

# Debating the Subject of Substance: Adrian Johnston and Slavoj Žižek on Dialectical Materialism

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In chapter four of his latest book, *A New German Idealism* (2019), Adrian Johnston seeks to clarify the meaning of ‘materialism’ in Žižek’s philosophy and questions what he sees as potentially problematic aspects of Žižek’s ‘materialism without materialism’. In this article, I propose a possible reply to three problematic aspects of Žižek’s materialism identified by Johnston. First, that Žižek risks losing his materialist credentials by appealing to a Pythagorean-Badiouan mathematical idealism to define matter. Second, that Žižek’s account of the emergence of the subject from substance relies on the idea of a pre-subjective Nature that is whole and balanced,

contradicting the key tenet of Žižek's dialectical materialism that nature is a non-all. Third, that Žižek projects features of human subjectivity onto natural substance, and so problematically anthropomorphizes the pre-human Real, which is evident in how Žižek argues that there are similarities between the behaviour of particles in quantum physics and features of the Lacanian symbolic order.

### **Adrian Johnston's Critique of Žižek's 'Materialism without Materialism'**

Adrian Johnston, alongside Alain Badiou and Slavoj Žižek, is one of the most important advocates today for dialectical materialism, although he prefers the term transcendental materialism. Johnston has done much to show the importance and significance of Žižek's philosophical project in books which include *Žižek's Ontology* (2008), *Badiou, Žižek, and Political Transformations* (2009) and *Adventures in Transcendental Materialism* (2014) but he has also engaged in many immanent critiques of Žižek's work. Johnston is a careful and sympathetic reader of Žižek, and his questions and criticisms help illuminate areas of Žižek's philosophy that deserve further clarification. These critical engagements with Žižek's thought reflect a profound appreciation for what is at stake in developing the type of materialism that Žižek advocates: one that allows for the phenomena of subjectivity and freedom while being compatible with contemporary science. In Johnston's words, his aim is to:

formulate an account of subjectivity that, while both materialist and naturalist, nonetheless does full justice to human beings as irreducible to natural matter alone. At the same time, and in conformity with the sensibilities of my chosen historical sources, I adamantly oppose relapses into idealisms, dualisms, and spiritualisms. (Johnston 2014: 13)

A key area where Johnston and Žižek have parted ways is this relation between dialectical materialism and science. Whereas Žižek sees quantum physics as the science that best complements dialectical materialism, for Johnston, it is biology.<sup>1</sup> This is because Johnston believes that dialectical materialism can help provide a

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<sup>1</sup> For an account of the debate between Žižek and Johnston on this topic, see Johnston's 'A Critique of Natural Economy: Quantum Physics with Žižek' in the collection *Žižek Now: Current Perspectives in Žižek Studies* (2013) and chapter seven in Johnston's *Adventures in Transcendental Materialism* (2014): 'Spirit is a Quark: Quantum Physics with Žižek'

conceptual framework to contribute to a biological account of how human subjectivity emerged out of substance. This difference has implications for how each thinker answers the question of what existed before the advent of human reality.

For Žižek, developing a dialectical materialism involves negotiating a fine line between what he describes as the two dominant versions of materialism today. The first is 'scientific materialism' (Darwinism, brain sciences) and the second is discursive materialism (ideology produced by material discursive practices). Although these two alternatives present themselves as competing approaches to materialism, Žižek claims they are 'two sides of the same coin' (Žižek 2015: xi). Both options fit into Badiou's category of democratic materialism, according to which 'there is nothing but bodies and languages' (Badiou 2009: 4). For Badiou, in a truly dialectical materialism there 'are only bodies and languages, except that there are truths' (Badiou 2009: 4). Here is Žižek's definition of dialectical materialism from *Absolute Recoil*:

The predominant philosophical struggle today occurs *within* materialism, between democratic and dialectical materialism – and what characterizes dialectical materialism is precisely that it incorporates the idealist legacy, against vulgar democratic materialism in all its guises, from scientific naturalism to the post-Deleuzian assertion of spiritualized 'vibrant' matter. Dialectical materialism is, first, a *materialism without matter*, without the metaphysical notion of matter as a full substantial entity – in dialectical materialism, matter 'disappears' in a set of purely formal relations. Second, despite being materialism without matter, it is not idealism without an idea – it is a *materialism with an idea*, an assertion of the eternal Idea outside the space of idealism. In contrast to idealism, whose problem is how to explain temporal finite reality if our starting point is the eternal order of Ideas, materialism's problem is how to explain the rise of an eternal Idea out of the activity of people caught up in a finite historical situation. (Žižek 2014: 72-73)

The challenge of this dialectical materialism is how it conceptualises this 'eternal Idea' without falling into the trap of being, on the one hand, too idealistic and so losing its materialist credentials by introducing a non-material element into its metaphysical frame, or on the other hand, too materialistic, and so denying the possibility of freedom and truth. This is especially the case when it comes to explaining the relationship between substance and subject: what is it about

substance that allowed for the emergence of subjectivity, and can this quality of substance be explained in a way that is compatible with contemporary science?

In this latest book, *A New German Idealism* (2019), Johnston argues that the dialectical materialism outlined by Žižek in *Less Than Nothing* and *Absolute Recoil* fails, at times, to avoid the pitfalls of an obscurantist idealism that imbues nature with Platonic, spiritualist forms. In chapter four, Johnston puts forward two closely related claims regarding Žižek's dialectical materialism. First, that Žižek 'deviates too far in an idealist qua nonmaterialist direction in his anti-Leninist revision of dialectical materialism.' Second, that the distinction that Žižek makes between the Real and reality exposes his account of dialectical materialism to dangerous ambiguities which bring 'Žižek's dialectical materialism into disturbing proximity with certain of those contemporaneous "materialisms" he explicitly and correctly denounces as pseudomaterialist' (2019: 130).

Johnston points out that Žižek's characterisation of his dialectical materialism as 'a materialism without matter' is dangerously ambiguous as it can be interpreted in two possible ways. In the first, nature is deprived of its 'traditionally imagined positivity qua consistency, density, solidity, and unity.' Instead it:

is envisioned as shot through and permeated with tensions. Godlike Nature-with-a-capital-N as an omnipotent and omniscient big Other or Whole/Totality as One-All is replaced with, in hybrid Lacanian-Žižekian parlance, weak (*ohnmächtig*), rotten (*pourri*) nature(s) as a nonwhole/not-all (*pas tout*) barred Real. (Johnston 2019: 136)

Johnston describes this first possible sense of materialism as 'a dialectical materialism of a weak nature' in which it is not matter that disappears, but rather a conception of matter as 'nonconflicted' (Johnston 2019: 136). The second possible interpretation of 'materialism without matter' is a Pythagorean or Platonic metaphysical realism 'in which everything is dissolved into the "purity" of logical (whether symbolic or dialectical-speculative) or mathematical "forms"' (Johnston, 2019, p. 136). This seems to rule out a material that is indistinguishable from the ideational, but without any form of dialectics. Johnston calls this 'dialectical materialism of strong form' as it involves a 'hyperstructuralist ontology' that rules out matter as substance.

For Johnston, these two possible interpretations of materialism without matter run together in a single sentence in Žižek's definition: 'Dialectical materialism is, first, a materialism without matter, without the metaphysical notion of matter as a full substantial entity – in dialectical materialism, matter "disappears" in a set of purely formal relations.' Before the dash, Johnston claims, Žižek is describing the dialectical materialism of a weak nature, whereas after the dash, Žižek is referring to dialectical materialism of the strong form. Although these two definitions of materialism without matter are not contradictory, they do show that Žižek's materialism is characterized by two competing tensions: one towards replacing a traditional, scientific framing of nature as a completed whole with a framing of nature as barred or 'weak', and the other towards an extreme form of idealism which proposes that substance is ultimately comprised of mathematical entities. Johnston makes it clear that he and Lenin would have little time for this second type of strong form dialectical materialism (Johnston 2019: 137).

But Johnston also takes issue with Žižek's dialectical materialism of weak nature – a thesis which Johnston otherwise endorses. His criticism here is that Žižek does not consistently maintain this weak nature, and at times inadvertently 'seems to slide back into a belief in a strong Nature as a holistically self-cohesive field of being' (Johnston, 2019: 137). The issue here is how Žižek characterizes the relationship between substance and subject. Again, Johnston identifies two conflicting tendencies in Žižek's thought. On the one hand, Žižek describes the subject as that which disturbs nature, so implying that before the emergence of subjectivity this Nature was whole or complete. If Žižek sees the substance as having ontological and temporal priority to subjectivity, and if the subject is that which disturbs the balance and cohesion of nature, then is not Žižek positing the complete, holistic, stable Nature-with-a-capital-N that he explicitly rejects elsewhere? On the other hand, Žižek sometimes claims that nature was already barred before the emergence of the subject and that the subject that emerged from nature reflects, or is identical to, some primordial imbalance or contradiction in nature itself. This is problematic as it pre-supposes that there exists some 'natural' affinity between the Real of nature and the Real of the more-than-natural or unnatural subject:

If the move is made of directly equating the two negativities of (in)substantiality and denaturalised or more-than-natural subjectivity, then how is this not tantamount to yet

another panpsychism, albeit one with the historical distinctiveness of replacing an emphasis upon cosmic organic unity with one upon ubiquitous antagonisms and strife (Empedocles rather than Parmenides)? (Johnston 2019: 139)

Johnston sees this reference to a pre-human subjectivity inscribed in substance as a regrettable and problematic Schellingian turn away from Hegel, and one that potentially introduces a 'vitalist, pan-psychism' to which dialectical materialism is opposed (Johnston: 149):

About this Schelling, one could say that the rabbit he pulls out of his hat is the one he put there beforehand. The human organism and its forms of subjectivity 'emerge' from Schellingian nature because the latter is always an eternally pre-existent macro-/mega-Subject, namely, the spontaneous agency of *natura naturans*, a divine productive power as the ground (*Grund*) of *Ur*-potency of all beings. (Johnston 2019: 150)

Johnston's argument is that by using Schelling to develop his theory about a pre-human reality, Žižek relies on a type of anthropomorphism of the Real as he reads the Real of the human subjectivity as a type of eternal, natural principle. Johnston does not think Žižek's ontology necessarily entails this position, or that Žižek consistently relies upon this ultimate principle of Real operating in the universe, but he does see it as a problematic tendency in his work and argues that when Žižek 'slides into portraying this Real as a mysterious primal Nothingness/Void or omnipresent protosubjectivity, he drifts towards a certain negative theology or vitalist panpsychism respectively' (Johnston 2019: 147).

Johnston is a sympathetic reader of Žižek's work, and his criticisms of Žižek's project are better read as points of potential misreadings or misinterpretations of Žižek's philosophy that are to be avoided rather than disagreements with Žižek's philosophy. If Žižek seems to push readers into the incompatible options of a 'Pythagorean-Platonist idealist metaphysical realism' or 'a disavowed pansychism of the barred psyche', Johnston affirms that it is possible to frame dialectical materialism in a way that avoids these 'intensely unpalatable' readings:

I am convinced that Žižek possesses and frequently utilizes claims and arguments delineating a compelling, novel variant of dialectical materialism avoiding and surpassing both of these distasteful options. As on previous occasions, I see myself in this context as yet again conducting an immanent critique of Žižek himself,

challenging some of his utterances on the basis of what I take to be the most charitable and powerful reconstruction of a systematic Žižekian metaphysics. (Johnston 2019: 139)

In the rest of this article, I will articulate a possible way to read Žižek's work to avoid the potential problems that Johnston has identified. In proposing these possible interpretations of Žižek, I hope to extend the valuable clarificatory work that Johnston has instigated.

## 1. Mathematics and Matter

Recall how Žižek defines dialectical materialism in *Absolute Recoil*: 'Dialectical materialism is, first, a materialism without matter, without the metaphysical notion of matter as a full substantial entity – in dialectical materialism, matter "disappears" in a set of purely formal relations.' Johnston reads the second part of this sentence as potentially and problematically appealing to a Badioun or Pythagorean mathematical idealism in which material substance is ultimately 'dissolved' into logical or mathematical forms (Johnston 2019: 136).

The distinction between democratic and dialectical materialism is a reference to the Preface of *Logics of Worlds* (2012), so it is a fair assumption to read Žižek's definition of dialectical materialism as closely related to Badiou's philosophy. But once we take this background into account, it becomes clear that in this first line of his definition, Žižek is referring to a particular, metaphysical idea of substance, one that applies at the level of ontology, not to material substance that exists at the level of appearance. In his recent, short introduction to his own philosophy, Badiou clarifies what he means by a materialist ontology that does not rely on the concept of matter:

...it was necessary to propose a "materialist" ontology, foreign to all transcendence, and yet capable of doing without the inconsistent concept of "matter," which only ever designates the hidden – and ultimately unthinkable – One of the evident multiplicity of all that is. This conviction came to me more from politics than from mathematics. And just as the young Marx already found himself obliged to do, it is then that I turned to the fifth orientation: the affirmation that being is nothing but pure multiplicity, without-

One, and devoid of any specific attribute, whether of the type “matter” or “spirit.”  
(Badiou 2022: 56)

Badiou’s proposal of a materialism without matter is the rejection of an idea of matter that is tied to a monist ontology that would see everything that exists as ultimately reducible to a single, shared substance. When we re-read Žižek’s definition of dialectical materialism again, we can see that he stresses this: ‘Dialectical materialism is, first, a materialism without matter, without the *metaphysical notion of matter as a full substantial entity* – in dialectical materialism, matter “disappears” in a set of purely formal relations.’ (italics added). The second part of the sentence, the ‘matter’ that is disappearing, is not the matter that we perceive and measure in our everyday worlds or in our scientific endeavours: quarks, atoms, rocks, wood, and so on. Rather what disappears is the idea of matter as a single substance that underpins all material reality.

But why is this the case? Žižek shares with Badiou the ontological thesis that prior to reality, or what Badiou calls the situation that is an effect of a count-as-one, what exists is the void of multiplicities of multiplicities:

...prior to fully existent reality, there is a chaotic non-All proto-reality, virtual fluctuation of a not yet fully constituted real. The pre-ontological real is what Badiou calls pure multiplicity, in contrast to the level of appearance, which is the level of reality constituted by the transcendental horizon of the world. (Žižek 2012: 912).

The transition from proto-reality to full reality brought about by the operation of the count involves the presentation of multiples in a structured set or situation. This operation of the count is always in excess to the situation that is counted – to include an element in a set involves positing the set as such, as something separate from its elements. The Void, which refers to the multiplicities of multiplicities from which the situation has emerged, is always marked in the situation by the gap between this meta-structure (the count-as-one that constitutes the set) and the structure (the elements that make up the set) of the situation. In this way, Badiou’s philosophy allows for a precise formulation of how any situation will always involve the Real as the structural impossibility of the universe to form a completed whole: there is no situation that can present being-qua-being prior to the count. It follows that there can be no universe in the sense of a situation that contains all situations. The Whole as the set that contains all sets cannot exist (Badiou 2012: 109-110).



This is why, in Badiou's philosophy, there can be no final or single account of material reality as the 'raw stuff' of nature. What pre-exists any situation, count, or framing of a reality, is a multiplicity of multiplicities:

If...we follow Badiou and conceive the World – the transcendental structuring principle – as strictly immanent to ontic reality, then we have to conclude that beings, in their material density and with their wealth of properties, exist *always* and *only* as part of a World and its determinate situation. Beings are not neutral "raw stuff" caught up in one and then another transcendental network – the only neutral "stuff" outside every situation is mathematical multiplicity. (Žižek 2012: 806)

Take the simple example of a desk: I could see this desk as an object in the world of my room or analyse its chemical composition at the level of world constituted by chemical interactions or analyse its make-up in the world of the desk as it appears at an atomic level. I may even analyse matter that makes up the desk in terms of quantum physics, at which level the 'matter' of the desk may be expressed in abstract mathematical language without any reference to material substance at all. All of these versions of the desk present me with different possible worlds, and with different materialist accounts of what constitutes the desk, but none of them provide me with *the* materialist account, because each version of my desk relies upon a particular transcendental framing that establishes the limits of the world in which each materialist version of my desk appears. If we ask, but what is the pre-world 'stuff' that appears in each of these materialist worlds, the answer is that there is only a pure potentiality of different possible framings which, until it appears in some world, cannot be described as having any materiality. For Badiou, the only way in which we can think what exists in terms of this pre-ontological being is using the mathematics of set-theory – so what exists is 'multiplicities of multiplicities'. This in no way entails the conclusion that the desk is ultimately made up of mathematical entities – on the contrary, the question of what material constitutes the desk only makes sense at the level of an appearance, within the framing of a particular world. Žižek says as a consequence of Badiou's philosophy:

we should totally reject the notion of the symptomal point of a situation as an effect of the resistance of the inconsistent multiplicity of ontic reality getting caught in the grid of transcendental consistency. The point of inconsistency, of the "symptomal torsion"

of a situation, is generated by its immanent transcendental structure. (Žižek, 2012, 806)

In other words, the incompleteness of any version of materialism is not caused by some noumenal material substance that is not amenable to the transcendent structure of a particular world, but rather by the basic antagonism between structure and meta-structure that is an inherent part of the transcendental structure of the appearance of worlds.

Johnston concedes that 'Žižek's militant fidelity' to a 'non-Platonist Hegel categorically rules out his deviations in the direction of a matter-less hyperstructuralism of unsullied, strong forms' (2018: 140), and thinking through Žižek's use of Badiou's ontology shows us why. Žižek's appeals to a 'materialism without matter', like Badiou, to reject a particular type of materialism – one that would rely on an idea of matter as a single substance that underpins all things and so on the idea that all that exists could be counted as One. Claiming that what exists at the level of being-qua-being is nothing but multiplicities of multiplicities is an ontological claim that is entirely consistent with the claim that matter, in all the ways in which it is affirmed by science or our everyday experience, indeed exists. What does not exist is a world of all worlds made up of one type of matter. What 'objectively' exists is the perpetual non-coincidence between subject and substance that at once renders materialist discourse possible and necessarily incomplete or non-all so that the metaphysical conception of matter as a single entity that underpins all things disappears.

## **2. Nature Before the Subject**

Now we turn to Johnston's reading of Žižek as appealing to a strong vision of completed Nature. In *Absolute Recoil*, Žižek defines the subject as 'the immense – absolute – power of negativity, the power of introducing a gap or cut into the given-immediate substantial unity. . . of tearing apart and treating as self-standing what is part of organic nature' (Žižek 2014: 140). It does sound here as if Žižek is appealing to a completed, whole nature which is then disturbed by the emergence of the subject. But it becomes clear as one reads on that this is not the case. Rather, Žižek sees that this version of Nature as whole is not a natural order that pre-exists the

subject but a retroactive fantasy that sustains the subject. To Žižek, this is one of the key lessons of the Hegelian dialectic:

The story that he (Hegel) is telling in his account of a dialectical process is not the story of how an original organized unity alienates itself from itself, but the story of how this organic unity never existed in the first place, of how its status is by definition that of a retroactive fantasy – the Fall itself generates the mirage of what it is the Fall from. (Žižek 2012: 952)

Žižek states that the notion of ‘self-alienation’ of spirit is more paradoxical than it may appear, for two reasons. First, the Spirit discussed here is non-substantial: ‘Spirit is nothing but the process of overcoming natural immediacy, of the cultivation of this immediacy, of withdrawing-into-itself or “taking off” from it, of – why not? – alienating itself from it’ (Žižek 2014: 140-141). Second, just as there is no self other than the process of the failure of the self to establish itself as something other than nature, so too the original wholeness from which the self is split never existed, but is something posited in the dialectical movement of Spirit’s self-alienation:

Spirit’s negativity is not relativized, subsumed under an encompassing positivity; it is, on the contrary, the ‘simple negation’ which remains attached to the pre-supposed positivity it has negated, the presupposed Otherness from which it alienates itself, and the negation of the negation is nothing but the negation of the substantial character of this Otherness itself, the full acceptance of the abyss of the Spirit’s self-relating which retroactively posits all its presuppositions. In other words, once we are in negativity, we can never leave it and regain the last innocence of the origins; in the “negation of the negation” the origins are truly lost, their loss is lost, they are deprived of the substantial status of what has been lost. (Žižek 2014: 140-141)

Here it is clear that the ‘organic unity’ to which Žižek is referring in these pages is not something that is potentially presupposed by his own ontology, but rather something presupposed in the process of alienation that is involved in subjectivization. Žižek makes a similar point in the section that Johnston quotes from *Disparities*. Here again, Žižek’s discussion of the Hegelian ‘Spirit as the wound of nature’ shows that the organic unity which is disturbed by the Spirit is one that never existed:

...the Spirit heals the wound not by directly healing it, but by getting rid of the very full and sane Body into which the wound was cut. It is in this precise sense that, according to Hegel, ‘the wounds of the Spirit heal, and leave no scars behind’:

Hegel's point is not that the Spirit heals its wounds so perfectly that, in a magic gesture of retroactive sublation, even their scars disappear. The point is rather that, in the course of a dialectical process, a shift of perspective occurs which makes the wound itself appear as its opposite – the wound itself is its own healing when perceived from another standpoint. (Žižek 2016: 118)

It would be difficult to make sense of this passage if we suppose that Žižek is appealing to a completed, holistic organic unity that is then disturbed by the advent of the subject. The central point of this passage is that what appears as a wound is actually its opposite. Although the idea of organic wholeness is a part of the dialectic of the Spirit, the end of this dialectic is that there was never a wound, or an organic wholeness, to begin with. The idea of a natural unity or wholeness that pre-existed the emergence of the subject is exactly what is lost in the process of the dialectic. There is no positing of a completed, pre-subjective Nature in these passages.

### **3. The Anthropomorphised Real**

This brings us to the most compelling aspect of Johnston's reading of Žižek's dialectical materialism: that Žižek's description of the pre-human Real sometimes involves an appeal to vitalist or panpsychist tendencies which hypostasize features of human self-consciousness into eternal principles of the universe; in his reading of quantum physics, Žižek attributes subjective features to a pre-ontological space that existed before the emergence of subjectivity. To help understand Johnston's concerns here regarding Žižek's use of quantum physics to ground metaphysics, it is worth revisiting some of his earlier engagements with Žižek on this topic. Johnston sees Žižek's appropriation of quantum physics as potentially introducing an untenable reductionist frame into his dialectical materialism that would problematically endorse explanations of macrocosmic phenomena, like expressions of human freedom, that appeal to microcosmic phenomena (Johnston 2013: 107). Such explanations would risk re-introducing

the supposedly banished One-All of a big Other in the formal guise of a natural economy generalized precisely from the discipline he holds up as entailing the scientific debunking of any and every version of (material) nature as a totalized, self-integrated Whole. (Johnston 2013: 114)

Moreover, such an explanation is ‘neither necessary nor even remotely feasible’ (Johnston 2013: 114). It is just not the case that quantum-physical phenomena operate at the scale of materiality that involves human agency. Johnston appreciates that Žižek sees the quantum-physical phenomena as being analogous to human subjectivity, rather than grounding it, but to this Johnston points out that if the relationship is merely analogous, then how does quantum physics provide any useful explanatory resources for a dialectical materialist ontology? Ultimately, to explain phenomena implicated with expressions of human subjectivity, dialectical materialism cannot just rely on the science of quantum physics:

...a viable transcendental materialist theory of subjectivity needs much more than can be extracted and extrapolated from this lone source, particularly if it eschews dependence on the shaky scaffoldings afforded by the big Other of a natural economy. (Johnston 2013: 111)

In other words, even if it can be shown that Žižek’s use of quantum physics does not hypostasize human subjectivity as a basic principle of the universe – that his use of quantum physics is analogous rather than reductive – then Žižek owes us an explanation of how it is useful. If Žižek is not using quantum physics to explain anything then why does he insist that it is the science that best supports his dialectical materialist ontology?

But we can read Žižek’s use of quantum physics in a way that does not involve either analogy or reduction. Rather, Žižek sees quantum physics as the science that addresses how the Real is implicated in the structure of the universe as the barred-One that manifests symptomatically in incompatible attempts to resolve it or remove it.

Žižek is very explicit as to why he privileges quantum physics over the other sciences, including biology: it is the science that directly conceptualizes material reality as non-all. Unlike traditional scientific approaches that underpin Newtonian physics or biology, which generally posit a completed world external to the subject which is governed by explicable natural law, quantum physics confronts the impossibility of describing the material world in a way that does not involve some form of subjective intervention or reflectivity:

Perhaps the key feature of quantum physics is that for the first time, it has included this reflectivity into science itself, but positing it as an explicit moment of this scientific process. Because of this self-reflective character of its propositions, quantum physics joins ranks with Marxism and psychoanalysis as one of the three types of knowledge which conceives itself not as a neutral adequate description of its object but as a direct intervention in it. (Žižek 2007: 208)

It is because quantum physics conceptualizes reality as non-all that it accounts for how subjectivity emerges in reality. Johnston is right to point out that here Žižek, on a cursory reading, seems to oscillate between seeing subjectivity as something that emerged within history with the development of a symbolically mediated self-consciousness, and something that is part of the proto-reality that existed before the subject. But a careful reading of Žižek shows that there is no contradiction here. To Žižek, what quantum physics shows is that the world that pre-existed the development of subjectivity still involved an 'absential' or positively existing negativity that accounts for the emergence of matter and even of human subjectivity. Biology, which generally posits a completed world that is external to the observer, does not allow for this conceptualization of the world as non-all:

If we interpret the 'absential' nature of the symbolic order that characterizes the functioning of the human mind in this precise sense...can we really account for the emergence of the human subjectivity out of biological organisms via a reference to the above-mentioned triad? Is it not that something stronger is needed, a more paradoxical structure of reality, if we are to account for the possibility of the emergence of the symbolic order in it? (Žižek 2016:48)

Quantum physics thus plays a key role in allowing Žižek to address the question of 'How must the world be structured to allow for the emergence of subjectivity?' Žižek draws on Schelling because of his conceptualization of the pre-ontological Real as always-already incomplete and inconsistent with itself, immanently disturbed and unstable. This is not an obscurantist or panpsychist gesture of thought. Žižek explicitly rejects any sort of spiritualization of this pre-ontological Real. Žižek's use of quantum physics avoids this as it provides an account of how reality emerges out of a primordial inconsistency.

How to break this deadlock without regressing to spiritualism? Quantum physics provides here an answer: it is the gap between material reality and quantum proto-

reality which makes possible the gradual self-overcoming of material reality. (Žižek 2016: 50)

Žižek does not appropriate Schelling and quantum physics to posit the existence of some universal, spiritual principle that underpins the universe. Rather, with them he creates an ontology that sees nature as 'non-All' all the way down:

This structure of reality as "non-All" is to be taken in fully ontological terms: it is not that, within our finite horizon, the In-itself of reality always appears against the background of its withdrawal and concealment; reality is "in itself" non-All. In other words, the structure of disclosure or concealment, the fact that things always emerge out of their background Void truncated, never fully ontologically constituted, is that of reality itself, not only of our finite perception of it. Therein, perhaps, lies the ultimate philosophical consequences of quantum physics: that what its most brilliant and daring experiments demonstrate is not that the description of reality it offers is incomplete, but that reality itself is ontologically "incomplete," indeterminate – the lack that we take as an effect of our limited knowledge of reality is part of reality itself. (Žižek 2012: 925)

Quantum physics, that is, enacts the shift from Kant to Hegel in the realm of the physical sciences: it takes what appears to be an epistemological limitation as an ontological limitation (Žižek 2012: 925).

The implications of conceptualizing the pre-human world as being already split, already non-All, are profound. What Žižek is attempting to do by using quantum physics as the science that defines his ontology is disturb an idea of nature or natural order that underpins much of how we spontaneously perceive and discuss the world; a perspective that places the subject (as human, perceiver, knower) over and above the world (object, natural order, substance). What dialectical materialism introduces is not just that the human subjectivity disturbs this order, but that there is no complete or final order in the universe in the first place. The first principle of Žižek's dialectical materialism is that there is no One, no totality, from which then individual objects or subjects emerge. Rather, the 'One is in itself barred, out-of-joint with regard to itself' (Žižek 2012: 928). The fundamental principle of the universe is a gap or a cut which generates a difference that has the quality of 'diffraction'.

Whereas ordinary difference involves distinguishing between two entities, A and B, diffraction involves a difference where two entities entail two different ways of coping

with some initial obstacle. In a difference that is diffracted, A and B reveal an inherent impossibility or antagonism that cannot be resolved. Whereas in a relation of pure difference, A and B can constitute each other, and be 'two sides of the same coin', in a relation of diffraction A and B are not complementary, and do not fit together to form a one. Rather, they reveal an antagonism that cannot be resolved, and is only apparent when it is revealed that there is no consistent way to resolve it. This, to Žižek, is essentially the structure of sexual difference as theorised by Lacan which:

is already that of diffraction: the difference itself precedes the two entities between which it differentiates; in other words, it works like the diffractive obstacle, so that both sexual positions, masculine and feminine, must be conceived as reactions to the obstacle or deadlock, as two ways of coping with it. (Žižek 2012: 935)

What quantum physics reveals is not so much 'what is there' but that 'what is there' is an impossible Real that generates a parallax view. Quantum physics overcomes the prejudice that the basic principle of the world is a stable order, a One, that then generates appearances or partial knowledge. Rather, the inconsistent diffracted difference that manifests in the frustrating incompleteness in the accounts of 'what exists' according to quantum physics is generated by a Real that is revealed in that incompleteness.

To explore this relationship between the Real and diffracted difference, consider one of the definitions of materialism proposed by Žižek in *Less Than Nothing*: 'the irreducible distance between two vacuums' (Žižek 2012: 945). The two vacuums that Žižek is referring to here relate to the Higgs field:

The "Higgs field" controls whether forces and particles behave differently or not: when it is "switched on" (operative), symmetries are broken between elementary particles, and their complex pattern of differences emerges; when it is "switched off" (inoperative), forces and particles are indistinguishable from one another, the system is in a state of vacuum. (Žižek 2012: 944)

What is distinctive about the Higgs field for Žižek is that energy is expended when the Higgs field is switched off rather than when it is switched on. This allows Žižek to distinguish between two vacuums:



1. A 'false' vacuum in which the Higgs field is switched off and in which energy is expended. In this state, there is a pure symmetry with no differentiation of particles and forces.
2. A 'true' vacuum in which no energy is expended, but in which there is a certain differentiation of particles and forces, even though, energetically, this field is in a state of inactivity.

The Higgs field allows for a materialist answer to the question of why there is something rather than nothing. You can start with a true nothing, but this requires some expenditure of energy, and as the field moves to a space in which no energy needs to be expended, differentiation emerges.

What the gap between these two vacuums reveals is the impossibility of thinking a 'nothing' that existed before a 'something'. To generate a nothing, you have to expend some energy, and if you stop expending energy, you get a something. There is no primordial nothing out of which a One emerges, there are rather only two types of nothing, neither of which can sustain itself as a nothing. The gap between these two nothings, between the 'false' and the 'true' vacuum, provides a materialist answer as to why there is something rather than nothing: because '*something is cheaper than nothing*', this something being 'a weird pre-ontological "something" which is less than nothing' (Žižek 2012: 945). The difference between these two vacuums is diffracted: the two vacuums are not two complementary opposites that, put together, make up a 'whole'. Rather they are two different versions of the failure of nothing to be a nothing.

In this discussion of the two vacuums, the subject is the name of the minimal gesture of difference that separates these two vacuums from each other. Žižek writes that 'it is thanks to the split in the vacuum itself that the "substance is always already subject."' (2012: 947). Žižek here refers to the subject, not as an emergence of human phenomenological awareness from some being that is pre-reality, but as a gesture of difference that means substance can no longer be said to be identical with itself: 'the subject...is a void which is not determined by its context but disentangled from it, or rather, is the very gesture of such a disentanglement....when the "object" is the vacuum itself, it is supplemented by the *pure* difference which "is" the subject' (2012: 947). The subject, for Žižek, describes a structural element of reality that

existed before the emergence of the human self-awareness, or the symbolic. So although it is correct to describe Žižek as an emergentist with regard to the category of human freedom, he sees this human freedom as a manifestation of an incompleteness at the quantum level. As he writes in *The Indivisible Remainder*:

The emergence of human freedom can be accounted for only by the fact that nature itself is not a homogenous 'hard' reality – that is to say, by the presence, beneath 'hard' reality, of another dimension of potentialities and their fluctuations: it is as if, with human freedom, this uncanny universe of potentialities re-emerges, comes to light. (Žižek 1996: 230)

It is important that this account of freedom is not just read as an analogy of indeterminacy that is found at a quantum level. Žižek, as Johnston notes, does not see quantum level indeterminacy as a sufficient condition for human freedom. But he does see it as a necessary condition. The freedom that Žižek refers to here he derives from Schelling: human freedom comes into being when 'possibility is no longer automatically realized but persists *qua* possibility' (1996: 231). In the same way that the indeterminacy at the quantum level means that what exists is explained as probabilities rather than actualities, or outcomes contingent upon how we measure what-is-there rather than a what-is-there independently of how we measure, so human freedom manifests a fundamental openness of what-is. With the advent of human freedom, even experiencing everything I do as fate involves a minimal subjective gesture, decision, or frame that renders this experience as fate – and the implication of this subjective gesture is that it reveals a subject that is other than the subject that has been determined by fate.

When Žižek draws a parallel between quantum indeterminacy and human freedom, he is drawing a parallel between a common structure that underpins each, and this common structure is the barred One that causes the parallax view. In both cases, we are confronted with a Real that leads to a non-complementary split between two levels of reality (phenomena and some registering of this phenomena, or particles and waves for quantum physics, the subject and substance for human freedom) that is the result of some barred Real that is structural. This definition of the Real that Žižek provides in *Less Than Nothing* is useful to revise at this point in the argument:

the Real is not the external In-itself that eludes the symbolic grasp, that the symbolic can only encircle in an inconsistent and antonomic way; the Real is *nothing but* the

gap or antagonism that thwarts the symbolic from within – the symbolic touches the Real in a totally immanent way. We are thus led back to the key paradox of the Real: it is not simply the inaccessible In-itself, it is simultaneously the Thing-in-itself and the obstacle which prevents our access to the Thing-in-Itself. (Žižek 2012: 959)

A similar point is to be made when Žižek draws parallels between reality and the symbolic order. Some of these similarities that Žižek points in *Disparities* (49-50) include:

1. possibility possesses an actuality of its own. The father's virtual threat of violence underpins his authority, so in quantum physics that trajectory of a particle can only be explained by taking into account all its possible trajectories within its wave function.
2. knowledge in the Real. Just as in the symbolic universe, pretending to take on a social role makes us act like this role, so in the quantum universe, the behaviour of a particle, like the in famous double-slit experiment, will be affected by whether or not which slit the particle moves through is measured.
3. an event only exists when it is registered by some big Other. In the symbolic system, an event only fully actualizes itself when it is registered in the symbolic order; in the same way a wave function collapse in quantum physics only when it is observed or registered in some way in a point external to it.

Here Žižek is not just using analogy. What these similarities show is that we should reject the evolutionary model that with the emergence of human subjectivity and the symbolic realm we have a higher level of reality emerging out of a lower level. Rather, 'lack and absences must be here from the very beginning, already at zero-level, which means that physical external reality cannot be the zero level' (Žižek 2016: 50). It is not that the symbolic just happens to mirror processes that we find at the level of quantum reality. Rather, the Real that is revealed in the symbolic is a repetition of the Real that we find in quantum physics, and this Real is nothing other than the barred One. Just as the symbolic is possible because it relies on a minimal gap between the subject of the enunciation and the inscription of the enunciated content in the symbolic system, so quantum physics posits 'a minimal gap between things in their immediate brute proto-reality and the registration of this reality in some

medium (of the big Other)' (Žižek 2016: 51). Quantum physics shows us that reality can only emerge at a minimum as a result of a cut, or of the establishment of a diffraction between two levels of reality.

When Žižek identifies similarities between the symbolic order and the universe of quantum physics, he is not reading human attributes into the natural world. Rather, he is pointing out that both the symbolic realm and the natural world involve the Real so that what we get, in either the symbolic or the natural world, is reality always-already split due to an ineliminable, inherent inability to form into a single whole, or a non-barred One. Žižek is not saying: 'Human beings have subjectivity, but so does nature', he is rather saying: 'The Real of the symbolic and the Real of the natural world are identical, and so both realms manifest an inherent, structural incompleteness.' If quantum physics reveals a world where there is a gap between some sort of pre-registration reality and post-registration reality, then an objective description of matter as forming a completed whole that exists independently of the subject becomes impossible. To take the findings of quantum physics seriously is to accept that a materialism of a single field of matter interacting with itself in a closed system is not tenable, and so it is to accept the basic tenets of dialectical materialism: that reality is non-all, and that the name for the gap in substance that renders it so is the subject.

## **5. Conclusion**

There can be no doubt that Johnston is supportive of reading Žižek in a way that avoids the charges he lays against him. By pointing out these possible misreadings of Žižek, he is pointing out ways of interpreting Žižek's work that we should avoid. My aim in this article had been to contribute to Johnston's project of reading Žižek in a way that does not involve the potential misreadings that Johnston points out. On the point of quantum physics against biology, Žižek has very good reasons for insisting that quantum physics is the key science of the ontology for dialectical materialism. The most important of these is that quantum physics is the science of the barred-One. It is the science that objectively approaches the impossibility of describing reality as single-layered whole which can be passively observed by the human subject in a way that does not entail intervention or disturbance. It is this

science that best bolsters dialectical materialist claims that reality is always non-all, always split by a constitutive impossibility to complete itself – a thesis that Johnston and Žižek will no doubt continue to profess, defend and clarify as they develop and debate its meaning and its implications.

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