

Physical Emergence of Subject-Object Division (and a dialectical approach to reconciliation)

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Abstract: This paper aims to approach the mystery of the subject-object division which structures humans historical experience of reality. In this approach we engage with other major forms of knowledge in order to contextualize and demonstrate what we have learned about our self and our world from their development. Here we posit that reductionist physics, complex evolution, relativistic epistemology, and subjective phenomenology form a quadrant of knowledge each with their own practical utility but without the ability to approach a synthetic totality. In order to approach synthetic totality we attempt to explore the internal logic of the subject-object division in terms of its basic structural nature. We propose a theory of how the subject-object division structures our experience and knowledge of the world with a potential approach to embedding this structure in terms of a practical and universal historical dialectic.

Introduction

Historically embedded experiential phenomena fundamentally characterize the intersubjective human world in which we live and enact our life. In this paper we work in relation to the problem of how experiential phenomena at the human scale could have emerged and become stabilized across time under a physical emergentist paradigm. We here bring attention to the phenomenological fact that the physical emergence of experiential phenomena is structured around a subject-object division (from unity) generating separation and distance that we categorize under a priori categories of space (separation) and time (distance). This subject-object division is marked by a relation between the observer of phenomena (commonly known as perception), and observed phenomena (philosophically known as noumena). What human beings have learned from this fundamental experiential division from unity is that it is both incomplete and open, meaning that the division is not a static or fixed relation but a division that is in-itself a dynamic process of becoming [1]. However, due to the dynamism of this relation it has remained an elusive mystery to science, art, philosophy, religion and other knowing practices [2].

The fundamental incompleteness and openness of the subject-object division is the most important phenomenological fact of our existence because it is the very state that allows our species to develop meanings, purposes and goals that structure the life history of our worlds. Consider, for a moment, a realm in which the subject-object division were complete and closed as a static-fixed relation. In such a state, by definition, there would be no space for our experiential flow to act in relation to meaning, to develop a life practice of high purpose, or to

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posit a future state worthy of a goal. Thus, in a subject-object division that were complete and closed we would exist in a permanent correlation between observer and observed allowing for no life at all. In this way the conventional approach to knowledge which tends to reify the identity of phenomena in a 'closed' and 'complete' formalism is the very approach that would be imminently broken by subject-object divisions process of becoming itself [3]. Indeed, it is for this reason that our philosophical understanding of historical knowledge is fundamentally dialectical, constantly under a process of collective negotiation due to the incessant movement of our shared intersubjective spaces [4].

In focusing this paper on the phenomenological fact of the physical emergence of experiential phenomena we are focusing our attention on *the* unique dimension of our world. This dimension is the fundamentally dualistic interaction operating in a still mysterious processual dynamic between observer and observed. Thus, in building a physical theory of subject-object division we are aiming to build an emergentist physical theory capable of synthesizing theories of modern physics. In contemporary physics there is no place for emergence in the conventional sense [5]. This is because the main paradigmatic structures of physics focus on the micro-world of quantum mechanics (particle physics), or the macro-world of general relativity (cosmology) [6]. However, these paradigms leave unresolved two issues of critical importance: (i) the existence of historically constituted observers within the physical system, and (ii) the asymmetrical and irreversible temporal nature of phenomena that characterize the dynamical curved spacetime manifold [7]. If we can approach these unresolved issues within an emergentist physical paradigm we may be able to resolve antagonisms and tensions inherent in contemporary physical and social theory.

Contextualizing the Theory

Here we claim that the nature of historically constituted observers (on the divided side of the subject), and the nature of asymmetrical temporality (the irreducible experiential difference between past and future), are both problems that require a new type of emergentist physics that is capable of escaping the limitations of an otherwise productive reductionist Newtonian framework. In an emergentist physics we must admit that, although the fundamental laws of physics appear to structure a realm of pure objects reducible to time-independent reversible processes, the world of human experience and history, as embedded in a physical world, is fundamentally different [8]. In contrast to the reductionist understanding of the world, the emergentist understanding of the world must start with the reality of observers and the complex nature of their world. This world presents to perception an interaction between a manifold of diverse phenomena that can produce structures and dynamics with no correlate at the lowest microscopic scales [9].

Of course, we are not totally devoid of emergentist physical theories of the human experiential scale of reality. In contemporary academic theory of the human experiential scale

there exist philosophies related to the evolution of complexity [10], relativistic epistemology [11], and subjective phenomenology [12]:

- (1) The philosophy of complex evolution frames human reality as a process of becoming and constant change that operates under principles of self-organization from subatomic to civilizational scales of being. In processes of self-organization local interactions between diverse phenomena tend towards forms of repetitive motion that allow for the stabilization of higher levels of complexity. For example, with self-organizing phenomena we may start with any initially random set of motion and observe that it will become increasingly non-random (or organized) across time with the establishment of emergent rules that structure novel dynamics. This process is subject to asymmetrical feedback allowing for the emergence of the complex world we can observe around us today. From this frame we may think of the world as a multi-dimensional phenomena interacting on many levels or scales.
- (2) The philosophy of relativistic epistemology frames human reality as an interpretive horizon characterized by a multiplicity of socially constituted virtual constructions. In this sense the 'relativity' of knowledge practices is thought to emerge in relationship to different power centers internal to social network order. For example, we may say that self-organization as a knowledge practice, or quantum mechanics as a knowledge practice, is a particular epistemological frame of reference that is useful relative to a particular power center internal to historically constituted social networks. In this view we focus more on the communal nature of complexity scientists that use the frame of self-organization, or communal nature of particle physicists that use the frame of quantum mechanics. This does not mean that self-organization or quantum mechanics are 'simply' and 'only' social constructions', but it does mean that their enacted value for observers is irreducibly connected to the realm of social construction as embedded in historical becoming.
- (3) The philosophy of subjective phenomenology frames human reality as a series of internal states that correspond to either an external background (world), an internal background (dreams), or an absent background (no-thing) that can be studied via methods of transcendental empiricism. In this sense emphasis is placed on both the concrete ethico-pragmatic life world of our subjective formations, and on the irreducible transcendental coordinates of mortality and finitude without which subjective formations would, by definition, be everything (i.e. immortal, infinite) or nothing (i.e. death, void). For example, in subjective phenomenology we do not think of concepts like self-organization and quantum mechanics as related to the noumenal in-itself, but instead as subjective formations that have particular experiential value when grounded in our ethico-pragmatic life world. Importantly this experiential value of concepts becomes overdetermined by conditions of mortality and finitude considering that our 'time in space' is always operating under these existential limitations. In this sense all of reality is conceived as nothing but concretized subjective formations that appear and vanish across a temporal process.

However, in terms of mainstream contemporary academic theory of the human experiential scale, we are still missing a framework that can approach a type of objectivity that we have come to expect as a standard in reductionist physical analysis. This is commonly referred to as 'physics envy' and has structured both legitimate critique and parody of theory grounded in subjectivist interpretation [13]. For example, in reductionist physical analysis the theories of quantum mechanics and general relativity have allowed for collective observation of the universal structure of being as something that can apparently be verified independent of subjectivity and historical constitution. In other words, quantum mechanics correlates to a 'truth' of the structural dynamic of subatomic particles [14], and general relativity correlates to a 'truth' of structural dynamic of cosmological movement [15], that appears to exist independent of human observers and our history [16]. This corresponds to what philosophers refer to as 'noumenal'. From this perspective, if humans were never to exist, and if humans cease to exist, the noumenal processes described by quantum mechanics and general relativity would, in some sense, continue to operate in the non-human beyond their phenomenal appearance 'for us' [17].

Of course, when we approach the real of a subject-object division we have a different problem, which is to identify an objectivity that is dependent on human observers [18]. In principle theories of complex evolution structured by self-organization aim for this level of objectivity in terms of understanding the general material processes of systemic motion but have not yet been capable of understanding the nature of subject-object division [19]. In contrast, cultural theories of relativistic epistemology in Marxist, psychoanalytic, feminist, linguistic, postcolonial, or poststructuralist criticism would deny the claim that an objectivity is possible in any absolute sense because every knowledge practice is irreducibly dependent on its relational instantiation in a regime of social power [20]. Furthermore, theories of subjective phenomenology would deny the claim that an objectivity is possible precisely because objective reality itself is an irreducibly temporal subjective formation (or 'illusion') with no concrete identity independent of this formation [21]. In that sense theories of objectivity like quantum mechanics, general relativity, and self-organization are once again reduced to the postmodern realm of subjective formation and discursive historicism.

Building the Theory

How can we synthesize this antagonism or tension that appears to structure the historical dialectic of incomplete and open subject-object becoming? The first thing to emphasize would be that we should avoid at all costs any posited synthesis that unreflectively offers a closed or complete answer to the problems of subject-object division. The problem with any posited synthesis offering closure and completion of subject-object division in an individual historically constituted discursive process is that it, by its nature, prematurely ignores the irreducible experiential flow of temporal process that characterizes historical becoming [22]. In this way we should make the higher order assumption that any self-posed closure or completion tells us more about the nature of the subjective element self-positing than it tells us

about the subject-object division as a whole (which includes an irreducible multiplicity of subjective elements engaged in self-positing) [23]. In this way we would propose a philosophy that is capable of approaching the human experiential scale with a framework instantiating the dialectical mediation of an intersubjective objectivity [24].

In a framework capable of dialectical mediation of an intersubjective objectivity we aim to build a form of knowledge that is capable of understanding on a meta-level a singular orientation and meaning for the psychosocial level of existence (which on an individual level is irreducibly an open-ended multiplicity). This meta-level theory is thus not a singular language or 'meta-language' capable of universally structuring subjectivity towards a noumenal truth capable of reinstantiating an absolute external correlate [25]. In accordance with much standard postmodern social theory [26] and higher order cybernetic theory [27] we maintain that any meta-language is an impossibility and a remnant of reductionist first order scientific discursivity [28]. Thus we posit that the fundamental problem and limitation with such theories is that they prematurely attempt to complete and close the discursive process of becoming which is fundamental to and immanent to the subject-object division itself.

Instead we propose a meta-level theory that is a theory aiming for an understanding of a singular orientation and meaning that emerges spontaneously and internally to the realm of divided observers in an intersubjective discursive mediation across the fullness of historical process (or time). In other words, we propose a theory of objectivity that may be capable of fundamentally and universally reconciling the subject-object division with an understanding of a truth that depends on the emergence and development of historically constituted observers. Here we tentatively propose that such a truth is related to the experiential and emotional formation of unity between subject-object that is dependent on the sociocreative motion of subjectivity beyond will. In this sense, we posit that internal to the incomplete and open division of subject and object there exists an experiential-emotional drive in atemporal relation to 'non-division' (unity) [29]. We would furthermore attempt to elaborate on the possibility that such 'non-division' (unity) can be understood with the paradoxical logics that appears in complex mathematics [30] and psychoanalysis [31].

This requires a rethinking of reality so let us first move dialectically through the various dominant conceptions of reality in relation to aforementioned dominant knowledge practices. In the world of reductionist physical theory what is most fundamental is an objectivity independent of subjectivity: either a subatomic world of particles subject to reversible physical laws [32]; or the gravitational spacetime manifold of curved geometries [33]. Both of these reductionist frameworks not only fail to theorize subject-object division but actively ignore the reality of subjectivity as either epiphenomenal or illusory [34]. In this frame the experiential and emotional psychic drives of human subjectivity can never be included in fundamental theory, because fundamental theory gains its status precisely due to the fact that it is presented as a phenomena independent of psychical experience and emotion [35]. In other words, reductionist physical theory is presented in discursive reality as the noumenal in-itself, of a world

independent of the emergence of humans, and thus independent of the emergence of subject-object division [36].

In the world of evolutionary theory what is most fundamental is the constant change of material phenomena or processuality that grounds a metaphysics antithetical and ultimately incompatible to the Newtonian physical picture of the world [37]. In the standard Darwinian modern scientific synthesis of natural selection and genetics theory is applied to the realm of emergent biology from the cellular level to the social level [38]. From this perspective what is most real are processes of natural selection which exert a pressure on living systems to maximize environmentally contingent fitness levels on multiple levels of analysis [39]. Thus in the neo-Darwinian synthesis the structure of reality that appears to us is a consequence of the pure chance of events governed by a fundamental struggle for survival and reproduction [40]. In this reality structure there is an asymmetry between subject-object (or agent-environment) that places an analytic focus on the side of the object (environment) as the constraining container or background for the emergence of stable living form. In this sense we have an evolutionary theory that presents to us a pure naturalist explanation for the existence of life and mind [41].

In the world of epistemological theory what is most fundamental is the contingent multiplicity or heterogeneity of constructive projects that structure human existence and civilization [42]. The realm of epistemological theory places a great emphasis on the local ethico-pragmatic relation between knowledge and a given life world [43], the irreducible openness and incompleteness of any form of knowledge [44], and its literary or narrative nature for self knowledge [45]. In other words, epistemological theory always views knowledge as something historically enacted and transformative in terms of discursive intervention in lived events. From this perspective all knowledge must be grounded in a frame relative to the observers social and cultural relational power matrix [46]. Thus if knowledge does not enable the desired solutions to the goals and values of an authentic life world then this knowledge should be subject to critique, denunciation, and deconstruction [47]. In this way knowledge practices can only be defined in relation to the sets of problems posited or presupposed by a life world.

In the world of phenomenological theory what is most fundamental is the pre-logical a priori experiences and emotions that structure all sets of knowledge and abstractions in a historical becoming [48]. Thus the most fundamental is always an internal experiential state that represents the truth of a form or sphere of consciousness [49]. From this perspective on the asymmetry between subject and object there is a greater emphasis placed on the side of the subject and how the subject is relating to a particular background for experience. In this way phenomenological life scientists tend to invert the standard approach to evolutionary theory by emphasizing that environmental pressures can not help us understand life and mind in-itself [50]. Thus, in phenomenological theory there is a growing agnosticism about the 'world' or the 'object' as such, and instead greater emphasis placed on how an agent or subject appears, and

how an agent or subject interprets and transforms its given background [51]. The consequence of such a view is that the measure of reality itself becomes a subjective perception.

However, as mentioned above these approaches fail to understand the potential fundamental reality of an emergent intersubjective objectivity that depends on the primordial emergence of a subject-object division, or a difference between observer and observed. Here we posit that this problem has not been properly framed or approached by either reductionist physics or by the other emergentist theoretical forms mentioned above. In this emergentist physical theory we posit that an intersubjective objectivity is internal to all other forms of knowledge. This claim becomes evident when we consider that all such forms attempt to ground an objectivity in social agreement that holds between an intersubjective collective. For example, reductionist physics communities may disagree on the particular details of quantum mechanics or general relativity, but agree that these theories correspond to a fundamental real. In the same way, evolutionary theory communities, epistemological theory communities, or phenomenological theory communities may disagree on the particular details of applications of natural selection, relativistic knowledge, or transcendental empiricism, but agree that these theories correspond to some historically constituted real. From this perspective can we say that there is a meta-level real that corresponds to the drive of an intersubjective objectivity inaccessible to any one 'language game' but at the same time constitutive of the introduction of a symbolic order?

This meta-level intersubjective objectivity where a collective of subjective individuals become regulated by a non-division (unity) is hypothesized to emerge on the higher order of psychosocial becoming. Furthermore, we hypothesize that this higher order psychosocial becoming in relation to non-division (unity) manifests as a transhistorical effect of a desire to fundamentally and universally reconcile the difference between subject-object division. In other words, we posit that the manifestation of intersubjective objectivity is stabilized by a drive, asymmetrically located on the side of subjectivity, to dynamically generate a synthesis between observational states and what is objectively observed. In this sense the emergence of what is most fundamental is the experiential nature of an asymmetry of a unidirectional temporal process (from past to future) which subjectivity unconsciously attempts to resolve or reconcile with abstract knowledge constructs. From this point of view what is most fundamental and what is most objectively real is a collective discursive process of becoming internal to a realm of subject-object division that narratively orients itself towards non-division (unity).

Thus, in this analysis we attempt to instantiate a phenomenologically and epistemologically grounded approach to objectivity. In this approach to objectivity we affirm the fundamental incompleteness and openness of both experience and knowledge that enables psychosocial interpretation and transformation. However, we also affirm that the fundamental incompleteness and openness of experience and knowledge is oriented and structured by invariant desires for static-fixed backgrounds that are represented as a non-division or unity. In this sense we posit that logical interpretations and transformations tend to occur against a symmetrical background constituted in visionary metaphors that overdetermine experiential and

epistemological becoming and allow for a pre-logical emotional stability across time. Consequently, we are here positing an approach to objectivity that centers upon a singular destiny internal to logic which simultaneously contains and transcends reductionist physics [52], evolutionary complexity [53], relativistic epistemology [54], and subjective phenomenology [55].

Working the Theory

Here we further develop our fundamental claim regarding subject-object division which is that its incompleteness and openness is structured around a non-division that manifests as a desire for unity. In this sense we posit that the subject-object division is fundamentally and primordially structured, not around a positive object, but around a void or absence [56]. In this absential void attractive/repulsive images appear to the present moment that simultaneously constitute a primordial historical ground and orient a future unity or reconciliation. Towards a deeper understanding of this phenomena we affirm the grounds of past theorists who worked from the presupposition that complex physical emergence is organized in far-from-equilibrium systems which self-organize internally and adapt externally to various environmental conditions [57]. These works in complex adaptive systems are necessary to build a science capable of understanding life and mind on its own terms. However, in order to push beyond the frameworks of 'complex adaptive systems' and 'dissipative structures' we also aim to engage deeply with phenomenological and epistemological frameworks that attempt to understand the general nature of intersubjective desire and its ontological consequences. The first question we investigate is whether a simple unifying principle as fundamental universality structures and is immanent to the nature of this subject-object division?

Here we apply the idealist logic of reductionist physics which seeks for simple unifying principles or a fundamental universality to structure knowledge coherently and consistently. However, we apply this idealist logic within the general intersubjective realm of human civilization capable of approaching reconciliation of subject-object division. In this way we do not directly engage with the reductionist presupposition that fundamental reality is the subatomic void of quantum physics which universally contains the multiplicity of material phenomena [58]; but instead focus our attention on the subjective void of future-oriented desire which universally contains the multiplicity of intersubjectively constituted idealist phenomena [59]. From this claim we draw on a deep philosophical tradition that aims to understand the virtual effects and consequences of ideational movement on materially constituted human civilization [60]. However, the important result is an attempt to make connections towards a quantum ontology that can bring physical and social worlds together [61]. Such a coherence between physical and social ontology would allow us to articulate an observationally [62] and epistemologically [63] constituted universality.

Thus, in this move we propose that what appears most simply and most fundamentally internal to the intersubjective domain structuring human civilization is a universal void of desire (or absence). This universal void is ontologically characterized by dynamical and unstable

virtual (evanescent) field of images representing an emotional need for the direct experience of absolute love. Here the void of desire is understood as on the side of the subject and absolute love is understood as on the side of the non-division (unity) that appears internal to the subject-object division. In this way human knowledge or epistemology and physical being or ontology become themselves entangled by a void on both sides (the subject's separation and distance; and the object's emptiness). Thus, fundamental reality becomes intersubjectively structured objectively by an emergent multiplicity of subjects (ones) tending for internal unification. These subjects (ones) seek transformative knowledge constructs that would unify their being in an immortal or transcendent relation. We posit that although this transformation is archetypally a spiritual or religious transformation, such transformations can occur outside of religious contexts in a multiplicity of psychosocial forms. Thus, spiritual or religious institutional forms are not presupposed as mechanisms for external coercion and control [64], but forms that spontaneously emerge due to an internal desire for transcendental unification [65]. In the modern and postmodern deconstruction of such institutions we posit that this internal desire for transcendental unification does not disappear but instead unconsciously manifests itself in 'secular' or 'individualist' forms that still maintain the same intersubjective objectivity [66].

In this claim we seek to formalize an invariant transformation process between a divided subject and its emergent unified background by proposing a formula for subject-object division inspired from a fundamental formula from complex mathematics. In mathematics the epistemological utility and ontological mystery of the square root of $\sqrt{-1}$ is well known as an imaginary number crucial for rotational operation about the origin of a complex plane [67]. In classical mathematics this square root was dismissed as physically irrelevant but modern mathematics cannot do away with the utility of remaking or dividing itself in relation to points of impossibility. The fundamental formula for such an operation is represented as [68]:

$$i = \sqrt{-1} = 1 \angle 90^\circ$$

Here we seek to make a philosophically and psychoanalytically informed connection between this fundamental formula and the invariant (atemporal) motion of the subject-object division structured around a non-division (unity). In this motion we have a phenomenology in-itself that is structured in the present moment as a primordial subjective void of self-relating (origin) divided from and acting in relationship to a desired unity (future). Thus, we posit that when the subject engages in interpretive transformations that embody this structure in the material real of historical action we can describe these interpretative transformations via the following representation inspired from complex mathematics:

$$\text{self-consciousness (i)} = \text{non-division } (\sqrt{-1}) = \text{action (1)} \angle 90^\circ$$

This formula should be read very precisely as describing the way in which forms of self-consciousness in history form in relationship to a negative unity (or what we are referring to as non-division). In other words, we are positing that forms of self-consciousness do not form in relationship to a positive object in the perceptible universe but instead form in relationship to a

negative object in the suprasensible conceptual universe that emerges from cognitive transformation processes. In this sense when a subject acts in the world this structural relation to non-division overdetermines the coordinates of its unified embodied action as it rotates about the origin (i.e. rotates about its own void as self-relation). Here we want to strongly emphasize that this claim is in fact supported in the realm of philosophical speculation from [69]:

- critical philosopher Immanuel Kant, who stated that unified subject-object reality is an abstract logical entity to a “square root of a negative number”,
- to transcendental subjectivist philosopher Johann Fichte who formulated the structure of the subject as $i=i$ (self = impossible unification),
- to Freudian psychoanalyst Jacques Lacan who said that the meaning of the master signifier of the symbolic order is a positivized absence in relation to “the square root of $\sqrt{-1}$ ”.

However, crucially, although we are identifying this phenomena as an intersubjectively constituted phenomena, we must also emphasize that we do not believe that the non-division (unity) can be expressed through direct merger of subjects. In this way we emphasize the irreducible experiential-emotional division at the core of every individual subjectivity. Here the non-division (unity) is something experienced emotionally as an internal transformation only against particular intersubjective backgrounds. In this sense what we emphasize here is that the transformation of subject-object division in relation to non-division (unity) is something that occurs internal to each subject via the development of epistemological constructs that bring coherence and consistency to their worldview. This transformation process is something that represents a movement that is objective and thus something dependent on historical becoming but independent of historical context. What we claim here is that reductionist physics, evolution of complexity, relativistic epistemology, and subjective phenomenology as intellectual communities, are each enacted historical phenomena that embody this objective motion. In other words, each of these intellectual communities operate in relation to:

$$\text{self-consciousness (i)} = \text{non-division } (\sqrt{-1}) = \text{action (1)} \perp 90^\circ.$$

Now we will offer a very speculative but potentially deeper synthesis between physical and social ontology. In order to approach an intersubjective reality structured by a universal void of desire (non-division internal to subject-object division) we here offer the idea that we can potentially apply principles of quantum mechanics and general relativity within an emergentist and experientially based physics capable of making sense of the subject-object division. As mentioned above, conventional physics cannot resolve the issues of (i) the existence of historically constituted observers within the physical system, and (ii) the asymmetrical and irreversible temporal nature of phenomena that characterize the dynamical curved spacetime manifold. However, in our epistemological method and ontological presuppositions we introduce the structure of observer-dependent curved geometries into the study of the nature of human civilization. In this sense, we start our physics with the observer because we start our physics with experiential and emotional real of a general subject-object division. Here our

knowledge does not start with the void of the universal object, but the void of the universal subject.

Thus, in order to achieve this tentative synthesis we seek to take seriously the philosophical challenge of a physics that requires emergent observers whose open and incomplete relations structure the nature of relative spacetime backgrounds. In this way spacetime is constituted from the relation and not given a priori as an absolute background. This is in contrast to or in opposition to an observerless physics structured by an objective spacetime. From this perspective a materially embedded observer (or something) is primordially organized around a void (or nothing) where images structured as desired unities appear in an evanescent field (or virtuality). This basic structure was already captured in our proposed formula for self-conscious transformations above. Due to the material separation and distance from the nature of these images (i.e. their lack of substance, their virtuality) the observer's a priori concepts of space (separation) and time (distance) organize around a non-division (unity) that manifests as a relativistic geometric curvature. Here we can say that *the unity in-itself is not an actual immanent state in the subject's future but a curvature in the present which stabilizes its internal consistency and coherence in the present moment*. In this sense we have identified a phenomena (virtuality) that emerges as a suprasensible superposition from a void of being, and requires observational constitution in order to structure a 4-dimensional gravitational curvature.

From this conjecture of an understanding of subject-object division and non-division we posit concrete modifications to fundamental sociological and futurist theory that could potentially approach a human experiential reality that orbits an emergent emotionally charged dynamical absolute. In contemporary sociological theory structured around the idea of relational networks we could modify this by including the internal absence or void (irreducible non-relation) that universally structures human networks. In contemporary futurist theory structured around the idea of technological singularity we could modify this by including an invariant singularity of transformation processes internal to the division in subject-object becoming. Thus, in sociological and futurist theory informed by emergentist physical theory focusing on the problems of subject-object division we may be able to engage directly with the two problems excluded from modern physics:

- (i) the existence of observers within the physical system, and
- (ii) the irreversible asymmetry of past-future

Here we propose that what is being dialectically mediated by intersubjective objectivity (future-oriented sociology) is:

- (i) relationships capable of sublimation of space (i.e. 'why are there observers within the physical system?') and

(ii) the absence of absolute love where subjectivity transforms into eternal unity (i.e. 'why is there a difference between past-future?')

In a state where relationships sublimate space and there is no difference between past and future we would exist in a state where the fundamental identity of the opposites (subject and object) would coincide as 'one' (thus nihilating or cancelling each other). However, and crucially, because the subject cannot merge with its object, any form of posited closure or completion to the subject-object division which becomes externalized, is ultimately a form of unity that will be imminently subject to future processes of division.

Conclusion

In grounding a theory that directly engages the real of a subject-object division and non-division this is a theory that ultimately seeks to engage a potential synthesis between the sciences and the humanities. The reason why this theory can approach the divide of the sciences and the humanities is because this divide is broadly structured around the divide between subject and object. Here the humanities have traditionally focused on the freedom, narrativization, and experiential world of the subject; and the sciences have traditionally focused on the predictable, deterministic, and materialistic world of the object. In this sense the two general worldviews experience discord that ends up producing fundamentalist freedom on the humanist end, and fundamentalist determinism on the scientific end. Both of these extremes are ultimately perspectives that cannot think the real of a subject-object division and non-division in its totality. Here we claim that this real of subject-object division and non-division produces an observer dependent objectivity (unity) that structures the historical asymmetry of past and future.

Thus, as opposed to a view that starts and ends with the object as in reductionist science, or a view that starts and ends with the subject as in holistic humanism, we attempt to formulate a type of knowledge that starts with an open and incomplete subject-object divide that requires a dialectical mediation capable of approaching reconciliation internal to the division at the core of subjectivity. This is important because in worldviews that attempt a fundamental universal objectivity independent of the subject we are always left with the irreducible mystery of the openness and incompleteness of subjectivity; and in worldviews that attempt to open a universal relativistic and pluralistic subjectivity independent of objectivity we are always left without orientation or anchor for truth and reality. This divide is as strong today as when it was first abstractly identified [70]. In our current intellectual divides scientists on the far reductionist side of the equation are searching for a fundamental universal objective truth disconnected from subjectivity in the noumenal real and paradoxically become lost in subjective fictions [71]; and humanists on the far holistic side of the equation are searching for a fundamental universal freedom from objective physical conditions and thus become paradoxically lost in a nihilistic void of pointless self-relation [72]. In this sense we have lost touch with the real of subject-object

historical dialectics which must navigate a ethico-practical real with universal desire for transcendent love [73].

In starting with the assumption that an emergent intersubjective objectivity exists independent of historical context we attempt to synthesize the best of both the worlds of physical reductionism and the worlds of humanist emergentism. Here we consider the best of physical reductionism to be its commitment to universality and objectivity, and we consider the best of humanist emergentism to be its commitment to freedom of consciousness and subjective development. From our approach the commitment to universality and objectivity becomes inscribed into the realm of free consciousness and subjective development as an absolute necessity. In this frame we make sense of reductionist physics as a sublimated domain of knowledge that represents an internal desire for a universal objectivity that is general to the psychosocial realm as a whole. Thus we see reductionist physics as a necessary stage of historical becoming that may be preparing human knowledge for the task of understanding an internal and perspectival universal objectivity [74]. In this sense we hope to have proposed the initial stages of an emergentist physical theory that is capable of reconciling the subject-object division and the multiplicity of experiences and knowledge practices that exist on the historical civilization horizon.

The consequences of such a synthesis is ultimately the identification of an emergent intersubjective objectivity that manifests itself in a paradoxical singularity expressed as a multiplicity of conscious forms aiming for internal unity. In other words, the becoming of reflective subjectivity (ones) occurs against the background of a universal void where internally generated imagistic desire for closure and completion appears. These images, in turn structure a symmetrical transformation process that repetitively attempts to reconcile subject-object division with a unity that would guarantee absolute love. In this way a singular force of desire structures the motion of a multiplicity of drives and the reconciliation of this intersubjective objectivity becomes the central aim of an integrated and holistic dialectical analysis. Here we do not aim to close and complete analysis, but aim to remain open and incomplete, as approaching an abstract understanding of the subject-object division in-itself does not reconcile the subject-object division in-itself. In order to reconcile the subject-object division in-itself we must move from the work of the abstract intellect to the concrete real of the work of our experiences and our emotions [75].

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