

What is it to Represent the World? How, if at All, do Zalabardo and Price Differ?

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ABSTRACT

Zalabardo (2023) and Price (2023) largely agree on what it is to represent the world, by rejecting representationalism and using pragmatist meaning grounds, but disagree regarding whether the truth or falsehood is absolute and objective. The key to representing the world is to understand that it is at base the procedure for ascribing truth or falsehood that comprises the meaning ground of a sentence. Zalabardo has this as an absolute, accept or reject, *objective* process, and employs a strict divide between sentences as representational or non-representational in function. Price accepts pragmatist meaning grounds as providing meaning, but argues for the possibility of ‘no fault disagreements’ rather than ‘an absolute standard of correctness’ [Price (2023), p. 50] and envisions a *graduated* sliding position in terms of representational or non-representational function, which I am more sympathetic to. For Price, ‘meaning depends on what are at base simply contingent dispositions to treat one thing as like another’ (ibid.). Building on Ramsey-Wittgenstein’s hypothetical, future-oriented direction of thought and language (e.g. properties/concepts as ‘dispositions’) [1930; 1929], Price suggests that the Predictive Processing Framework [Clark (2013); Godfrey-Smith (2013)], is largely consistent with his neo-pragmatism, excluding Hohwy’s Cartesianism (2013). Disagreements remain from outside and within neo-pragmatism concerning subjectivism about probability; the cosmological versus psychological understanding of global ‘now’ or ‘becoming’; the determinability/openness of the future; the metaphysical question of what probabilities are, versus why we psychologically model probabilities; and finally, whether memory or agency is implicated in causal asymmetry. Price and Zalabardo’s divergence creates a fruitful new platform to investigate various issues arising e.g. Are we continually misrepresenting the world; does Zalabardo’s absolute standard of correctness stand up to scrutiny? A persuasive case has been made for pragmatism and pragmatist meaning grounds, which posit that representing the world involves the idea that meaning is grounded in the procedure for accepting/not-accepting a sentence, rather than via representationalism and representationalist meaning grounds, however I favour Price’s recognition of no-fault disagreements.

KEYWORDS: *Neo-Pragmatism, No-Fault Disagreements, Causality, Scientific Objectivity, Representationalism.*

RESUMEN

Zalabardo (2023) y Price (2023) coinciden en gran medida en lo que es representar el mundo, rechazando el representacionalismo y utilizando fundamentos de significado pragmatistas, pero discrepan sobre si la verdad o la falsedad son absolutas y objetivas. La clave para representar el mundo consiste en comprender básicamente que el procedimiento para atribuir verdad o falsedad es lo que constituye el fundamento del significado de una oración. Zalabardo considera que se trata de un proceso *objetivo* absoluto, que se acepta o se rechaza, y emplea una división estricta entre oraciones con función representativa y oraciones sin función representativa. Price acepta que los fundamentos de significado pragmatistas proporcionan significado, pero defiende la posibilidad de «desacuerdos sin fallo» más bien que «un estándar absoluto de corrección» [Price (2023), p. 50] y prevé una posición *graduada* deslizante en términos de función representacional o no representacional, con la que simpatizo más. Para Price, «el significado depende de lo que en el fondo son simplemente disposiciones contingentes para tratar una cosa como semejante a otra» (ibíd.). Basándose en la dirección hipotética y orientada al futuro del pensamiento y el lenguaje de Ramsey-Wittgenstein (por ejemplo, propiedades/conceptos como «disposiciones») [1930; 1929], Price sugiere que el Marco de Procesamiento Predictivo [Clark (2013); Godfrey-Smith (2013)], es en gran medida coherente con su neo-pragmatismo, excluyendo el cartesianismo de Hohwy (2013). Sigue habiendo desacuerdos desde fuera y dentro del neopragmatismo por lo que respecta al subjetivismo sobre la probabilidad; la comprensión cosmológica frente a la psicológica del «ahora» o el «devenir» global; la determinabilidad/apertura del futuro; la cuestión metafísica de qué son las probabilidades, frente a por qué modelamos psicológicamente las probabilidades; y, por último, si la memoria o la agencia están implicadas en la asimetría causal. La divergencia entre Price y Zalabardo crea una nueva y fructífera plataforma para investigar diversas cuestiones que surgen, por ejemplo: ¿representamos el mundo de forma errónea constantemente? ¿resiste el escrutinio la norma absoluta de corrección de Zalabardo? Se han presentado argumentos persuasivos a favor del pragmatismo y de los fundamentos pragmatistas del significado, que afirman que la representación del mundo implica la idea de que el significado se basa en el procedimiento para aceptar/no aceptar una oración, en lugar de hacerlo a través del representacionalismo y de los fundamentos representacionalistas del significado, aunque yo estoy a favor del reconocimiento de Price de los desacuerdos sin culpa.

PALABRAS CLAVE: *neopragmatismo, desacuerdos no culpables, causalidad, objetividad científica, representacionalismo.*

I. INTRODUCTION

Zalabardo and Price agree, up to a point, on what it is to represent the world, by rejecting representationalism and using pragmatist meaning grounds. The key to representing the world is to understand that it is at base the procedure for ascribing truth or falsehood that comprises the meaning ground of a sentence. However, Zalabardo and Price differ when it comes to whether the truth or falsehood is ultimately to be thought of as absolute and objective. Price argues that for a given type of discourse there is an axis of representational function and non-representational function

with the position of a sentence or perhaps a discourse sliding between extremes, rather than the absolute line between favoured by Zalabardo. In Zalabardo's world there is an objective absolute standard of correctness regarding a sentence, whereas for Price there is not. Hence for Price, 'meaning depends on what are at base simply contingent dispositions to treat one thing as like another' and there can be 'No Fault Disagreements' between speakers [Price (2023), p. 50]. This topic has wide-ranging implications for the relationship between language and reality, which leads to questions about the function of sentences and discourses, truth and falsehood, objectivity, science, the temporal nature of thought, and more besides. I shall start by looking at Zalabardo's pragmatism, then at Price's view, and then discuss.

II. ZALABARDO'S REPRESENTATIONALISM VERSUS PRAGMATISM

II.1 *Representationalism and Its Shortcomings*

In regard to the sentences he is concerned with, Zalabardo asks whether in sentences that purport to or do represent the world, a 'meaning ground' can be ascribed to them for their language-to-world relationship, as in representationalist meaning grounds, or explained or specified by 'features of the way they are used' [Zalabardo (2023), p. 13], as in Zalabardo's proposed pragmatist meaning grounds. Zalabardo argues that representationalism assumes, 'a sentence that performs the function of representing things as being a certain way must have a representationalist meaning ground. Representation, according to [this], requires representationalism' [ibid. p. 8]. The main problem is that the existence of representational meaning grounds this does not seem to follow, consistently. A sentence may have no actual referents, things or properties say, that it refers to in the world [ibid. 9]. 'Vulcan has craters' includes a term for a planet Vulcan which does not exist. A plainly false sentence like 'Fido meows' also creates a problem. These are 'reference failures' and lead Zalabardo to argue for pragmatic meaning grounds for a whole variety of sentences. As Price neatly summarises, '[Zalabardo's] objection to representationalist meaning grounds rests on the *open question argument*. He argues that whatever the representationalist picks out as the item in the world, the link to which is supposed to provide the meaning grounds of the claims in question, we can make sense of a speaker who means the same as us by such claims, but takes it to be an open question whether they refer to those items' [Price forthcoming: 3]. Zalabardo thus makes a

strong case that since the requirement of representationalist meaning grounds cannot be met due to reference failures, representationalism itself must be rejected for semantic discourses: ‘sentences appear to represent the world, but they don’t, because the central terms in the discourse fail to refer’ [Zalabardo (2023), p. 10].

II.2 *Pragmatist Meaning Grounds*

How are meaning grounds to be explained? In terms of sentence ‘use’, Zalabardo argues, using ‘Wittgenstein’s idea that the meaning of a linguistic expression is constitutively linked to the way the expression is used’ [ibid. p. 106]. This means that ‘when a sentence has a pragmatist meaning ground, ... it will have the meaning it has as a result of the way in which its acceptance and rejection are regulated’ [ibid. p. 92–93]. Or more simply, ‘the meaning ground of a sentence consists in the procedure employed by speakers for regulating acceptance of the sentence’ [ibid. p. 106]. Zalabardo says we already know ways of doing this, for example, via ‘non-cognitivist and verificationist accounts of these discourses [...] we find that they treat aspects of the procedures by which the acceptance of their sentences or the ascription of their predicates is regulated as essential to the meanings of these expressions’ [ibid. p. 93]. An example given is in the discourse of ethics wherein “is morally right” has the meaning it has by virtue of the fact that its ascription is regulated by the presence in the speaker of the feeling of moral approval [ibid. p. 94]. Price [forthcoming: 5] has some reservations about the overall approach, including that pragmatism here has meaning grounds ‘silent on the function they [sentences] perform [Zalabardo (2023) p. 10], which I take to refer to either a representational function or non-representational one, although Price seems to conclude this is not a worry for him [Price forthcoming, pp. 5–7]. So to represent the world one needs to adopt a pragmatist approach with pragmatist meaning grounds derived from or consisting of our accepting methods of acceptance or rejection of a particular claim or type of claim, rather than look to the correspondence, or otherwise, of the world to sentences.

II.3 *Representing the World Via an Absolute Standard*

Following on from the above argument from Zalabardo, can we accept that there is an absolute standard of correctness when we attempt to represent the world? For Zalabardo, there is an absolute standard [Zalabardo (2023), pp. 153, 155]: ‘if I accept a sentence now, then I regard as correct its acceptance at any time by any speaker who at that time

means by the sentence what I mean by it now, and I regard as incorrect its rejection at any time by any speaker who at that time means by the sentence what I mean by it now. And if I reject a sentence now, then I regard as correct its rejection at any time by any speaker who at that time means by the sentence what I mean by it now, and I regard as incorrect its acceptance at any time by any speaker who at that time means by the sentence what I mean by it now. Our verdicts on a sentence with respect to this absolute standard of correctness are what we express by ascribing the predicates 'is true' and 'is false' [ibid. 153]. Perhaps the immediate problem, as Price points out, is twofold: first, we are put in a position of judging another speaker without much chance of allowing for nuance, and second, where is the possibility for 'no fault' disagreements? [Price forthcoming: 8]. Also, must all the sentences Zalabardo discusses represent the world in an absolute way? Later, I shall say more about what Price proposes as a possible alternative: 'meaning depends on what are at base simply contingent dispositions to treat one thing as like another' and thus there can be 'No Fault Disagreement' between speakers [Price (2023), p. 50].

III. ZALABARDO'S PRAGMATISM APPLIED TO SCIENTIFIC DISCOURSE

III.1 *Are the Meaning Grounds of Scientific Terms Representationalist or Pragmatist? — Lewis' Argument for Humility (2009)*

In the context of scientific theories, Zalabardo uses Lewis' argument for humility (2009) to suggest that knowing the reference-fixing condition, or role within theory [Duhem (1991), Poincaré (1952)] does not suffice for knowing the identity of the referent, and therefore representationalism locates the meanings grounds of predicates such as 'has colour charge' in 'facts to which we necessarily have no access' [Zalabardo (2023) p. 185]. The roles are not sufficient 'for knowing which properties occupy them' [ibid. p. 193]. Structuralism tries to circumvent this by rendering role-occupancy as essential, with property essence comprised of causal and non-causal links [Berenstain (2016)]. There are other ways of conceiving of scientific discourse. Zalabardo contrasts verificationism (where scientific statements do not represent unobservable states of affairs but the observable state of affairs regarded as their support), with instrumentalism, where the function is not to represent but 'generate successful observable predictions' [Zalabardo (2023), p. 198]. Verificationism is largely observed to be an 'untenable position' (ibid.), for the reason that 'there isn't in general a one-to-one correlation between sentences about unob-

servable entities and states of affairs and the observable states of affairs on which we ground our decisions on the acceptance of those sentences' (ibid. 200). Zalabardo's more 'realistic' proposal is that 'what makes the sentence 'an electron has just passed through the cloud chamber' have the meaning it has is the fact that its acceptance is regulated by what our theory of elementary particles treats as observable consequences of the sentence '[ibid].

Zalabardo raises the problem that if even science cannot individuate its referents, how can any discourse truly represent the world? Complicatedly, a change in theory does not always eventuate a change in terms/referents, and vice versa. A solution is presented for a relation of 'inter-theoretic co reference', which is not an equivalence relation but does not violate non-circularity.

III.2 *How to Use Pragmatist Meaning Grounds in Scientific Discourse*

Physicalism — the view that physical properties are the only properties the world contains — faces a significant problem when applied to semantic properties such as 'truth, content and reference', as highlighted by Jackson (1998), p. 2. Zalabardo contends that maintaining physicalism requires maintaining that 'the scope of what the world is ultimately like is much narrower than that of what the world is objectively like' [Zalabardo (2023), p. 204], with the ultimate supervening on the physical — world-states identical in all physical respects are identical in all respects. He then argues that accepting the pragmatist approach to the meaning grounds of the physical sciences, allows us to identify referents in terms of abstraction principles generated by 'criteria for co-reference of theoretical terms' (ibid.); but this also means abstraction is our only method of cognitive access. The Canberra Plan assumes: (1) 'If a predicate is to perform the function of representing the world, there has to be a property it refers to' and (2) the physical properties identified by the sciences provide a complete description of reality [ibid. 202]. It follows from these assumptions, that if a predicate can represent, there must be a property it refers to.

III.3 *Abstraction Principles Give Meaning*

Zalabardo's main adversary is quasi-realism, the version of expressivism contending that an expressive discourse can be representationalist. Zalabardo's overall critique of quasi-realism is that it generates (1) wholly representational discourses with no other function but to represent the world and (2) discourses thought to be representational, but which ulti-

mately have a non-representational function essential to their meaning grounds. Pragmatism, he argues, circumvents this problem, by having no other purpose than representing the world. On his construal, property ontology is unaffected by cognitive access via explicit definition or abstraction principle. However, this has been critiqued by those who claim that abstraction somehow *creates* the ‘items that the abstraction operator pairs with the elements of its domain, instead of granting us *access* to independently existing items’ [ibid. 206], and therefore representationalist meaning grounds are superior to pragmatist meaning grounds. This can only be bypassed if one accepts the pragmatist approach to the basic sciences; and that there are no higher ontological properties than those from abstraction, as is argued by Zalabardo. These disputes have far-reaching implications for our understanding of the relationship between language and reality, as well as for the relationship between the sciences and other discourses. If science cannot be relied upon to provide the referents in the representationalist model, it is proposed by Zalabardo that abstraction principles may provide access to the referents of all predicates (excluding sensory qualities). It is claimed that the same result is reached even without difficulties in the language of science, as ‘cognitive access to properties through explicit definitions is necessarily dependent on the availability of an alternative method for cognitive access to properties’ (ibid.).

A possible objection is that one needs to know the referent of ‘*x* regulates her ascription of *y* on the basis of her *feeling* of moral approval’ to know the referent of ‘is morally right’. Zalabardo responds by arguing all one needs do is represent in thought such a speaker (ibid. 211); therefore, abstraction principles enable a progression from predicate understanding to predicate referents, though I am unsure how convincing this is.

IV. PRICE’S ‘GEOGRAPHICAL’ MAPPING OF ZALABARDO’S PRAGMATISM & ADDED ‘GRADUATION’

IV.1 *The Geographical Mapping of Zalabardo’s Pragmatism*

Suppose we accept broadly what Zalabardo is saying, on the grounds of reference failures and the open question argument. We might still be sceptical that the world is being represented, as perhaps there are disagreements between speakers or we cannot be sure that absolute standards of correctness are plausible for various types of sentences in general. Although Price is in favour of pragmatist meaning grounds, he differs from Zalabardo in important ways [Price forthcoming]. First, as

shown in Figure 1, Price indicates how Zalabardo describes a matrix which shows how Zalabardo is particularly interested on this topic.

	Representational function	Non-representational function
Representationalist meaning grounds	Popular	Unavailable?
Pragmatist meaning grounds	Unavailable?	Popular

Figure 1 [from Price (forthcoming), 'Review of Zalabardo, *Pragmatist Semantics*'; *Mind*.]

Price places the previously missing 'pragmatist meaning grounds' under the 'representational function' of sentences [ibid. 2]. Price then accepts Zalabardo's rejection of the representationalist meaning ground and agrees with pragmatist meaning grounds, up to a point. Note for Price global expressivism and global pragmatism are the same [Price (2023), pp. 23, 26, and see Price (2023), Section 2.2 The Expressivist Recipe]. Expressivism combines five ingredients: 'a use-first approach to meaning. Expressivism focusses on how words are *used*, rather than what they are *about*...[concerning] primarily linguistic or psychological issues — Why do we talk or think this way? — with a renunciation of the 'representational' moves that [regress] to metaphysics [e.g., that of seeking 'referents', or 'truth-makers', in some non-deflationary sense]...an explanatory program [which] aims, roughly speaking, to account for the existence and practical relevance of the vocabularies in question...features of speakers — typically features of practical or 'pragmatic' significance — that play characteristic roles in expressivist accounts of particular vocabularies. I have called these features the pragmatic grounds of the vocabularies in question...culminating in perspectivalism' [Price (2023), pp. 26-27].

IV.2 Price's Added 'Graduation'

As mentioned earlier, Zalabardo argues for a standard of correctness of representation claims that is absolute. This is where Price departs from Zalabardo. '[Zalabardo's] view seems to lead to the conclusion that the world is simply everything that may be correctly said to be the case, by sentences subject to this absolute standard of correctness.' [Price forthcoming: 9]. Price continues, that he could be at fault for ignoring the SW [mapping] option, but does not want to shift his ground and ar-

gues that the representation is on a horizontal W to E sliding scale that does not touch the extremes. The strict divide between representation and non-representation function is removed. ‘Some discourses are further West than others, with no pure cases.’ [ibid. 10].

Price argues that Zalabardo’s position is closer to expressivism/non-cognitivism than Zalabardo grants, as they both agree about ‘how the ascription of the predicate has to be regulated in order for it to have the meaning it has’ (Price forthcoming: 5); while non-cognitivism assigns these sentences a non-representational function. Price agrees that Blackburn’s quasi-realism is unstable [Macarthur & Price (2007); Price (2015)]; but contends that Zalabardo’s pragmatism does not escape a distinction between ‘genuinely and merely ‘quasi ‘representational discourses’ [Price forthcoming: 7] by virtue of the fact Zalabardo concedes that there are some declarative sentences that cannot have pragmatist meaning grounds. Although it is not a bifurcation in representational function, it is a bifurcation in terms of meaning grounds.

Overall, Price agrees that ‘factuality’, or Zalabardo’s ‘representation’ is ‘constructed from within’, yet not incompatible with ‘global expressivism’ [ibid. 9]. He points out that ‘we can never exclude the possibility that two speakers will find themselves ‘going on in the same way ‘in *different* ways, in what will come to seem merely a terminological disagreement, with no ‘factual ‘content’, and characterises it as a limiting case to Zalabardo’s proposal, proposing a form of gradation depending on the type of discourse [ibid. 10].

IV.3 *What Does Meaning Depend On?*

For Price, contra Zalabardo, ‘meaning depends on what are at base simply contingent dispositions to treat one thing as like another...’ [Price (2023), p. 50]. Price argues that meaning and thus communication depend on: ‘a use-first approach to meaning, and the identification of pragmatic grounds. Once we have these ingredients in view, there’s an obvious path to globalisation. We simply need to argue that any kind of declarative cake needs a handful of pragmatic grounds, blended into a use-first account of some aspect of its meaning. Where to find such an argument? In effect, [the first edition of *Facts and the Function of Truth*, Price (1988)] claimed to do so in the rule-following considerations, and what they reveal about the way in which meaning depends on what are at base simply contingent dispositions to treat one thing as like another. Communication is possible because, most of the time, we are disposed to ‘go on in the same way ‘in the same way — but divergence is always

possible, leading, in principle, to [No Fault Disagreements]. These dispositions are themselves pragmatic grounds, in the terminology we have been using, and they are absolutely *global*. Anything that counts as language depends on them. These dispositions are thus an essential ingredient, without which no linguistic cake can possibly stand up. In fact, we have more than we need. It would have been enough to show that any assertoric language game needs some sort of use-first component — perhaps a different one in different games. We have shown that there is a particular kind of use-first component that is needed in all such games [Price forthcoming second edition: ch. 12 (ibid.)]. The notion of ‘contingent dispositions to treat one thing as like another...’ (ibid.) seems to be the key to this way of explaining where meaning comes from.

V. WHAT IS IT TO REPRESENT THE WORLD?

V.1 *For Zalabardo; Against Representationalism*

In Zalabardo’s approach to meaning grounds for sentences, representing the world cannot be achieved through the idea of representationalism, i.e. the correspondence of terms to the world, because the terms fail to refer consistently. The open question argument, as we noted earlier, helps us to realise this. The speaker may or may not be referring to the same items we are. The solution is pragmatist meaning grounds and the considerable advantage is that reference failure is avoided and instead we may employ the idea that a sentence ‘will have the meaning it has as a result of the way in which its acceptance and rejection are regulated’ (Zalabardo 2023: 92–93). It then seems that for acceptance as correct by any another speaker, at any time, of a sentence that I accept now as correct, it is the case that we two speakers mean the same by a sentence (ibid. 153). ‘The sky was red in North London early yesterday morning’ could then be either (absolutely) correct or (absolutely) incorrect *for a given day and time, and from a given commonly agreed vantage point*. This does seem to be a very promising way to ascribe meaning. But is there anything awry? What if two speakers agree to disagree on this?

V.2 *Price’s Concerns and Vientpoint*

For Price, the extent to which sentences and/or discourses *function* so as to represent the world varies from representational to non-representational in a spectrum, with no pure cases. This ‘messy’ scenario is different from having a clean dichotomy or dividing line between repre-

sentational and non-representational representing as per Zalabardo. For Price, ‘representation always comes by degrees. The so-called absolute standard is never entirely absolute. [All] assertoric discourses have the potential to force us to admit no fault disagreements’ [Price, forthcoming]. Price thinks ‘meaning depends on what are at base simply contingent dispositions to treat one thing as like another’ and there can be ‘No Fault Disagreements’ between speakers [Price (2023), p. 50]. This is reminiscent of an overlapping consensus type of argument, perhaps similar in kind to Rawls’ political pluralism in *A Theory of Justice* (1971). Sentences and/or discourses function so as to represent the world in accordance with best effort/s and the rendering of least fault/mistake, as it were. This seems to me to be a clear advantage of the pragmatist approach, unless one insists on absolutism in human judgement, in the way of Kant, such that there are *universal* ethical standards that apply to actions that are intrinsic to everyone, irrespective of context. Price says further: ‘Communication is possible because, most of the time, we are disposed to ‘go on in the same way’ in the same way — but divergence is always possible, leading, in principle, to [No Fault Disagreements]’ (ibid.). Thus Price questions the ‘absolute standard’ approach to the question of correctness.

V.3 *Why Is This Topic Important?*

The topic being discussed here bears extensive utility as it introduces what appears to be a whole new way of thinking about the meaning grounds of many sentences, and whole discourses. That philosophers have missed the pragmatist meaning ground previously, and have instead accepted representationalism without question, seems remarkable. Price’s neopragmatism emphasises that the temporal character of causality (in the manifest image) is likely reflective of our own agential, temporal modality, not an independent reality; chance may reside in the fact that we have less information about the future than the past; QBist or Quantum Bayesian approaches to quantum theory may illustrate the perspectives of idealised observers [Healey (2017); Timpson (2008)]; it is possible that the entropy gradient in our sector of the universe produces our distinction between past and future [Boltzmann-Schuetz hypothesis], and orientation of our acquisition and storage of information; and finally, the ‘*entropic*’ environment is crucial for the physical existence of *agents*’ [Price (2023), p. 62]. C-Theorists about time, such as Price (1996), Farr (2018), and Fernandes (2017), contend that the entropic gradient is explanatorily prior to all other asymmetries, instantiating in succession (1) Albert’s (2000) asymmetry of fixtures and options, (2) the asymmetry of records (past knowledge is only

useful before we act upon it), (3) the fact that deliberations precede decisions, then finally (4), a (merely) contingent and local asymmetry of intervention. It is worth noting that C-Theorists must seemingly accept the possibility of cases of causal handles/‘options’ in the past, evoking the kind of backwards causation implied in Price’s (1996) ‘advanced action’ interpretation of Wheeler’s (1978) ‘delayed two-split experiment’ [wherein change in final conditions retroactively determines initial wave/particle choice], which is not widely accepted by physicists [Forbes forthcoming (2024), p. 152], or by Wheeler himself. Contra Price, some are also sceptical of philosophers’ extrapolation from Boltzmann’s Second Law of Thermodynamics (1895) to a fully objective, observer-independent temporal arrow due to micro time-reversal invariance, and other conceptual/extrapolatory problems, as highlighted by Earman (2006), Hemmo & Shenker (2016), p. 161, and Dainton (2010), p. 50. Building on Ramsey-Wittgenstein’s hypothetical, future-oriented direction of thought and language [including properties/concepts as ‘dispositions’] (1930) (1929)], Price suggests that the Predictive Processing Framework (PPF), the brain as hypothesis-testing, error-minimising machine which in some way constructs its environment [Clark (2013); Godfrey-Smith (2013)], is largely consistent with neopragmatism, excluding Hohwy’s Cartesianism (2013). Disagreements remain from outside and within neopragmatism concerning subjectivism about probability; the cosmological and psychological understanding of global ‘now’ or ‘becoming’; the determinability/openness of the future; the metaphysical question of what probabilities are, versus why we psychologically model probabilities; and finally, whether memory or agency is implicated in causal asymmetry.

Some interesting questions also arise from the debate within this essay about meaning grounds. Is there a dividing line between the representational and non-representation function of sentences? Does Zalabardo’s absolute standard of correctness, when we attempt representation of the world, hold up to scrutiny? Is there fault to be adjudged when we disagree? How does objectivity exist and does it always prevail? And, in regard to scientific discourse, to what extent is scientific discourse ‘scientific’ and to what extent is it merely based on theories and commonly-accepted *abstractions from theories*? Are we continually misrepresenting the world in some way? What is it to represent the world? I cannot answer these crucial questions here, but Zalabardo and Price certainly provide a lucrative platform for a whole set of future work in this area.

VI. CONCLUSION

Zalabardo makes a strong argument for rejecting representationalism as what it is to represent the world, and instead adopting pragmatism with its pragmatist meaning grounds consisting of how a sentence is used or deployed, the procedure that speakers use for accepting or rejecting a sentence. Zalabardo has this as an absolute, accept or reject, *objective* process, and employs a strict divide between sentences as representational or non-representational in function. Price accepts pragmatist meaning grounds as providing meaning, but argues for the possibility of 'no fault disagreements' rather than 'an absolute standard of correctness' and envisions a *graduated* sliding position in terms of representational or non-representational function, which I am more sympathetic to. The divergence creates a fruitful new platform to investigate various issues arising, for example, the function of sentences and discourses, the nature or reality of truth and falsehood, objectivity and science, cosmological versus psychological understanding of time, and the relationship between language and reality itself. A persuasive case has been made for pragmatism and pragmatist meaning grounds, which posit that representing the world involves the idea that meaning is grounded in the way sentences are used, in particular the procedure for accepting or not-accepting a sentence, rather than via representationalism and representationalist meaning grounds.

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