TECHNOHUMAN

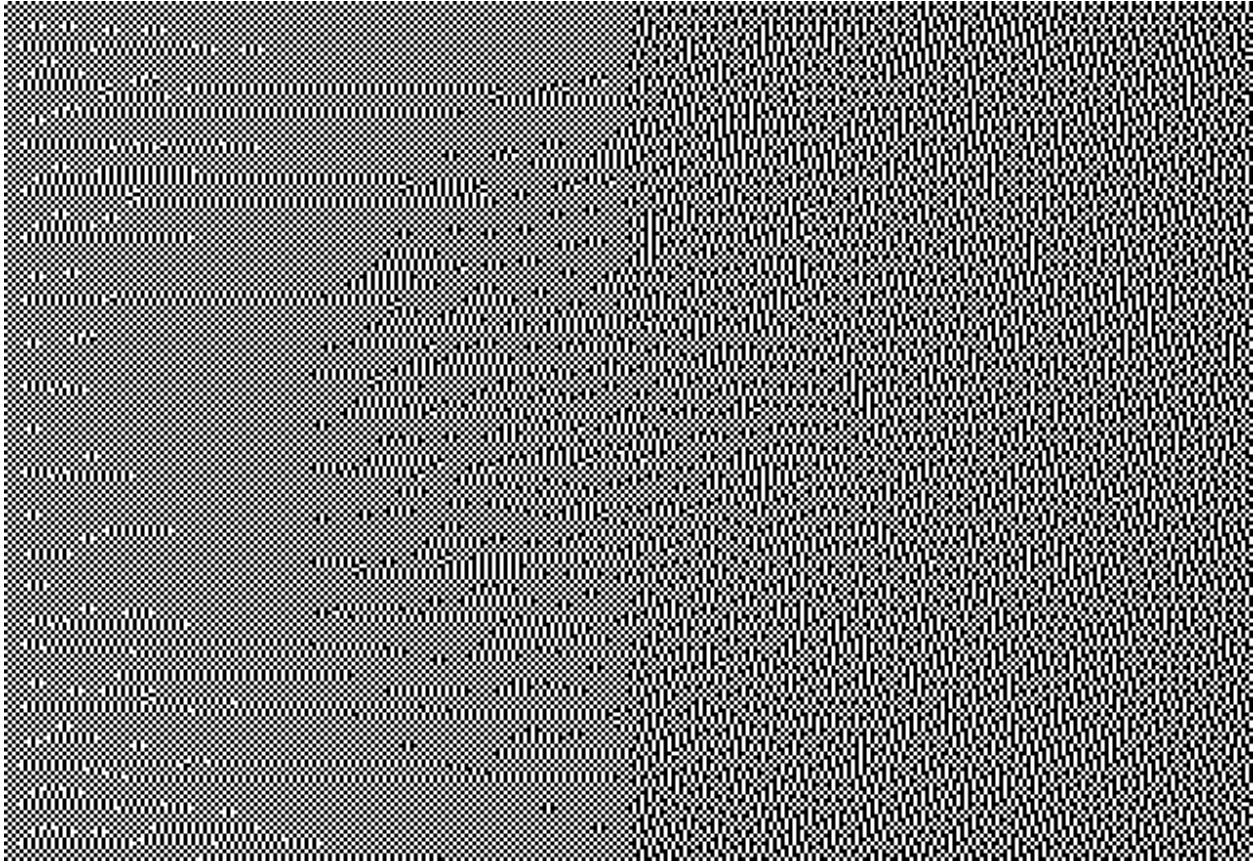


Figure 10: *Untitled error-diffusion*, 2020

The relevant question to ask about the "assumptions" of a theory is not whether they are descriptively "realistic," for they never are, but whether they are sufficiently good approximations for the purpose in hand. <sup>108</sup>

The Cold War generated the conditions and the modes of thinking that enabled neoliberalism to take root as the latest nonideological ideology. <sup>109</sup>

Very subtle explicit or tacit combinations may be woven from the interplay of the (Repressive) State

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108. Friedman "Positive Economics," 15.

109. Beck and Bishop, *Technocrats of the Imagination*, 15.

Apparatus and the Ideological State Apparatuses? Everyday life provides us with innumerable examples of this, but they must be studied in detail if we are to go farther than this mere observation.<sup>110</sup>

I would now like to discuss one real world historical instance in which the Repressive State Apparatus and the Ideological State Apparatuses collaborated to perpetuate the ideology of The Individual insofar as it is a rational actor. To present a very brief and oversimplified developmental model, the origin and trajectory of this element of *maximizing utility* was born from the question of the determinant factor of value, which asked if the value of a commodity was in its production (labor) or in its usefulness (utility, satisfaction, derived pleasure)?<sup>111</sup> The answer to this question increasingly became the latter, dawning the age of the supply and demand curves and neo-classical economics, which appeared to accurately depict market mechanizations by imagining consumers as "rational individuals maximizing utility,"<sup>112</sup>--that is, behaving logically.<sup>113</sup> From here the invisible hand of the market is reified: if utility sets prices, and individuals always maximize utility, it should follow that the price is correct, the rational actor makes the market work *all by itself*. The concept of utility was later expanded to encompass probabilistically determined desired outcomes in an attempt to understand the process by which utility was calculated and maximized by the advent of game theory and the work of John von Neumann.<sup>114</sup> These theories were applied to economic and military interactions--as "markets and wars could equally be represented as games", or rather, zero-sum games. Actors in these scenarios are said to be acting rationally, responding to a situation logically with all available information.<sup>115</sup>

With both cases forwarding the very same premise, on one hand this creates a mathematized and probabilistic military playing field of human automatons calculating risk and desired outcome, setting the

110. Althusser, "Ideological State Apparatuses," 244-45.

111. Fox, *Rational Market*, 10; Wolff and Resnick, *Economic Theories*, 68; and King and McClure, "Concept of Value," 6.

112. *Ibid.*, 30.

113. King and McClure, "Concept of Value," 6. The supposed logical aspect comes from "marginal utility" which is the consumer weighing their consumption choices off of past consumption, i.e. "the consumption of the 10th unit of a good is [determined] by the individual having already consumed 9 units of that good, and so on."

114. "ASC Glossary," 59; Fox, *Rational Market*, 50-51.

115. Steyerl, "Why Games," 156.

stage for World War II, the Cold War (and the resulting sphere of Individualized strategists and think tanks); on the other hand it presents us with the dawn of the *Neoliberal Individual* as championed by Milton Friedman: conscious and rational; awash in a sea of information; always already seeking maximum utility. With a few tweaks to von Neumann's theory of expected utility, Friedman and his ilk believed they could describe the way humans make economic decisions: not only do they maximize utility, "individuals behave *as if* they calculated and compared expected utility and *as if* they knew the odds."<sup>116</sup> It is at this juncture where an interesting revelation occurs: humans are in fact *not* rational actors, *never* have *all* available information, and thus, *don't* respond in the way in which these theories were predicting. This presented two problems (incompatibilities), which were "resolved" differently in each apparatus, military and economic, respectively.

Within the Repressive State Apparatus of the military, because these theories were developed in part for strategic military operations (which it should be stressed, the purpose of which were to uphold and reproduce growing American hegemony), as tensions grew before and during World War II, this role of The Individual as a rational actor calculating risk in the face of wartime conditions became crucial to uphold. The absence of this reflection of The Individual on the concrete individual was a glaring incompatibility--as we know, individuals *never* have all available information,<sup>117</sup> we simply respond to information *subjectively*. As opposed to correcting this assumption, instead it can be argued, as Hito Steyerl does in *Why Games, or, Can Art Workers Think*, that the computer (already in early development) would take the place of the absent subject, in effect extending the phenotype of the human to

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116. Fox, *Rational Market*, 75.

117. This information gap which limited the human's rational potential was not viewed as indicative of a failed heuristic, but instead just that--a lack of information, that is, easily resolvable with more information. With enough information, it doesn't matter if your models are wrong. (Steyerl 2017, 160-61) This forms the unity of utility theory and data science. "The individual is still rational, we simply must acquire more information to further tune this rationality." "The market reflects the true price value, we simply must acquire more information to further tune this accuracy." This is not to say the collection of data in general is dangerous, certainly there are instances in which it would be beneficial if properly implemented for the purposes of a unified global transindividual flourishing. (Phillips and Razworski 2019, 211-13) However, it is simply a fact that under the current social order, data collection is always used to perpetuate the system by means of it being easier to predict, model, and in effect control, thus serving as another ideological node of The Individual as it makes sense of its world by way of the narrative arc set forth by the genesis of the rational actor maximizing utility.

incorporate--and be incorporated within--computers:<sup>118</sup>

For Neumann, the computer is, so to speak, a rational game player. It is also a creative solution to the problem that the world didn't comply with the fictions of economists, strategists, and mathematicians. If adapting the model to reality was too difficult, one could always change the world according to the fiction. If there was no rational agents, why not create ones?<sup>119</sup>

Within the economic Ideological State Apparatus, Friedman did not create an extension of the human to make his theory work, but instead (in a strange act of perfectly describing ideology) believed that theories were never supposed to be realistic in the first place--so long as they functioned accurately in predicting market machinations--the reasoning behind this is justified with an anecdote of a billiard player: despite being incapable of writing down the physics behind their shot selection, they behave as if they were aware.<sup>120</sup> This viewpoint would develop over time into the aforementioned Neoliberal Individual: the merging of market logic with human logic; shaping the development of economics and finance towards the "efficient market hypothesis," which is the market manifestation of The Individual as it interpellates not just humans but entire institutions in its image.

These incorrect models used for (militarily and economically) making sense of the world--that is, ideological models--despite their factual inaccuracies, joined forces and began to shape the very concept of what it means to be a human. The human-computer assemblage in its new rational capabilities, came to be enveloped within The Individual, maintaining their false rationality by association, while the inaccuracies of the human actor which enacted the "models" were set aside in favor of a functioning, yet highly abstract, model: an unresolved incompatibility. This transductive unfolding, in its models, implementation, phase changes, and development, serves as but one piece of the totalizing mirror which

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118. Dawkins, *Extended Phenotype*, 200. "By building a dam across the stream the beaver creates a large shoreline which is available for safe and easy foraging without the beaver having to make long and difficult journeys overland. If this interpretation is right, the lake may be regarded as a huge extended phenotype, extending the foraging range of the beaver in a way which is somewhat analogous to the web of the spider.." Ironically, this concept of the extended pheontype--and many of Dawkins' theories, described differently, present a world in which all organisms consciously maximize utility.

119. Steyerl, "Why Games," 157.

120. Fox, *Rational Market*, 75-76.

reflects an imaginary representation of the human's real relations back to them in the form of The Individual--the material enactment of the ideological form of American mid-century capitalism and beyond as it is shaped by its own imaginary understanding of its "real" relation to the world. Make no mistake, the computer is a useful tool, but it should not destroy what are believed to be qualities inherent to humanity.

At this point, it is possible that there may be confusion regarding any perceived similarities between the rational human maximizing utility and the transductive individual as it individuates. However, I would say that transduction falls on the opposite side of the original dispute over value which began this section: transduction is the process of labor producing value--the productive forces of material reality. Value is produced via the shared production of reality, as opposed to any particular perceived utility produced via individuation, as this would inevitably lead to an ontological privileging of certain "levels" which is not the goal of a transindividual unity. Additionally, the preindividual is anything but rational--its entire existence is precluded on an inherent incompatibility with itself, not rational stable equilibrium. In this way it should not be surprising that humans couldn't live up to their rational expectations, but the model was never intended to be true--just to reproduce the system. Once again, The Individual only reduces advantageous gradients, ironically in that way it manages to successfully maximize utility, but only the utility of the system, while ignoring the incompatibilities within the social relations which perpetuate it, and the increasingly alienating Subject which interpellates on its behalf.

Interestingly enough, the realization that humans "do dumb things" did not lead to an abandonment of efficient market hypothesis, instead it led to behavioral research dubbed "libertarian paternalism" in which the goal was to "nudge" the irrational actors towards rationality.<sup>121</sup> The Father in this instance is of course The Individual which serves the purpose of only one thing, reproducing the current social relations via the continued maintenance of market stability. In many ways, despite appearing late in the game compared to the rational actor, nudging--as I have previously described--can

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121. Fox, *Rational Market*, 295.

be conceived as the primary method of subjectification: the sum total of a life's worth of ideological steering. Next we will look at examples of this steering as it was conducted by the Central Intelligence Agency around the same time Milton Friedman was modifying John von Neumann's utility theory--but first, an interlude regarding *intention* in the reproduction of ideology

## INTERLUDE: FUNCTIONAL IRRELEVANCE

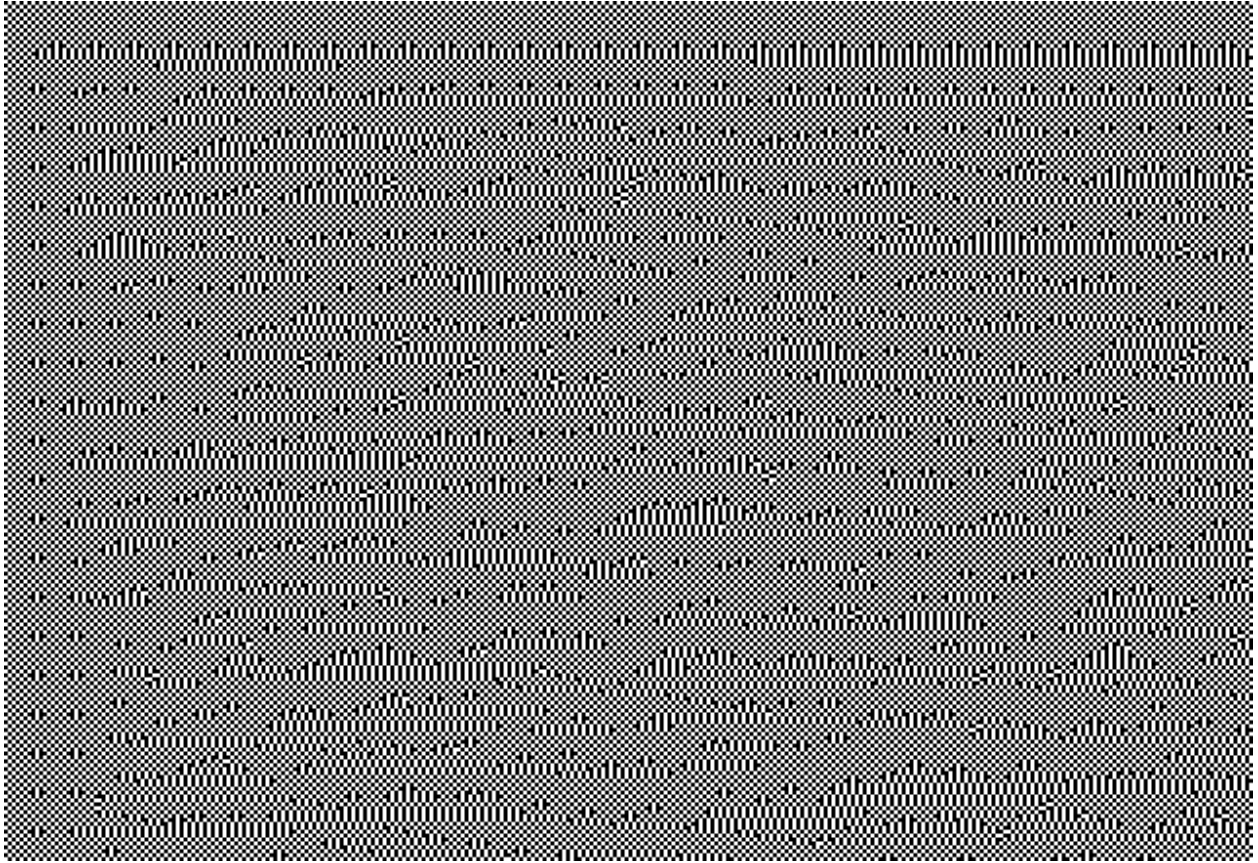


Figure 11: *Untitled error-diffusion*, 2020

The individual is interpellated as a (free) subject in order that he shall submit freely to the commandments of the Subject, i.e. in order that he shall (freely) accept his subjection, i.e. in order that he shall make the gestures and actions of his subjection ‘all by himself’. There are no subjects except by and for their subjection. That is why they ‘work all by themselves’.<sup>122</sup>

Despite the advent of the human-computer assemblage via military and economic ideological proliferation reifying the human's role as a rational actor, not only was the human not rational, even with its newly (imaginarily) extended phenotype, it was not programmable either. Nevertheless, the co-

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122. Althusser, "Ideological State Apparatuses," 269.

development of cybernetics as a method of understanding and controlling systems, and a heightening Cold War vying for ideological supremacy, led to a desire to win at any cost; which is to say, there were attempts made at direct subjectification--that is, mind control. During this time the human mind, along with most systems, were understood to behave cybernetically, or with determinate causality, just like the computers upon which we reflected The Individual, and those causal chains were attempted to be decoded with drugs and hypnosis in an attempt to program the human mind.<sup>123</sup> As discussed earlier, this is of course not possible due to the n-dimensional degrees of freedom of the human mind and all attempts were deemed failures, but what this goes to show is that the inaccurate models of The Individual reproduced all as subjects, not just the exploited,<sup>124</sup> and through continued subjectification by The Individual, they began to attempt to perpetuate the ideology at all costs. The ideology was in danger, and it needed the support of its institutional constituents in the apparatuses.

We must pause for a moment to reflect and understand that ideology as it circulates in class society serves numerous functions, all of which, as we discussed earlier, are conducted through a dual articulation of ideology only being constitutive of the subject insofar as the subject is also constitutive of ideology; what this means is: yes, ideology reproduces the subject, reproduces the institutions, and reproduces the subjects which reproduce the institutions, *but at the same time*, it is the institutions and subjects, via their material forms of existence which reproduce the (imaginary) ideology; ideology without a subject is nothing.<sup>125</sup> This is how the ideology makes sense of itself, through its material enaction by an apparatus--or more specifically: through a concrete individual's perpetual subjectification, the *ideological* practices of an apparatus or institution are enacted *materially*.<sup>126</sup> All of this is to say: the scientists, Operations Research specialists, Central Intelligence Agency operatives, and the "subjects" of

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123. Blum, *Killing Hope*, 53; cf. Lilly, *Human Biocomputer*. The title of which serves as the inspiration for this chapter title. John Lilly and I have both been put in strange places on account of our research and common interests studying human consciousness (even if his view happens to be more *cybernetic* than mine). His research was being subsidized by the military and mine by The University of California San Diego..

124. Althusser, "Ideological State Apparatuses," 236.

125. *Ibid.*, 262.

126. *Ibid.*, 258.



their mind control experiments, were all subjected to the same ideology,<sup>127</sup> and in turn reproduced it to varying degrees.

One may wonder if those which experimented with mind control were consciously reproducing the ideology of The Individual, or simply functioning as a sufficiently subjectified Individual, and thus unconsciously (unintentionally) reproducing the ideology. Additionally, one might also wonder functionally what difference there is between mind control and the nudging which I have previously described. Ultimately, ruling class ideology functions with what might be described as *functional irrelevance*: the means may differ, but the ends remain the same.

In other words, despite plenty of efforts, direct mind control is far less efficient (and far more energy intensive) than a simple ideological nudge--or rather, the sum total of a lifetime of subjectification to The Individual, may be functionally indistinguishable from mind control. This is the *passive* ("non-repressive") form of coercion possible through ideology; the tried and true method.<sup>128</sup> You cannot program humans with determinate causality (x input = y output); however, as mentioned, you can nudge towards a goal. That goal of course being the continued reproduction of the system:<sup>129</sup> the social, political, and economic organization as it is expressed through the material existence of concrete individuals in the image of The Individual. So in this way perhaps mind control was a success after all, just through wildly different means than traditionally understood, or in other words: despite our inability to be programmed

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127. Ibid., 236; also see O'Neill, *Chaos*, 354-55. CIA Project MKULTRA made attempts at mind control, sometimes even using their experiments on themselves.

128. For an official U.S. military strategist presentation of the tactical potential and applications of PSYOP or Psychological Operations internationally, see Goldstein and Jacobowitz, "Psychological Operations." 5. "PSYOP is a vital element within the broad range of US political, military, economic, and ideological actions. Properly employed, PSYOP reduces the morale and combat efficiency of enemy troops and creates dissidence and disaffection within their ranks. Psychological operations can promote resistance within a civilian populace against a hostile regime or be employed to enhance the image of a legitimate government. The ultimate objective of American PSYOP is to convince enemy, friendly, and neutral nations and forces to take action favorable to the US and its allies." Again this shows the interplay between the Repressive and Ideological wings of the State Apparatuses, and presents the active interest shown in nudging subjects towards compliance.

129. Althusser, "Ideological State Apparatuses," 245. "Given the fact that the 'ruling class' in principle holds State power (openly or more often by means of alliances between classes or class fractions), and therefore has at its disposal the (Repressive) State Apparatus, we can accept the fact that this same ruling class is active in the Ideological State Apparatuses insofar as it is ultimately the ruling ideology which is realized in the Ideological State Apparatuses."

as such, *functionally, subjectification and mind control are indistinguishable.*

I would like to discuss one way in which this ideological nudging, or pseudo mind control, was conducted by way of the intentional (purposeful) and covert amplification of the nascent-but-not-yet-by-any-means dominant painting style of Abstract Expressionism by the Central Intelligence Agency and its private interlocutors. Once again demonstrating an intersection of the Repressive State Apparatus and the Ideological State Apparatuses, this time the Cultural Ideological State Apparatus. Furthermore, this also demonstrates the functional irrelevance of the incognizant painter, unconsciously becoming the avatar through which The Individual began its ideologically orchestrated world tour.

## REPRESSION OF CONTENT, FREEDOM OF EXPRESSION

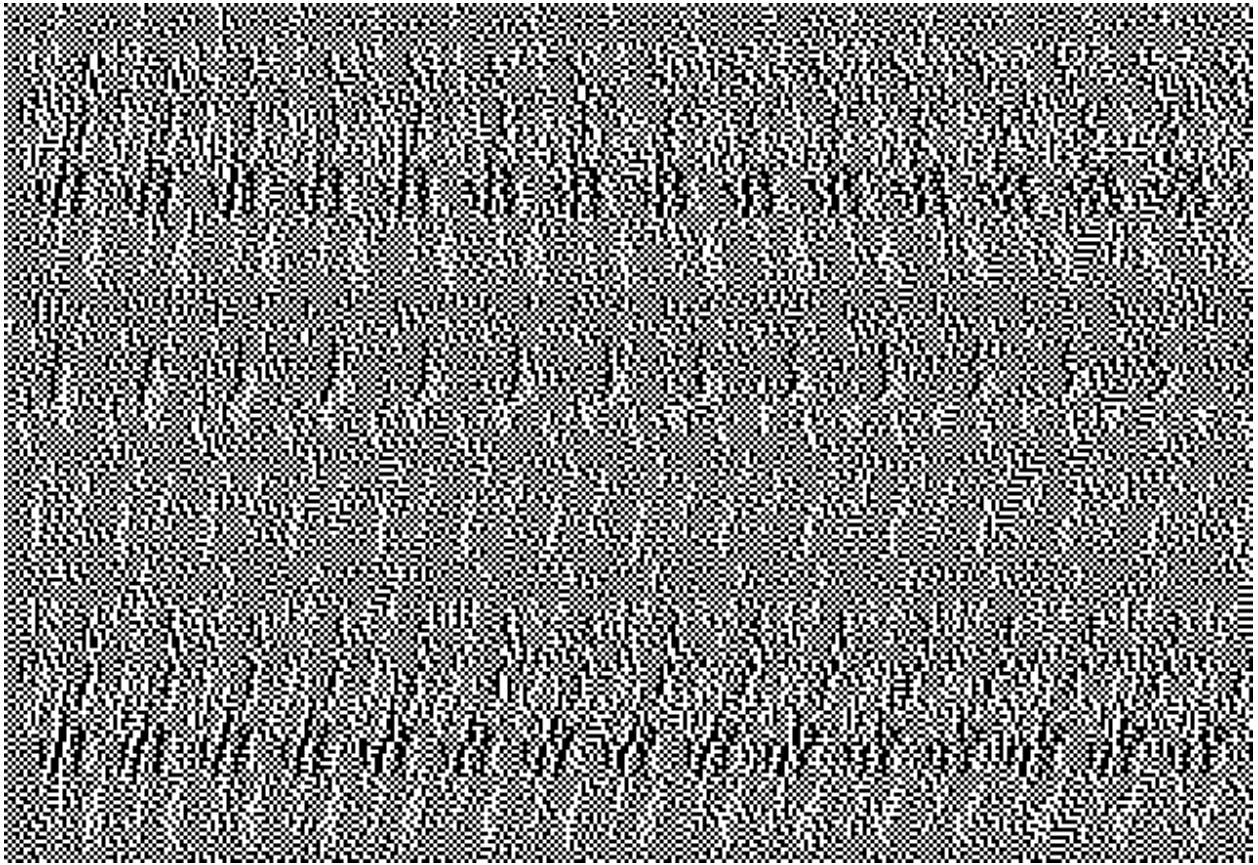


Figure 12: *Trinity Site Stereogram*, 2020

Although one critic described it as “melted Picasso,” others rushed to celebrate it as “the triumph of American painting,” which spoke for what America was: vigorous, energetic, freewheeling, big. It was seen to uphold the great American myth of the lone voice, the intrepid individual.<sup>130</sup>

The role that American painting played in the cultural Cold War is not the fact alone that it became part of this enterprise but that a movement which so deliberately declared itself to be apolitical could become so intensely politicized. “Modern painting is the bulwark of the individual creative expression, aloof from the political left and its blood brother, the right.”<sup>131</sup>

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130. Saunders, *Cultural Cold War*, 214.

131. *Ibid.*, 231.

As previously mentioned, one of the defining characteristics of The Individual is freedom: freedom to consume; freedom to express; freedom to maximize utility; freedom to be an Individual. This line of subjectification should be understood as a *negative freedom*, that is, the freedom from outside interference of individuals, collectives, or institutions (i.e. the State).<sup>132</sup> The irony in this of course being that the invisibility of the particular ideology in question allows it to reproduce subjects in the image of The Individual under the guise of it being one's own volition;<sup>133</sup> in expressing oneself within the predetermined degrees of freedom given by ruling class as it wields state power via the State Apparatuses, you are somehow demonstrating freedom. This is of course wildly different from the freedom which comes from individuation, in which freedom is considered "the form of the singularity ... insofar as it is the practical essence of the mind, insofar as it is the capacity to construct being. The mind and the will, intuition and freedom."<sup>134</sup> Or that is, insofar as it is the constitutive force of reality; the freedom to productively individuate oneself, one's mind, one's society, one's institutions--collectively: *positive freedom*.

It must be understood that even with the full stoppage of the ascending path insofar as it represents the sum total of reality's flourishing, transduction still takes place; it is universal. It should then follow that the unfolding of ideology is still dependent on the spatiotemporally specific structuration of its milieu. In this way, we can imagine the transduction process, revealing in its unfolding, new ways of The Individual to make sense of its milieu, presenting potentially useful tools to its apparatuses to amplify.

I am talking in this instance about how the global sociopolitical tensions of mid-century America<sup>135</sup>--the same conditions which turned humans into computers--presented to the CIA the newly developing style of Abstract Expressionism--ripe with ideological potential. As described by Frances Stonor Saunders in *The Cultural Cold War: The CIA and the World of Arts and Letters*, "[the paintings]

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132. Srnicek and Williams, *Inventing the Future*, 79.

133. Althusser, "Ideological State Apparatuses," 269.

134. Negri, *Savage Anomaly*, 83.

135. In this instance I am referring to the cold war.

spoke to a specifically anti-Communist ideology, the ideology of *freedom*, of *free enterprise*.

*Nonfigurative and politically silent*, it was the very antithesis to socialist realism. It was precisely the kind of art the Soviets loved to hate.”<sup>136</sup> Thus, not only was this a chance to continue reproducing The Individual domestically, but to present The Individual against a competing global force in an attempt to, “to create a world after its own image.”<sup>137</sup> Whereas the Rational Individual was reified through abstract models of economics, warfare, and mathematical probability, it was the hope of the CIA to reify the rugged and free qualities of the Individual by the proliferation of abstract (an imagined relation divorced from reality) models of American “expression” insofar as expression is an isolated act of personal negative freedom: *Libertarian Expressionism*

Thus, within this genre of painting contained the potential to present a cultural antithesis to the socially minded, reality depicting iterations of Soviet and Chinese socialist realism.<sup>138</sup> However, unfortunately for the CIA, most politicians in America viewed *all* modern art as “communistic,”<sup>139</sup> even Abstract Expressionism, and thus a lost cause with little hope of public funding or political support; with Clement Greenberg going as far as claiming art had been “abandoned by those to whom it actually belongs—our ruling class.”<sup>140</sup> At this moment in history it was crucial to transform the United States into a cultural hub of the world, in effect shifting the transduction of modernism towards American dominance, but a lack of public support led the CIA to seek help from private donors and the cultural

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136. Saunders, *Cultural Cold War*, 213 (emphasis added).

137. Marx and Engels, *Communist Manifesto*, 18.

138. Additionally, there were established leftist painters in Latin America, with which some Abstract Expressionists had prior contact. For an anecdote regarding a failed attempt at Nelson Rockefeller interpellating Diego Rivera as an avatar of The Individual see Saunders, *Cultural Cold War*, 217. After failing to remove what appeared to be Vladimir Lenin from a commissioned mural at the Rockefeller Center (the Rockefeller’s believed in the ability to convert leftist artists with patronage) Rivera was paid in full, and the mural was destroyed with jackhammers.

139. Saunders, *Cultural Cold War*, 212. “America, whilst advocating freedom of expression abroad, seemed to begrudge such freedoms at home.” For a similar incompatibility see Beck and Bishop, *Technocrats of the Imagination*, 4. “[W]hile individual freedom remained the bedrock of democratic virtue, the complexity of modern society increasingly required expert organization and management according to rational principles.” The stark incompatibilities between ideology and reality were apparent to some, which still managed to nevertheless perpetuate it. Also contained in Beck and Bishop, *Technocrats of the Imagination*, is a discussion of a different artist trajectory during the cold war, yielding similar Individual advancing results. Mainly, by participating in a parasitic collaboration with the very apparatus which helped craft the rational human, they helped pave the way for precarious undervalued labor conditions that have become standardized in the present.

140. Saunders, *Cultural Cold War*, 217.

ISAs. The poorly organized assemblage of Abstract Expressionist painters were about to receive large sums of capital and a CIA spotlight “two or three removed” to *make material* in their paintings and reflect in their persona the ideological *image* of Individual.<sup>141</sup>

With a combination of efforts including hosting overseas American Painting exhibitions; the continued praise of anti-communist tastemaker art critics like Clement Greenberg; clandestine donations from the CIA itself; and courting the assistance of the Museum of Modern Art and Nelson Rockefeller (the son of Abby Aldrich Rockefeller: MoMA co-founder--Nelson called it "mommy's museum), who referred to Abstract Expressionist paintings as "free enterprise paintings" and supported the movement both by adding upwards of 2,500 paintings to his private collection and distributing thousands more to various Rockefeller owned businesses;<sup>142</sup> these artists received the capital to not only reproduce themselves--the most crucial requirement of survival, but to consistently reproduce the image of The Individual by way of the development of their body of work on a global stage.

Thus, it can be said that Abstract Expressionism--debatably the most noteworthy trend in American art outside of the walled garden of the institution--and its subsequent place within the canon, was undoubtedly nudged towards success by the collaboration of the Repressive State Apparatus and the Ideological State Apparatuses. Without the monetary support by way of intentional ideological amplification, it is impossible to say for sure if Jackson Pollock would be a household name. This inevitably leads the author to wonder what other forms of culture which demonstrate qualities of The Individual have been purposely amplified,<sup>143</sup> and if there is any functional difference from their intended amplification, and the proper functioning of the system in general.

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141. Ibid., 212-18.

142. Ibid., 216-18, 222.

143. For a captivating (but no way verifiable) exploration into the history of the California hippie movement, in which without ever explicitly saying, it is suggested that the movement was organized by the United States government as an attempt to quell anti-war protest, see McGowan, *Weird Scenes*. It is mostly a presentation of family relations that connect nearly all Laurel Canyon adjacent hippie-era musicians to high ranking military and intelligence officers. Which means either: yes it was all orchestrated; or, alternatively, the aforementioned military and intelligence officers simply genetically reproduced Individuals which impeccably advanced the system all on their own by perpetuating a movement which encouraged disconnecting from society and inward expression, even when they may have viewed their actions as subversive: *functional irrelevance*.

Located at the transductive unfolding of the present, it is nearly impossible to imagine the CIA targeting the art world in its present state of development. No longer is it on the world stage, no longer does it pose any inherent threat to the system, no longer is there an emergent foreign art genre in need to juxtapose. The mission of the coercive nature of art has been completed, there is no longer any generative use in its implementation by the Ideological State Apparatuses insofar as it has internalized the goals of the project into the canon, and thus much of the ideology of the institution and successive generations of students. Given our current historical specificities, rather than visual art being seen as the most efficient vector for perpetrating The Individual culturally, as was the case with Abstract Expressionist painting--which, with its limited degrees of freedom was intended to nudge the viewer towards self reflection, rationality, freedom to consume and to express; if there were to be a promising vector of ideological transmission ripe for a similar co-option, memes are far more likely to be a site of present day propaganda than art.

Thus, unsurprisingly, starting in the mid-2000s DARPA (the present day transductive location of one of the founding apparatuses of the internet) funded research into the possibilities of implementing internet memes to do just that.<sup>144</sup> It should be noted that in the mid-2000's, much like the abstract expressionists in the early days of their attention from the CIA, memes were not clearly established as a cultural force of communication, and somewhat fringe. Viewing the current state of internet memes presents an ideologically rich genre of information dissemination, from the abstract and irreverent, to didactic--often times a blurring of the two. Again, it is impossible to determine if DARPA's research into

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144. Finkelstein, "Military Memetics." In this PowerPoint, the potential of memes and memetics as a method of influence are discussed in great detail. Their propagation: number, type, and dispersion of recipients; their persistence: duration of transmission and presence in cultural memory; their *entropy*: how much information they contain, measured in "bits"; and their impact: individual and social consequence. cf. Dean, *Communicative Capitalism*, 2. In which Jodi Dean describes *communicative capitalism* as "the materialization of ideals of inclusion and participation in information, entertainment, and communication technologies in ways that capture resistance and intensify global capitalism." This very real observation of the perceived global stage of the internet being more akin to shouting into a void is worth acknowledging as a helpful advancement in viewing agency on the internet, especially as platforms continue to shrink, and we move increasingly online. However, the fact that abstract modes of internet communication have been researched by DARPA should show that at the very least: those which perpetuate The Individual believe memes have potential.

implementing meme's as a method of control was successful, but they have debatably reshaped the current state of culture in a way that out shadows anything Abstract Expressionism ever did, and thus remain as a potentially rich vector for ideological transmission, be it radicalization, ironic detachment, or similar inward gazing as with the drive to unplug from society present in the mid-twentieth century. Perhaps in the future, the true nature of DARPA's involvement (like the CIA in Abstract Expressionism), or lack of involvement will be revealed, but for now the distinction remains functionally irrelevant.



## EXTRA-STATE APPARATUS

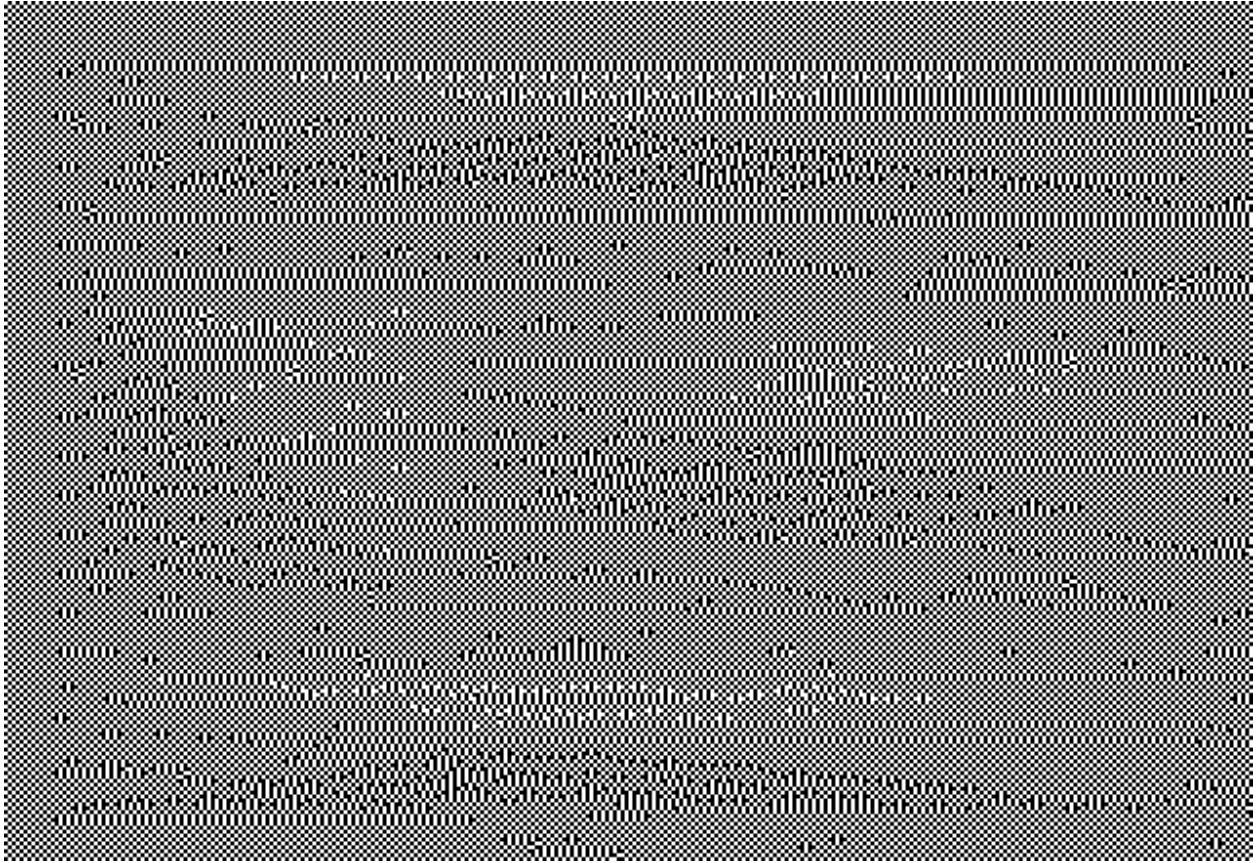


Figure 13: *Untitled error-diffusion*, 2020

The whole of the political class struggle revolves around the State. By which I mean around the possession, i.e. the seizure and conservation of State power by a certain class or by an alliance between classes or class fractions.<sup>145</sup>

Capitalism has created an ... apparatus which we need to bring about socialism, and which we take ready-made from capitalism; our task here is merely to lop off what capitalistically mutilates this excellent apparatus, to make it even bigger, even more democratic, even more comprehensive.<sup>146</sup>

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145. Althusser, "Ideological State Apparatuses," 241.

146. Lenin, "State Power," 106.

The Ideological State Apparatuses, as set forth by Louis Althusser, present a helpful advancement in the theory of the State, a theory of ideology *in general*, and the concept of subjectification; I would like to propose a further descriptive development towards what might be called the *Extra-State Apparatus*,<sup>147</sup> which functions with the same purpose as the State Apparatus--the active wielding of State power by the ruling class in the continued domination over the working class via the State Apparatus--but has found a way to transcend individual states, presenting instead a steadily growing global apparatus. The subjectification process of The Individual, by way of the historical events discussed above, as well as countless others, have been so successful that it has been ported to countries around the world in such a way that it is difficult to say if, for example, Amazon functions as an element of simply the United States ISAs or a new larger entity, which yields Extra-State power.

This *intentional megastructure* of the Extra-State Apparatus is comprised of its own repressive and ideological wings,<sup>148</sup> each containing within it various states perpetuating what is in effect the same ideology. I simply wish to alter the theory to acknowledge that The Individual is no longer only an American concept. After the fall of the Soviet Union, the war for ideological dominance ended; no longer was the United States operating domestically and overseas to stop the threat of communism, and yet, the desire to spread American Democracy continued--and this democracy always already requires a political constituency of Individuals to properly function and reproduce itself; and thus The Individual becomes a global citizen.

In any event, this descriptive update to match the current state of global monopoly capitalism will not require any further modification to the theory, it is only to acknowledge the co-evolution of an *ideological* monopoly in the efficient marketplace of ideas. It should be understood that this growing

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147. Althusser, "Ideological State Apparatuses," 240. "[D]escriptive theory' really is, without a shadow of a doubt, the irreversible beginning of the theory."

148. For ways in which--infrastructurally--this extra-state apparatus is attained, connected, distributed, and maintained, see Bratton, *The Stack*; Easterling, *Extrastatecraft*; and Phillips and Rozworski, *Republic of Walmart*. The scope of this concept is more interested in the ideology perpetrated by the pilots of this global apparatus and the way it shapes subjects than the apparatus itself; while undoubtedly, the Extra-State apparatus presents a readymade infrastructural network to use for the achievement and maintenance of ecologically minded transindividual collective flourishing.

tendency towards centralization both of capital and of the ideological apparatuses which aid in its proliferation presents a growing incompatibility in dire need of resolution. The wielding of the Extra-State Apparatus by a global transindividual subject acting in unison towards the "solidarity of the free development of all";<sup>149</sup> this is what I have been evoking all along in discussing individuation, subject production and universality.

In building the ascending path you are constructing a form of global consciousness. The individual is powerless in isolation and can only ever reduce the incompatibilities of the present by activating a global transindividual unity to overcome the ever increasing rift in subjectification. Only once the ascending path has incorporated as much into its expanse as possible--*including the apparatuses themselves*--will the deftly mystified incompatibilities present within The Individual become visible. Totalization, that is, State Power, can only ever be properly wielded *after* adequate universalization. The descending path of the Extra-State Apparatus is purely totalizing, with no constitutive force of the preindividual animating it. In order to close the rift of subjectification (the gap between the preindividual constitutive force and the present day image of subjectification in The Individual) we must strive first towards constructing the ascending path, that is, discovering, acknowledging, and *materially enacting* our shared primordial constitutive potentiality before developing any hope of a truly reflective Absolute Subject: the preindividual; creating a closed circuit between being and consciousness.

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149. Marx and Engels, *German Ideology*, 465.

## CONCLUSION: A REFLECTION ON ERROR DIFFUSION

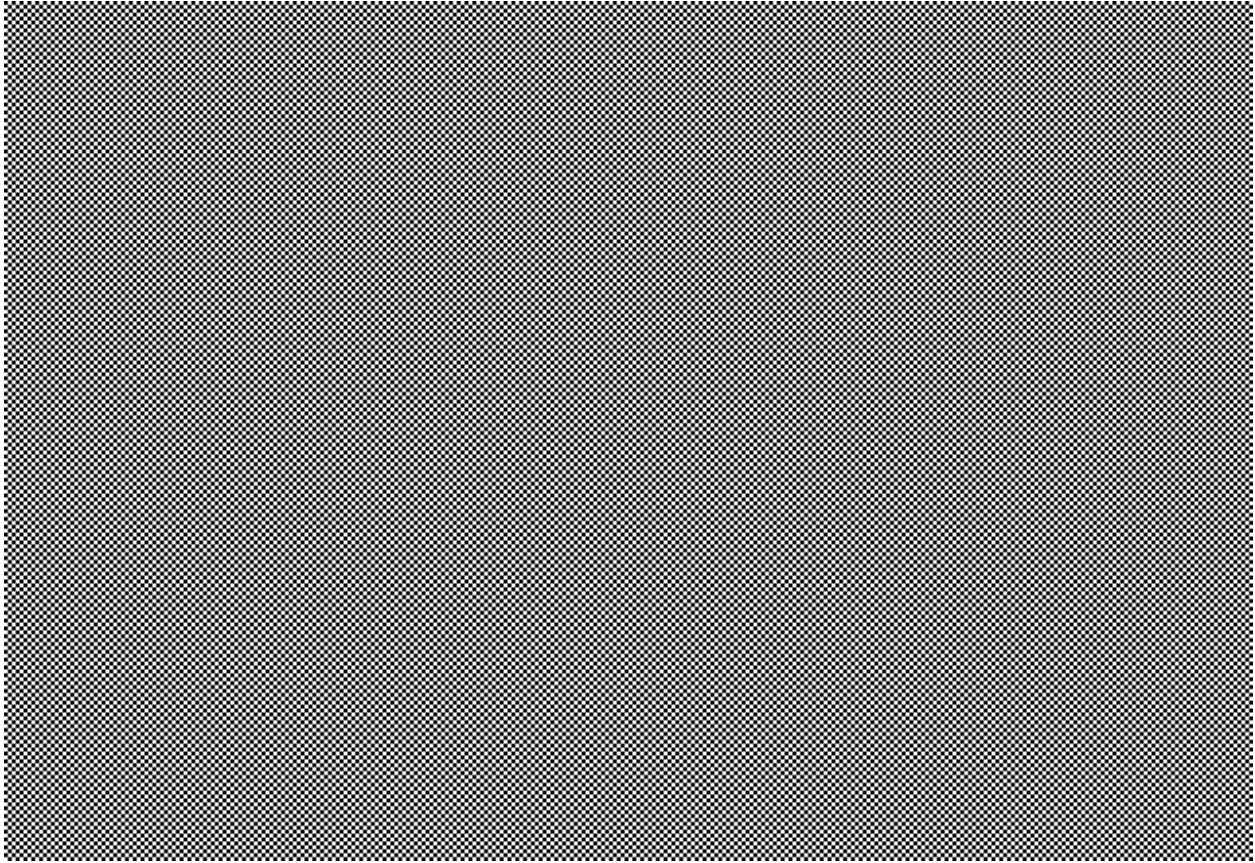


Figure 14: *50% gray error-diffusion*, 2020

A privileged place, a place that has a power, is one that drains from within itself all the force and efficacy of the domain it delimits; it summarizes and contains the force of a compact mass of reality; it summarizes and governs it, as a highland governs and dominates a lowland; the elevated peak is the lord of the mountain, just as the most impenetrable part of the woods is where all its reality resides. The magical world is thus made of a network of places and of things that have a power and that are bound to other things and other places that also have a power. This path, this enclosure, ... contains all the force of the land, the key-point of the reality and the spontaneity of things, as well as their availability.<sup>150</sup>

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150. Simondon, *Technical Objects*, 176.

The images contained within this text are all processed with what is called "error diffusion" dithering. In short: it is an algorithmic process for converting color images, into 1 bit--that is, black and white--images.<sup>151</sup> The process scans the source image line by line, pixel by pixel; as the algorithm arrives at a pixel, it analyzes its value compared to 50% grey. If the pixel is under 50% it turns black, if it is over 50% it turns white. The percentage amount by which the analyzed pixel is over or under 50% is considered an "error" (incompatibility) which must be "diffused" (individuated) to the neighboring pixels. The way in which this error is diffused varies from algorithm to algorithm, but conceptually they remain the same. In this way, the processing of the inherent incompatibilities within the source image, by way of each individual pixel, is partially resolved in the distribution of this incompatibility to its neighboring pixels. Depending on the compositional makeup of the source image, this process has the potential to individuate novel emergent singularities and transduction patterns within the resulting error diffusion, in effect producing what can be considered individuals composed of individual pixels within the self contained (pre)individual source image.

Alternatively, if there were no "errors,"--that is, if the source image itself was a "rational" 50% grey, the resulting image would be a perfectly ordered checkerboard pattern,<sup>152</sup> or in other words, stable equilibrium--entropic heat death. What is required for novel singularities to express themselves within the error diffusion process is an individual source image with sufficient incompatibilities at the level of the individual pixel to yield these novel patterns by way of the diffusion of errors--that is, the process of partially resolving incompatibilities within a system. Every individuation, every transduction, is dependent upon the initial conditions of not only the system from which it was individuated, but the preindividual from which the entire process emerged. The preindividual is reflected in the image of the completed error diffusion--never fully, as that is impossible, but sufficiently to produce generative transductions. We must strive to build a societal source image which produces these complex

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151. It is also possible to conduct 4-bit, or 16-color error-diffusion with slightly different, but functionally similar, algorithmic processes

152. Figure 14.

transductions and novel singularities that demonstrate the shared composition of reality within which we are all embedded. We must diffuse errors productively, avoiding the checkerboard of stable equilibrium, while altering the conditions which distort the integrity of the source image of the preindividual. Let us make a perfect picture.

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