

Nietzsche's Positivism

Nadeem J. Z. Hussain

1. Introduction

One strong strain in contemporary Anglo-American secondary literature on Nietzsche would like to take his favourable comments about science, scientific methodology, the results of particular sciences, the role of scientists, and the senses as grounds for interpreting him as similar in many ways to contemporary naturalists.¹ According to such a reading, Nietzsche has a basically empiricist epistemology and has ontological commitments that are more or less straightforwardly read off of whatever he takes to be the best empirically supported account of the world. This interpretation is taken to gain support from the strong presence of materialism in Nietzsche's historical context.

However, this view does run into some problems. Nietzsche often suggests that the theories of scientists do not straightforwardly report how the world is. Thus he says:

It is perhaps just dawning on five or six minds that physics, too, is only an interpretation and exegesis of the world (to suit us, if I may say so!) and *not* a world-explanation; but insofar as it is based on belief in the senses, it is regarded as more, and for a long time to come must be regarded as more—namely, as an explanation. (*BGE* 14)²

Or consider the following passage:

One should not wrongly reify 'cause' and 'effect', as the natural scientists do (and whoever, like them, now 'naturalizes' in his thinking), according to the prevailing mechanical doltishness which makes the cause press and push until it 'effects' its end; one should use 'cause' and 'effect' only as pure concepts, that is to say, as conventional fictions for the purpose of designation and communication—*not* for explanation. In the 'in-itself' there is nothing of 'causal connection', of 'necessity', or of 'psychological non-freedom'; there the effect does *not* follow the cause, there is no rule of 'law'. It is *we* alone who have devised cause, sequence, for-each-other, relativity, constraint, number, law, freedom, motive, and purpose; and when we project and mix this symbol world into things as if it existed 'in itself', we act once more as we have always acted—*mythologically*. (*BGE* 21)³

Not surprisingly such passages lead to a different, and older, strain of Nietzsche interpretation. Such interpretations focus on his apparent insistence that scientific

theories involve falsification and are, in some appropriate sense, *merely* interpretations of the world. Much is made in this context of Nietzsche's 'perspectivism'. This Nietzsche is taken as presenting us with a radical attack on the pretensions of science and reason.⁴

Maudemarie Clark argues that such passages represent only a stage in Nietzsche's development and that the mature Nietzsche, the Nietzsche of the last six books starting with *GM*, is not committed to the falsification thesis.⁵ The falsificationist thesis is initially the result of the following argument: (i) the truth of a claim is a matter of correspondence with things-in-themselves, (ii) however our language is only about our own representations rather than the extramental things Nietzsche identifies with the Kantian thing-in-itself, (iii) 'since we cannot therefore say anything about *what* such things are, our linguistic expressions certainly cannot correspond to what they are in themselves' and so cannot be true.⁶ In *GS* and *BGE*, though, he comes to see that the notion of a thing-in-itself makes no sense and by the time of *GM* he has realized that without it he should give up the falsification thesis and so he does.

I, like some others, find the claim that Nietzsche gives up on the falsification thesis hard to swallow.⁷ In the very books, *GS* and *BGE*, where Nietzsche is supposed to have realized that the thing-in-itself is inconceivable, he continues to insist on the falsification thesis. Many of the later books do not deal with epistemology and metaphysics so an absence of the falsification thesis would not be that surprising. Furthermore, there are indeed passages from *TI* that sound at least very much like the falsificationist passages of his earlier works. Finally, falsificationist claims are present in Nietzsche's unpublished notes apparently right till the end (*KSA* 13:14[153]).

Clark grants of course that there is such *prima facie* evidence against her view, but attempts to interpret it away. She presents a detailed account of *GS* and *BGE* meant to show how Nietzsche might not have immediately realized the consequences of the inconceivability of the thing-in-itself. She also provides an interpretation of the apparently falsificationist passages from *TI* that allow us to read them as an attack on 'the metaphysical concept of a substance, the concept of an unchanging substrate that underlies all change' (107) rather than 'the scientific world-view' (108).

I'll consider the details of Clark's reading below, but the fundamental motivation to interpret Nietzsche as having given up the falsification thesis is clearly the view that, as Leiter puts it, it 'is impossible to reconcile' such a thesis with 'Nietzsche's explicit *empiricism*—his view that 'all evidence of truth comes only from the senses' (*BGE*: 314).⁸ Furthermore, much of Nietzsche's philosophical work, in particular his famous critiques of Christianity and morality, seem to rest on empirical truths.⁹ If the interpretive choice really were between falsificationism and empiricism, then we would indeed have strong motivation to treat the above evidence for falsificationism as only *prima facie* evidence. However, as I shall argue in this paper, there were several different ways in Nietzsche's historical context to be friendly to science and the senses: some of these in fact allow us to see how one could simultaneously reject the thing-in-itself, accept a falsification thesis, *and* be an empiricist.

I will agree with Clark that we should interpret Nietzsche as rejecting the thing in itself and then accepting the remaining world of appearances for all the reality there is. But what this comes to depends of course on how Nietzsche understood the Kantian framework in the first place. I shall argue that Nietzsche's understanding of this framework is shaped by neo-Kantians like Friedrich Lange, Afrikan Spir and Gustav Teichmüller. Once we understand what they meant by the 'apparent world', we come to see that a rejection of the thing-in-itself would lead Nietzsche to the kind of position represented by one of his contemporaries: the physicist Ernst Mach's neutral monism—Machian positivism as I'll call it. Such a view will allow Nietzsche both to be science-friendly and to accept a falsification thesis.

I will proceed as follows: (i) I will look at the details of Clark's explanation for the presence of falsification in *GS* and *BGE* despite Nietzsche's having given up the thing-in-itself. As we will see, *BGE* 15 plays a crucial role in her story of how Nietzsche eventually gives up the falsification thesis. (ii) I will raise various puzzles about Clark's interpretation of *BGE* 15 that, I will suggest, should lead us at least to look for an alternative interpretation. (iii) I begin the task of constructing this alternative interpretation by looking once again at Nietzsche's placement of himself in 'How the "True World" Finally Became a Fable' in *Twilight of the Idols*. Here Nietzsche lists a progression of historical positions on the relation between the world of experience and some purported real, or more real, world. He correctly sees these positions as linked by natural conceptual developments. The natural progressions that supposedly lead to Nietzsche's own position also lead, I will argue, for exactly the same reasons, to Mach's position. This should give us some reason to suppose that Mach might throw light on Nietzsche. (iv) Of course, this argument will not be effective if there is not actual textual support in Nietzsche for the Machian reading and so I will turn to citing and discussing relevant passages from Mach's and Nietzsche's works. (v) I will then return to *BGE* 15 and provide a Machian interpretation that I argue deals with the puzzles raised for Clark's interpretation of *BGE* 15. (vi) Finally, I briefly return to the question of falsificationism in Nietzsche's last six works.

2. Maudemarie Clark

2.1 *The Explanation for Falsification in GS and BGE*

As we saw in the introduction, Clark argues that the mature Nietzsche 'abandoned the falsification thesis because he realized that his account of the thing-in-itself as a contradiction in terms deprived him of any bases for it'.¹⁰ As a result, in his final six books starting with *GM*, there is no falsification involved for Nietzsche 'in either the common sense picture of the world of relatively enduring middle-sized objects or the scientific worldview' (108). However, as Clark grants, despite the rejection of the thing-in-itself in *GS* and *BGE*, Nietzsche continues to talk of falsification in these works (109). Indeed Clark even grants that in *GS*,

Nietzsche explicitly denies that the falsification thesis depends on the thing-in-itself (117). So what explains the continued presence of the falsification thesis? Why didn't Nietzsche realize that he should give up his falsification thesis?

Clark's answer is complicated and comes in a couple of parts. First, Nietzsche accepted, according to Clark, a representational theory of perception whose sources lie in his reading of Schopenhauer and Lange.¹¹ According to this theory 'we perceive only images or appearances rather than the things themselves' (81). Our language can only be about these representations (81–83). As Clark points out, according to her interpretation, in *TL*, the [falsification] thesis made sense because Nietzsche claimed that our representations fail to correspond to the thing-in-itself', but given the rejection of the thing-in-itself, Nietzsche should now give up the thesis since 'if there are only representations, to what could they fail to correspond? What is left to be falsified?' (120).

Clark's answer is the 'chaos of sensation': the representations fail to correspond with the chaos of sensation (122). Nietzsche identifies reality with the chaos of sensation. The representations falsify the 'chaos of sensation' because our 'brain's organization imposes' features on the reality of sensations 'making it appear to have features it does not actually possess' (121). Nietzsche, according to Clark, accepts a 'naturalized version of Kant's theory of knowledge' and so the features of knowledge that 'Kant construed as *a priori*: mathematics, logic, and the concepts of substance and causality' are treated as features that the brain, understood naturalistically, imposes on the data of sensation to generate our representations (121). Therefore in *GS* and *BGE* 'even the ordinary idea of an enduring thing' involves falsification because, for example, the representation of a desk involves 'the assumption of an enduring thing and bearer of properties' that is 'nowhere to be found . . . in the sense impressions themselves' (121).

If indeed the representations, the images or appearances, are all we are aware of, then 'how does Nietzsche know that reality is constituted by the chaos of sensations'?¹² Clark's answer is that Nietzsche could claim to know this because of 'an empirical theory of knowledge'—precisely the account of the brain's role in falsifying the data of sensation that he would supposedly have learnt from Schopenhauer and Lange (121). Thus we have an explanation for why Nietzsche would have continued to accept the falsification thesis in *GS* and *BGE* despite his rejection of the thing-in-itself.

Clark however doesn't stop there. She argues that in *BGE* 15 Nietzsche realizes that 'there is a major problem with this way of justifying [his] falsification thesis' (123). Here's *BGE* 15 in full:

To study physiology with a clear conscience, one must insist that the sense organs are *not* phenomena in the sense of idealistic philosophy; as such they could not be causes! Sensualism, therefore, at least as a regulative hypothesis, if not as a heuristic principle.

What? And others even say that the external world is the work of our organs? But then our body, as a part of this external world, would be the work of our organs! But then our organs themselves would be—the work

of our organs! It seems to me that this is a complete *reductio ad absurdum*, assuming that the concept of a *causa sui* is something fundamentally absurd. Consequently, the external world is *not* the work of our organs—?

According to Clark,

[t]his passage shows Nietzsche's realization that for the purposes of giving an empirical account of human knowledge, he must presuppose the existence of real, independently existing, things: brains, sense organs, the bodies to which they belong, and the bodies with which they interact. (123)

And so Nietzsche realizes that empirical accounts cannot be used to show that reality is the chaos of sensations. Nietzsche then gives up the identification of reality with the chaos of sensations and, eventually, gives up his falsification thesis.

2.2 Puzzles about Clark's Interpretation of BGE 15

2.2.1 The Identification of Reality with the 'Chaos of Sensations' Despite BGE 15

Recall that the above interpretation was meant to solve the puzzle of how Nietzsche could still accept the falsification thesis in *GS* and *BGE* despite having given up the thing-in-itself. The first problem with the interpretation is the obvious one, namely, that it doesn't really solve this puzzle precisely because, according to the interpretation itself, Nietzsche would have realized in *BGE* 15 that he could not equate reality with the chaos of sensations and so there would be nothing 'left to be falsified' (120). Clark's claim of course is that it takes Nietzsche some time to realize that he should give up his falsification thesis. However, for this interpretation to be plausible, the supposed confusions that keep Nietzsche from drawing the right conclusion from his rejection of the thing-in-itself should be quite opaque—opaque enough that, roughly speaking, the philosophical ineptitude ascribed to Nietzsche is, other things equal, less than the degree of ineptitude posited by competing interpretations.

I'll leave the comparative judgment for later, but we should note for now that the incompetence ascribed to Nietzsche is pretty severe. According to Clark, just a couple of sections away in *BGE* 4 and 11 Nietzsche is arguing for a version of the falsification thesis on the basis of a naturalistic, empirical account of knowledge according to which the organs of the brain create representations that falsify 'sense impressions' and reality is identified with these sense impressions (121–122). And yet by *BGE* 15 he's realized that such an account presupposes that the brain is real and so the identification of reality with sense impressions actually is *not* compatible with the account of knowledge (123). How could Nietzsche not have realized this when he wrote *BGE* 4 and 11 in the first place? Why would he have left them in once he had the realization?¹³

2.2.2 Making Sense of Reality as a 'Chaos of Sensations'

The puzzles increase when we think further about the empirical view Nietzsche is supposed to have held here. Where, one might ask, in the view ascribed to Nietzsche, is the 'chaos of sensation'—is reality? A natural thought to have is that reality is whatever impinges on our sense organs. The chaos of sensations would be the chaos of whatever stimulates our sense organs. Sensations would then not be the work of our sense organs—they would be on the other side, so to speak, of the sense organs. Several things to note: (i) it would be an odd use of language to speak of sensations not as what are produced by the sense organs, but rather as what impinge on the sense organs; (ii) such a view makes it blatantly obvious that the sense organs themselves are something different from what is impinging on them; (iii) it would also be odd then to write, as Clark does, of sensations as 'part of the representations' (122)—they may be part of what is represented by the representations but, being on the other side of the sense organs, can't be part of the representations themselves.

Surely this isn't the view Clark is ascribing to Nietzsche. Perhaps the chaos of sensations are produced by the sense organs, but are unconscious.¹⁴ The falsification occurs as the brain processes these unconscious sense impressions to produce the conscious representations. This certainly helps with (i) above but still doesn't help with (ii). Furthermore, why, in this view, would it ever make sense to identify reality with the chaos of sensations since they are something produced by the sense organs? Finally, it is still unclear in what sense they would be 'part of the representations'. Indeed why, if they are simply some intermediary state of the nervous system, would Nietzsche take representations to be falsifying them as opposed to falsifying whatever is, or isn't, on the other side of the sense organs?

2.2.3 Lange and Spir's Naturalized Versions of Kant's Theory of Knowledge

Given his historical context, it isn't clear how Nietzsche could straightforwardly draw the conclusion that Clark wants him to from the arguments of *BGE* 15. Clark points to Lange as a source of Nietzsche's representationalism and the above empirical theory of knowledge, but in Lange Nietzsche would have come across a *reductio* of precisely the kind of empirical theory of knowledge Clark wants to ascribe to Nietzsche. Lange suggests that the physiology of the sense organs 'leads us to the very limits of our knowledge, and betrays to us at least so much of the sphere beyond it as to convince us of its existence'.¹⁵ Now Lange thinks that though such physiological investigation into the sense organs may look favourable for the materialists—in that it promises to give us a materialistic account of our knowledge of the world—in fact it is deadly. Physiology shows us that the sense organs *don't* show us how the world really is and indeed that our very concept of matter may have nothing to do with what is really there in the world.¹⁶ And thus materialism, as the belief in 'material, self-existent things' is thoroughly undermined: the 'consistently Materialistic view thus changes

around, therefore, into a consistently idealistic view'.¹⁷ Lange draws the following conclusions:

1. The sense-world is a product of our organisation.
2. Our visible (bodily) organs are, like all other parts of the phenomenal world, only pictures of an unknown object.
3. The transcendental basis of our organisation remains therefore just as unknown to us as the things which act upon it. We have always before us merely the product of both.¹⁸

He summarises his chapter by saying:

The senses give us ... *effects* of things, not true pictures nor things in themselves. But to the mere effects belong also the senses themselves, together with the brain and the molecular movements which we suppose in it. We must therefore recognise the existence of a transcendental order of things.¹⁹

Now surely Nietzsche must have had this section of Lange in mind when writing *BGE* 15.²⁰ However, to respond to this argument by insisting that for consistency's sake the physiologist must indeed think of the sense organs as 'real, independently existing, things' would just make Lange's basic point that materialism, considered as a view about the nature of reality, is fundamentally incoherent.²¹ It is hard to think that *BGE* 15 could, in the light of this, be evidence that Nietzsche has come to some *new* realization. It would just show that the above empirical theory of knowledge is inconsistent with its presuppositions—something Nietzsche would have known all along from Lange since it is the heart of Lange's argument against materialism.

The kinds of arguments Lange deploys to conclude that physiological accounts of the brain and the sense organs show that they falsify are similar to those of many other neo-Kantians and share similar problems. Thus the physiology of our eyes shows that the visual sensation of a single three-dimensional object in front of me is in fact a composite generated from the two two-dimensional stimulations of each of my retinas (III: 203). Supposedly we learn that even the simplest of sensations is not the result of a single natural process, which is anyway in itself completely different from a sensation, but the combination of many different processes (III: 203–204). Furthermore we learn that 'colours, sounds, smells, &c., do not belong to things in themselves, ... they are peculiar forms of excitation of our sensibility, which are called forth by corresponding but qualitatively very different phenomena in the world' (III: 217). Indeed, according to these physiological accounts, only a very specific set of vibrations is picked out and the rest are ignored (III: 217). We learn that there is a blind spot on the retina but that the brain fills in the spot when constructing our image of the world (III: 220). The conclusion from all this that Lange wants to draw is that the world we think we see is radically different from the way the world really is.

Nietzsche would have come across similar arguments in his readings of the neo-Kantian Afrikan Spir. Spir adds to the kinds of considerations Lange points to above by noting that we learn from physiology that each sense organ produces the same kind of sensation despite the fact that the objects acting on them are radically different:

The optic nerve, for example, gives only light and colour sensations whether it is pinched or struck, whether it is affected by light waves or electricity. Similarly the auditory nerve produces sensations of sound with every influence and so also the rest. The most diverse stimuli, acting on the same sense organ, always produce the same impressions, and conversely, the same stimulus, for example electricity, acting on different sense organs, produces different impressions, namely, the one peculiar to each sense organ. Physiology therefore teaches us that our sensations are completely separate from outer things, do not resemble them at all and are completely incommensurable with them.²²

And so Spir concludes that if there are external things, they are completely different from the bodies we think we see and touch (I: 120).

Many of these then commonplace arguments can perhaps be seen merely as arguments in favour of a subjective account of secondary qualities and one could respond by insisting that nonetheless the empirical theory we construct gives us a correct account of the primary qualities. Indeed for all that has been said, someone might argue, we may still be warranted in thinking that reality is composed of bodies in motion in space. However, Lange wants to resist even this move, the 'last refuge of Materialism' as he calls it (III: 224):

Just as the vibrations of the calculated phenomenal world are related to the colours of the immediately seen, so too a to us entirely inconceivable arrangement of things might be related to the arrangement in time and space which rules in our perceptions. (III: 224–225).

Physical space, for example, could easily be of more than three dimensions without that having any effect on our phenomenal world (III: 227).

It helps I think to see this as a version of the brain-in-the-vat argument though, if it's possible, I'll put the point in even more extreme science-fiction terms. What physiology in the end shows us, I take Lange to be in effect saying, is that for all I know I could be, for example, a brain in a universe which consists only of my brain surrounded by a thin membrane that generates just the right pattern of electrical impulses for the optical nerve, the auditory nerve, etc.²³ I wouldn't even have to have eyes, ears, a tongue, etc. Beyond this nothing, perhaps not even space. Now it's true that even this extreme version does presuppose the three-dimensional brain, but that's about it. It certainly doesn't presuppose, note, sense organs let alone the rest of my body.

The physiological investigations that lead to the construction of the account of, for example, nerve impulses and sensations are based on an investigation not of

my own brain but rather those of others. However, the theory that I construct on the basis of this evidence—the above theory about nerve impulses—shows that, for all I know, I could be a brain in a vat and that the supposed eyeball or visual cortex on the lab table in front of me does not exist. Physiology itself undermines the reliability of the evidence it is based on and thus undermines the theories of physiology themselves. In the process it also undermines the materialistic worldview of mind-, or brain-, independent physical objects in three-dimensional space and time. Or so Lange, and others like him, would claim. That physiology presupposes external objects is precisely the problem.²⁴

After this long, but I think useful, detour through the kind of empirical theories of knowledge Nietzsche would have been exposed to, we can see that the fact that such physiological accounts ‘presuppose the existence of real, independently existing, things’ would hardly have been much of a realization. It was simply part of a standard story about how physiology and the materialistic world view undermine themselves.

Notice that what Clark calls perspectivism—the denial of a foundational account of knowledge and the denial of the thing-in-itself—wouldn’t obviously help here if Nietzsche did indeed accept that the empirical data supported these physiological theories.²⁵ Such physiological theories don’t assume foundationalism. The point isn’t that we need to find some particular indubitable belief or perception on the basis of which we construct our account of the world. To put the point in terms of the metaphor of rebuilding the boat at sea, the claim isn’t that we *have* to repair boats on dry land, the claim is that this particular boat is apparently consuming itself. Consider how Clark puts the anti-foundationalist approach she wants to ascribe to Nietzsche after he has given up the ‘assumption that truth is independent of our cognitive interests’:

In the absence of this assumption, we need not fear that we may be completely cut off from the truth . . . We do not need prior assurance because we can find reason in the results of inquiry itself to believe that inquiry is not futile. (Clark 1990: 54)

The problem precisely with the kind of empirical theory of knowledge Nietzsche would be exposed to from Lange and Spir is in fact that the results of inquiry themselves makes us worry that empirical inquiry is, as far as the external world is concerned, futile.

It also isn’t just a lack of certainty. The point is that the evidence, according to the lights of the very theory of our sense organs constructed on its basis, is actually compatible with a wide range of theories of the external world. We have no reason to prefer one account over others. The point isn’t just that we aren’t certain, the point is that we have no empirical reason for preferring one hypothesis over another.

Furthermore, the account doesn’t assume a thing-in-itself in the sense that Clark takes Nietzsche as rejecting, namely, something about which any conceivable intelligence could be wrong even though its theories lived up to

our best standards of rational acceptability (48). There is nothing that requires representationalism in the problematic sense that the essence or nature of an extramental object be independent of how it *can* appear (136–137). The point rather is that the particular appearances we have before us in some particular instance are apparently compatible, given the rest of our empirical theory, with many different arrangements of objects. Indeed these theories suggest that perhaps strict one-to-one correspondence between particular kinds of external events and internal states might help, let alone more radical possibilities for cognitive capacities we can imagine. We may well suspect that lying behind these arguments is some kind of *a prioristic* philosophical prejudice, but officially Lange or Spir aren't committing themselves to that in their claims about these physiological accounts.²⁶

Of course, Nietzsche should perhaps argue that in fact the physiological investigations don't show what Lange and Spir claim they show in the sense that the supposed empirical theories aren't what the empirical data support, that in fact, for example, our best physiological investigations do show that the neural processes are reliable indicators. There is no sign of him trying to correct physiology in this sense. The important point for our purposes here though is that it is hard to see how *BGE 15* could indicate an empirical argument against the proposed falsificationist empirical physiological theories. Given the historical context he would just be read by his contemporaries as pointing to the self-undermining nature of the scientific worldview.²⁷

2.2.4 *The Rhetorics of BGE 15*

Finally, there are some puzzling rhetorical features of *BGE 15* that Clark's reading does not seem to account for. Consider again the very first sentence:

To study physiology with a clear conscience, one must insist that the sense organs are *not* phenomena in the sense of idealistic philosophy; as such they could not be causes! (*BGE 15*)

There are two interesting features of this sentence. First, an assertion of what beliefs are needed for someone to study physiology, or rather to do physiology, with a 'clear conscience'—'Physiologie mit gutem Gewissen zu treiben'—does not require that the asserter actually think that one should have those beliefs. Or rather it doesn't require that the asserter think that the relevant beliefs are true. Second, idealists in the transcendental tradition—one obvious target in Nietzsche's surroundings—would find the claim being made quite peculiar. After all the domain concerning which causal claims are the most appropriate—the domain for which we are most confident that we understand what we are up to in making causal claims—is precisely that of the phenomenal world. The natural thing to say, if we are speaking in the 'sense of idealistic philosophy' might well be the following: 'We must insist that the sense organs *are* phenomena otherwise they could not be causes (or at least not causes in any sense that we have a clear grip on)'.

The oddity continues in the next sentence: 'Sensualism, therefore [somit], at least as a regulative hypothesis, if not as a heuristic principle'. Clark doesn't directly address this sentence, but it is not obvious what is meant. The suggestion clearly is that this claim about sensualism is supposed to follow as a consequence. Two questions arise: (i) what is meant by sensualism? (ii) what does it mean to accept sensualism as a 'regulative hypothesis' or 'heuristic principle'?

It is not obvious what Nietzsche might mean by sensualism here. One presumes that connotations of the pleasures of the senses are at least not central to whatever Nietzsche is referring to here. Our interpretive focus should be on the epistemic and metaphysical uses of sensualism. One obvious interpretation is that sensualism refers to the epistemic claim that all knowledge comes from the senses—this is an interesting thesis because of its exclusivity: there are no *other* sources of knowledge. But how could this be a conclusion of the above argument? Why would presuppositions of doing physiology with a good conscience lead, say, to rejecting non-empirical knowledge of the existence of God?

But what about the positive side of the thesis, namely, that the senses do give us knowledge? Doesn't this clearly follow from the argument presented in the text? If the sense organs were merely phenomena, then they couldn't be causes. Physiology has to take the sense organs as causes since according to such accounts the sense organs were part of a causal process leading from external stimuli to sensations within us. But how does it follow from this that the sensations give us knowledge? After all Nietzsche is writing in a context in which precisely this would have been under question: why couldn't the causal processes lead to sensations that *don't* give us knowledge?

I think one of Nietzsche's notes, obviously another instance of reflections on the issues dealt with more extensively in *BGE* 15, gives us an important clue about how to proceed. Nietzsche writes:

Our sense organs as causes of the external world? But *they* themselves are first effects of our 'senses'.—Our image [Bild] of an eye is a product of the eye. (*KSA* 10:24[35])

When doing physiology I rely on my image of the eye—the image of the eye I have when I place an eye on the lab table. Of course I assume that this image is caused by the eyeball on the table thanks to my own sense organs, but I also assume that my image of the eye, in general, can allow me, at least, to figure out the real structure of the eye.²⁸ If the physiologist didn't assume this, then her physiological theories would not be about the actual causal structure of the eyeball. Thus she must assume that her senses give her knowledge.

This though still leaves the puzzle we've already mentioned, namely, that this might only continue to show how the physiology of the sense organs is internally inconsistent. Sensualism, understood as above, would be precisely the kind of empiricist materialism that Lange and others took as self-refuting. Perhaps more

importantly, it also isn't clear why Nietzsche would have picked the term 'sensualism' in particular to specify the conclusion—materialism would have been just as useful a term. Indeed, in one of his notes, Nietzsche refers to sensualism as one of three basic epistemological positions the others being idealism and materialism (KSA 12:9[62]). Why isn't materialism the relevant alternative to the idealism being rejected? If Nietzsche was rejecting Lange's claims about the sense organs, then wouldn't materialism have been the obvious label to use?

Going back to Lange helps us make some further progress on the question of why Nietzsche uses the term 'sensualism' but also raises further puzzles. Lange introduces sensualism in his book by contrasting it with materialism:

As the *materialist*, looking at external nature, derives the shape of things from their matter and makes this the foundation of his worldview, so the *sensualist* derives all of consciousness from the sensations.²⁹

The question for Lange is how the two positions can be related. One cannot simply assume that one can be a materialist about the external world and a sensualist about the internal:

Rather the consistent materialist will deny that sensation exists independently of matter, and will therefore also find in the processes of consciousness only effects of material changes, and regard these from the same point of view as he regards other material events in the external world. Sensualism on the other hand must deny that we know anything whatsoever of matter or of things of the external world, since we only have our own *perception* of the things and cannot know how this relates to the things in themselves. Sensation is for him not only the material of all processes of *consciousness*, but also *the only immediately given material*, since we have and know all things of the external world only in our sensations.³⁰

Lange sees sensualism as a natural development of materialism and claims:

[o]ne can see easily that sensualism fundamentally is only a transitional stage towards idealism, as, for example, Locke stands on untenable ground between Hobbes and Berkeley; for as soon as sense-perception is the only given, not only will there be uncertainty regarding the qualities of the object, but its very existence itself must become doubtful. (I:131 n. 30/I:38 n. 30)

We now have a contrast between sensualism and materialism—a contrast Nietzsche would well have been aware of.³¹

However, sensualism so understood looks like the kind of view that Nietzsche is supposedly *rejecting* in BGE 15. After all this sensualism threatens to lead to both the thing-in-itself and a conception of the 'sense organs' as effects rather than causes.

When we turn however to the chapter in which Lange specifically discusses his contemporaries theories of the physiology of the senses organs—and the relevance of these to epistemology—we can begin to see why ‘sensualism’ was a label that might indeed apply to a position in physiology that is not self-undermining. In this chapter, as we have already seen, Lange argues that all the materialists present theories that are self-undermining. He makes an exception, twice, of one person, namely, Heinrich Czolbe.³² The title of Czolbe’s most famous book should now come as no surprise: *Neue Darstellung des Sensualismus*.³³ Lange credits him for being the only one among the new materialists to truly face up to the problems regarding perception generated by materialism for itself (II:105/II:284).

Czolbe goes beyond simple materialism in his sensualism, and gets credit from Lange for facing up to the self-undermining nature of materialism, precisely because Czolbe takes as central the problem created by the above mentioned empirical arguments about the nature of nerve processes in sense organs. He takes this to be the problem that Feuerbach, Vogt, Moleschott, etc. have not adequately dealt with.³⁴ These materialists have therefore not succeeded in defeating religion or speculative philosophy. Indeed Czolbe complains that the physiologists play right into the hands of the speculative philosopher because they don’t think through the philosophical consequences of their physiological theories.³⁵ The only way to defeat the speculative philosophers, Czolbe argues, is to insist that the sensory qualities are mechanically propagated through the nerves without any change.³⁶ His view appears to be that qualitative properties such as colours or sounds are transmitted directly from the outside to the inside. The view is hard of course to wrap one’s mind around, but the suggestion is that qualia are out there in the external world and merely transmitted to the inside of the brain. They are not generated by the nerves. Czolbe was of course not ignorant of wave theories of light or sound but claimed that the wave particle in some way already is the qualia which has only to be transmitted to the right spot in the brain in order for us to be conscious of it—as Lange mockingly emphasizes, the sound waves somehow involve the experience of their sound in themselves already (II:111/II:291). Czolbe accepts Lotze’s description of his view which I quote here for its relative clarity. Czolbe claims that:

the sensible qualities of sensation are already completely present in the external stimuli, that from a red-radiating object a ready-made redness, from a sound source a melody, detaches itself in order to penetrate into us through the portals of the sense organs.³⁷

If this were the correct view of how the sense organs work, then, so Czolbe claims, we would have an empirical account of knowledge that was not self-undermining.

As one can imagine it was an uphill struggle to defend such a view even against the evidence available to nineteenth-century science. To Czolbe’s credit he raises the empirical problems for his supposedly empirical claims right away.

We can get a feel for the difficulty of the problems and the quality of his responses by focussing on a problem that occurs immediately to modern readers and one which Czolbe was already aware of, namely, the discovery of electrical currents in nerves. The worry for Czolbe is that light waves ended up being converted to electrical currents in the nerves and that this might lead us back to the supposedly self-undermining empirical stories of the other materialists. Czolbe's response is first to point out that it is possible that both electricity and light—not just light waves remember but the very qualia—could be transmitted at the same time. He then points to supposed empirical data that at the moment of excitation the electrical current in the nerve weakens. This he thinks is decisive evidence that the electrical current isn't responsible for transmission since if it were, the electrical current would have to *increase* at the moment of excitation rather than decrease!³⁸

One can easily predict many of the problems that his overall view leads to. Just to give one example: he accepts something like a coloured picture, with all the different colour points, travelling in parallel up the optic nerve and has to concern himself with how many colour 'points' could travel in parallel in a single nerve (33). He thinks of course that all this is essential to keep materialism from undermining itself. The empirical data, he wants to argue, supports such a non-self-undermining empirical account of knowledge. Lange's judgment of the empirical data, and Czolbe's attitude towards it, is understandably not supportive: he accuses Czolbe of being obstinate and treating the results of scientific investigations as mere illusions which would disappear on closer investigation.³⁹

What is interesting, though, is that precisely in the section of Lange's book which would be most directly relevant to the naturalized Kantian physiological stories of perception that Clark takes Nietzsche as discussing in *BGE* 15, there is one position specifically labelled as sensualism that Lange takes as being able in principle not to have the self-undermining nature of most of the other materialist accounts of knowledge. Surely we need to take into account Lange's discussions of sensualism when we try to figure out why Nietzsche would refer to sensualism in *BGE* 15. However, though it may be true that Czolbe's sensualism by insisting on the direct propagation of qualia through the nerves provides a theory that allows us to have accurate knowledge of the external world, surely Nietzsche would have no grounds to reject Lange's assessment of how little the empirical data supported Czolbe's position. Why then accept sensualism? Is Nietzsche's point merely that for the sake of a good conscience the physiologist should accept Czolbe's sensualism? But how can one have a good conscience if this also requires stubbornly ignoring the results of science? I will eventually argue that once we adopt a Machian reading of Nietzsche we *can* see why alluding to Czolbe's sensualism in the context of the discussion of self-undermining physiological theories in *BGE* 15 would succeed in pointing to the view that Nietzsche *does* hold. For now though the use of the distinctive label 'sensualism' in *BGE* 15 remains puzzling.

One final comment about the rhetorical structure of *BGE* 15. The suggestion seems to be that there are two arguments where the second argument is a *reductio*

and involves appealing to the absurdity of a *causa sui*.⁴⁰ Indeed, the structure of the passage suggests that the first argument *doesn't* involve a *reductio* or *causa sui*. Last, but not least, the passage ends with a question rather than an explicit conclusion.

I hope to have shown in this section that there are some puzzling features of Clark's interpretation of *BGE 15*: (i) the presence of the falsificationist thesis, by Clark's own lights, in *BGE* despite the realization expressed by *BGE 15*, (ii) the location of the 'chaos of sensations' in the empirical theory of knowledge ascribed to Nietzsche, (iii) the puzzle that given the background of Lange's discussion of physiological theories of the sense organs, *BGE 15*, as interpreted by Clark, would merely reaffirm the view that empirical theories of knowledge are self-undermining, (iv) the rhetorical structure of *BGE 15* including the use of the term 'sensualism'. It would be nice to have an interpretation that is sensitive to the rhetorical and logical complexity of the passage. So, other things equal of course, it would be preferable to have an interpretation that can respond to some of these puzzles.

3. Appearance and Reality

Clearly Clark and others are right that we should see Nietzsche as rejecting the thing in itself and, at least eventually, accepting the remaining world of appearances for all the reality there is. What this comes to depends crucially on how Nietzsche understood, or modified, the Kantian framework that shaped his discussions of a contrast between appearances and the 'true' world. Like Clark, and others, I think it makes sense here to look at what is apparently Nietzsche's own location of his views in the passage from the *Twilight of the Idols* entitled 'How the "True World" Finally Became a Fable: The History of an Error'.⁴¹ Let me quote some stages of this history:

3. The true world—unattainable, indemonstrable, unpromisable; but the very thought of it—a consolation, an obligation, an imperative.
(... The idea has become elusive, pale, Nordic, Königsbergian.)
4. The true world—unattainable? At any rate, unattained. And being unattained, also *unknown*. Consequently, not consoling, redeeming, or obligating: how could something unknown obligate us?
(Gray morning. The first yawn of reason. The cockcrow of positivism.)
5. The 'true' world—an idea which is no longer good for anything, not even obligating—an idea which has become useless and superfluous—*consequently*, a refuted idea: let us abolish it!
(Bright day; breakfast; return of *bon sens* and cheerfulness; Plato's embarrassed blush; pandemonium of all free spirits.)
6. The true world—we have abolished. What world has remained? The apparent one perhaps? But no! *With the true world we have also abolished the apparent one.*
(Noon; moment of the briefest shadow; end of the longest error; high point of humanity; INCIPIT ZARATHUSTRA.) (*TI* 'World')

There are a few obvious initial reactions one might have: (i) stage 3 is surely Kant, (ii) stage 4 certainly is supposed to have something to do with the beginning of positivism, (iii) stages 5 and 6 may involve further developments of positivism, (iv) Nietzsche is placing himself presumably in stage 6.

So now if we turn to Nietzsche's historical context what do we find? How does Nietzsche interpret the Kantian position? What are the positions that went beyond Kant that Nietzsche would have been influenced by? Who are the positivists? And are there positions, so to speak, beyond positivism? Finally, would any of these positions help us with a more satisfactory interpretation of BGE 15?

3.1 *The Neo-Kantians*

As I've mentioned already, it is obviously essential in interpreting *TI* 'World' to try to figure out what Nietzsche might have understood by the 'apparent' world that contrasts with the 'true world'. Our interpretation of the Kantian version clearly referred to in stage 3 must allow for a transition to at least the emergence of something for which the label positivism makes sense in stage 4. I will argue that it is not just Kant that is crucial to understanding this transition, but also the neo-Kantians whom Nietzsche read with much care and attention in particular Spir and Teichmüller. As Michael Green has shown in his recent book, *Nietzsche and the Transcendental Tradition*, Nietzsche read Spir carefully and much of the language of Nietzsche's falsificationist claims is at least quite similar to Spir's in particular the repeated suggestion that, somehow, it is the assumption of 'unconditional and self-identical' (BGE 4) objects that is at the heart of how we falsify the world.⁴²

The first thing to note is that whether or not phenomenalist interpretations of Kant are mistaken, what is clear is that Spir's neo-Kantianism is certainly a form of phenomenalist Kantianism.⁴³ Spir argues that 'that which we cognize as body [*Körper*] is really nothing other than our own sensations'.⁴⁴ However 'the concept of bodies and their content [*Inhalt*] are two different things' (1:123). We'll come back to the concept in a moment. The *content*, namely our sensations, does not exist independently of us even though, unlike say pain and pleasure, we think of these sensations as foreign and external (1:74). There is some sense in which these sensations are inside us. Furthermore, these sensations obey laws that the 'cognizing subject' has no control over (1:16, 2:68). It is Kant's failure to recognize this that Spir takes as his fundamental mistake (1:16, 1:68–69). Once we realize that the sensations already have an order to them—indeed hang together according to immutable laws of their own—the entire doctrine of Kant's Analytic falls apart (1:16).⁴⁵

The sensations are in flux but they hang together in certain groups. The cognizing subject, governed, mostly, by a set of logical laws forms representations. A representation is a judgment and fundamentally different from the sensations which do not represent anything and so also do not assert anything

(1:48, 50–53).⁴⁶ In virtue of the logical laws governing the formation of our representations we ‘conceive of a connected group of sensations as *a* substance, as *a* body’ (2:73). Thus ‘we cognize our sensations as something which in truth they aren’t at all, namely as a world of substances in space’ (2:73) independent of the subject (1:123). ‘This independence of existence lies in our concept of objects itself’ (1:123).

Spir argues that, according to our concept of an object, an object is something that is self-identical and unconditional. This concept turns out to be identical to our notion of a thing-in-itself (1:158). But the world of experience is a world of ever-changing sensations in which individual sensations come and go without anything having the stability and solidity that we assume when we apply the concept of an object (1:276–277). *Groups* of recurring sensations have some *relative* stability—thus our tendency to treat them as objects. However, there is nothing there which continues to exist as a single object—I close my eyes and the group of recurring sensations that I call my desk disappears (1:164, 276–77).⁴⁷ As Green points out, Spir’s talk of ‘unending flux or change’ is very similar to Nietzsche’s recurrent talk of Heraclitean flux.⁴⁸ Spir summarizes the view as follows:

The sensations [*Sinnesempfindungen*] and the inner states of the cognizing subject [the contrast is between, for example, colour-sensations and pain] form the entire cognizable world, the world of experience, which is conditioned in all its parts. Therefore what the old Heraclitus taught is true: the world of experience is to be compared to a river in which new waves continuously displace the earlier ones and which doesn’t remain completely identical to itself for even two successive instances (1:277).

Spir simply accepts that there is an unconditioned thing-in-itself; he thinks that this is simply not an issue since no one questions its existence (1:384)! But he wants to insist against, as he interprets him, Kant and other ‘metaphysicians’ that we can say absolutely nothing positive about the relationship between the unconditioned world of the thing-in-itself and the world of experience constituted by our sensations. The ‘true’ world is thus supposed to be even more ‘unattainable’ than in Kant.⁴⁹

There are a couple of interesting features of Spir’s view that I will argue help us to interpret Nietzsche. The first is the conception of the world of experience in phenomenalist terms as made up of sensations that come and go in various clusters according to their own laws. The second is a conception of our thoughts, and of our language, as referring to clusters of sensations using concepts given which all such claims, literally construed, are false. What is important to see is that according to such a view our claims about middle-sized objects would be false even if there were no thing-in-itself. The explanation for the error is our ‘presupposition that experience *must agree* with our laws of thought’, however, and here we come to the third interesting feature of the view:

[W]ith this presupposition the subject is not completely in error. For although the given objects (the sensations) do not *logically* agree with the

laws of our thought, i.e. they are not truly self-identical things, are not true substances, they do *in effect* [*factisch*] fit and conform to the laws. This is because our sensations are so established by nature that we can cognize them without real incongruence as a world of bodies in space. In this lies the empirical truth of this cognition (2:74).

The claim that there is a desk in front of me, though literally false, conveys information about clusters of sensations. My claim that there is a tiger sitting on my lap would also be false, but also, worse perhaps, mislead about the presence of certain sensations in the way that the first claim didn't. My representations are false but they convey information about something in the world of experience other than them, namely, sensations. Finally, Spir holds the view that we can simply see that the flux of sensations is such that they don't live up to what our concept of an object requires. This does not mean that we have some other way of positively stating in detail what the flux of sensations is like—our language and thought, given our concept of body, just doesn't allow for this.⁵⁰ In one sense then the groups of sensation are given, but in another sense they aren't since anything we attempt to say about them—or at least almost anything—will involve falsification.

Nietzsche would have been exposed to a similar phenomenalist account of the world of appearances through his readings of Teichmüller.⁵¹ For Teichmüller the sensations are 'elements' that stand in relations. Teichmüller too points out that the sensations are not under our control. Again for Teichmüller the 'so called outer world is really only the content of our consciousness' which we think of as separate and external to us (131). He compares the individual sensations to the *teserae* of a mosaic:

When now in consciousness the innumerable mosaic pieces of sensations . . . have intermingled with each other innumerable times and with these many movements, through frequent repetition, certain complexes have finally acquired stability and continuity, then the mirage of life arises, namely the view that the so-called things—humans, animals, trees and everything which in its appearance holds together for a certain time, that is appears in us as a relatively stable complex of different sensations—are the so-called objects or substances or reality (132).

A tree, a bird, or a stone is really just 'a relatively persistent unity of fused visible images' (134). Elsewhere he talks of a how we 'regard a relatively stable complex of sensations as a unity and then we remove it from our consciousness and place it in so-called real space outside and . . . there we mark it with the name thing or object' (333). And, like Spir, Teichmüller argues that these complexes of sensation turn out not to have the stability we expect of objects (336–337).⁵²

The hypothesis I want to investigate then is whether understanding Nietzsche's talk of 'apparent' world and 'true' world in *TI* 'World' as being shaped fundamentally by Spir and Teichmüller's neo-Kantianism helps us to

interpret the rest of *TI* 'World' and, of course, *BGE* 15. What about the 'cockcrow of positivism' then? What connections or continuity emerges between this kind of neo-Kantianism and positivism?

3.2 *Positivism*

In Nietzsche's immediate historical context, positivism, both as philosophical and social movement, was associated with Auguste Comte (1798–1857). Comte argues that the human mind goes through 'three different theoretical states: the theological or fictitious state, the metaphysical or abstract state, and the scientific or positive state'.⁵³ It is this last positive state that Comte wants to endorse:

[T]he human mind, recognizing the impossibility of obtaining absolute truth, gives up the search after the origin and hidden causes of the universe and a knowledge of the final causes of phenomena. It endeavors now only to discover, by a well-combined use of reasoning and observation, the actual laws of phenomena—that is to say, their invariable relations of succession and likeness.⁵⁴

Everybody, indeed, knows that in our positive explanations, even when they are most complete, we do not pretend to explain the real causes of phenomena.⁵⁵

Positivism is understood as the rejection of the attempt to go beyond the phenomenal reality we have access to. John Stuart Mill describes the Comtean positivist position as follows:

We have no knowledge of anything but Phænomena; and our knowledge of phænomena is relative, not absolute. We know not the essence, nor the real mode of production, of any fact . . . The laws of phænomena are all we know respecting them. Their essential nature, and their ultimate causes, either efficient or final, are unknown and inscrutable to us.⁵⁶

Now we can see in this positivist position, some of the themes we see in Nietzsche: the importance of the senses, the emphasis on studying the observable world, and the recommended alliance of philosophy with the natural sciences.⁵⁷

But positivism, in this sense of the term, is a stage that Nietzsche takes himself to be going beyond. The Comtean positivist still accepts the distinction between the true world—the thing-in-itself—and the world of appearances—the phenomenal world. The Comtean positivist however simply thinks that there is no point in thinking about the thing-in-itself. Thus the Comtean positivist naturally falls under stage 4.⁵⁸

Now stage 5 and 6 go beyond stage 4. In stage 5 we abolish the 'true' world and in stage 6 we realise that 'with the true world we have also abolished the apparent one' (*TI* 'World'). Who in Nietzsche's historical context would be a natural successor to Comte? I want to argue that the natural successor most

helpful for interpreting Nietzsche's own position, particularly in light of the conception of the phenomenal world Nietzsche would have acquired from Spir and Teichmüller, is Ernst Mach (1838–1916) and, we should, as I hope to show below, hardly be surprised to learn that Mach's *Contributions to the Analysis of the Sensations* sat on Nietzsche's bookshelf or that Nietzsche sent Mach a copy of his *Genealogy of Morals* at the end of 1887.⁵⁹

The suggestions both that there are similarities between Mach and Nietzsche and that Mach may have influenced Nietzsche have been made before. I discuss these suggestions and the evidence for a causal connection elsewhere.⁶⁰ Here I will focus on the claim that Mach's position allows us to see how we can develop an interpretation of Nietzsche that does a better job of handling the puzzles involving BGE 15 discussed above.

So what does Mach say? An autobiographical footnote in Mach's *Analysis of Sensations* should remind us of Nietzsche's 'How the "True World" Became a Fable'. Mach writes:

I have always felt it as a stroke of special good fortune, that early in life, at about the age of fifteen, I lighted, in the library of my father, on a copy of Kant's *Prolegomena zu jeder künftigen Metaphysik* [*Prolegomena to Any Future Metaphysics*]. The book made at the time a powerful and inefaceable impression upon me, the like of which I never afterward experienced in any of my philosophical reading. Some two or three years later the superfluous rôle played by 'the thing in itself' abruptly dawned on me. On a bright summer day under the open heaven, the world with my ego suddenly appeared to me as *one* coherent mass of sensations, only more strongly coherent in the ego.⁶¹

Mach lays out his basic metaphysical picture in the introductory chapter of *Contributions to the Analysis of Sensations*. He defends a monism according to which the world consists of sensations.⁶² But he prefers calling these sensations 'elements' to emphasise that these elements are not to be understood as belonging to some particular self—or, in his terms, ego—and because they are the most basic building blocks—elements—of the world.⁶³

The primary fact is not the *I*, the ego, but the elements (sensations). The elements *constitute* the *I*. *I* have the sensation green, signifies that the element green occurs in a given complex of other elements (sensations, memories).⁶⁴

There is thus a field of sensory elements in which certain relatively stable complexes are given single designations, single names:

Our greater intimacy with this sum-total of permanency, and its preponderance as contrasted with the changeable, impel us to the partly instinctive, partly voluntary and conscious economy of mental representation and designation, as expressed in ordinary thought and speech.⁶⁵

But the 'useful habit of designating such relatively permanent compounds by *single* names, and of apprehending them by *single* thoughts' leads us to make the mistake of thinking that there is 'a *single* thing with *many* attributes'.⁶⁶ Thus also 'arises the monstrous notion of a *thing in itself*, unknowable and different from its "phenomenal" existence.'⁶⁷ And indeed we make this mistake about the particular complex that we label as the ego, *das Ich*.

Crucially, everything is, so to speak, on one ontological plain:

Let those complexes of colors, sounds, and so forth, commonly called bodies, be designated, for the sake of simplicity, by *A B C* . . . ; the complex, known as our own body, which constitutes a part of the former, may be called *K L M* . . . ; the complex composed of volitions, memory-images, and the rest, we shall represent by $\alpha \beta \gamma \dots$.⁶⁸

As soon as we have perceived that the supposed unities 'body' and 'ego' are only makeshifts, designed for provisional survey and for certain practical ends . . . , we find ourselves obliged, in many profound scientific investigations [*weitergehenden wissenschaftlichen Untersuchungen*], to abandon them . . . The antithesis of ego and world, sensation phenomenon and thing, then vanishes, and we have simply to deal with the *connexion* [*Zusammenhang*] of the *elements* $\alpha \beta \gamma \dots A B C \dots K L M \dots$.⁶⁹

As Mach emphasises '*the senses represent things neither wrongly nor correctly*. All that can be truly said of the sense-organs is, that, *under different circumstances they produce [auslösen] different sensations and perceptions*.'⁷⁰ Mach's illustration of this point makes things clearer:

A cube of wood when seen close at hand, looks large; when seen at a distance, small; it looks different with the right eye from what it does with the left; sometimes it appears double; with closed eyes it is invisible. The properties of the same body, therefore, appear modified by our own body; they appear conditioned by it. But where, now, is the *same* body, which to the appearance is so *different*? All that can be said is, that with different *K L M* different *A B C* . . . are associated.⁷¹

I will not provide a full-blown defence of Mach's sensory element monism.⁷² The fundamental commitment to a monistic metaphysics of sensory elements that are empirically given and the problems involved in such a view play a crucial part in the history of the development of logical positivism. Perhaps one of the central problems of course is that by not providing a reductive empiricist semantics Mach's view faces problems in explaining how the content of claims can indeed go beyond the sensory elements—assert more than that certain clusters of sensory elements are present. This though was a puzzle for many views at that time including of course the neo-Kantian accounts we've mentioned. If the Machian Nietzschean too would face such puzzles, this should not in itself give us a conclusive reason to avoid interpreting Nietzsche this way. After all this

would merely make Nietzsche a child of his times—something that may not be true but certainly could be.

What's important though about the Machian monist position is that we can see how it is a natural development of the phenomenalist neo-Kantian positions of philosophers like Spir and Teichmüller. The similarity between Mach's world of sensory elements and complexes of sensations to the account of the world of appearances in Spir and Teichmüller is obvious. Indeed the talk of elements and complexes of sensation in Mach is virtually identical to Teichmüller—and both of them use the analogy of a mosaic.⁷³ Consider again the development sketched in Nietzsche's *TI* 'World'. If we were to remove the thing-in-itself from Spir and Teichmüller's Kantian account, then the apparent world we would be left with would be that of Mach's sensory elements.

We can indeed see Nietzsche working towards such a position in his notes. Consider the philosophical position sketched at *KSA* 7:26[11]:

I have nothing but sensations and representations. Therefore I cannot think of these as arising from the contents of representation . . . The existing is sensation and representation . . . Matter itself is also only given as sensation. Any inference behind it is not allowed. Sensation and representation is the reason why we believe in grounds, impulses bodies.

The similarities to Spir's position is obvious. Indeed the similarity is so strong—particularly the insistence on sensation and representation as the two basic categories—that one could well argue that these are merely Nietzsche's notes on Spir and not an expression of Nietzsche's own position. My claim that they do express Nietzsche's own position receives its defense in the end only from the argument of this paper as a whole and the plausibility of the overall interpretation of Nietzsche presented. Taking the claim as an hypothesis for now, I think we see Nietzsche in this passage already moving beyond Spir. Spir, as we saw, simply accepts that there is an unconditioned thing-in-itself—the notion of 'the unconditioned' is the central notion that he uses to talk of the Kantian thing-in-itself. But in insisting, apparently, that *all* that exists is sensation and representation and emphasizing that no inference 'behind' is allowed, I think we see the beginnings of the move to a Machian position.

The process of transition away from Spir becomes even more apparent in a note like the following. After referring to the very Spirian notion of logical laws as involving a necessity to believe something about objects or things, he introduces what he calls 'My fundamental ideas' ('Meine Grundvorstellungen'):

'[T]he unconditioned' is a regulative fiction, that cannot be ascribed any existence, existence does not belong to the necessary properties of the unconditioned. Likewise 'being', 'substance'—all things that are not *supposed* to have been drawn out of experience, but in fact are *produced from experience through a wrong interpretation of it*.

Conclusion:

The interpretations so far had all a certain sense for life—preserving,

making bearable . . . my new interpretation gives the future philosophers, as rulers of the earth, the necessary unaffectedness [Unbefangenheit].

1. Not so much 'refuted', as incompatible with what we now chiefly take to be 'true' and believe: to that extent is the religious and moral interpretation impossible for us.⁷⁴

Note the connection drawn between the rejection of Spir's unconditioned things, the preservation of them as a fiction, the continuing importance of experience, and the idea of different interpretations of experience.

But, as Mach repeatedly emphasizes, the position we should accept, once we have dropped the thing-in-itself from Spir's version of Kant, is *neutral* monism, i.e., the sensory elements shouldn't be thought of as subjective. They shouldn't be thought of as belonging to some particular mind. The 'apparent' world has been abolished as well. Given both the Spir and the Mach story though we can see why the falsificationist claims would have remained. Our concept of a thing assumes kinds of stability and continuity that nothing in the flux of sensory elements can provide.

I want to turn now to a selection of Nietzsche's own texts that I think sound quite Machian. Nietzsche makes claims similar to those of Mach about how the senses do not lie or misrepresent. He attacks most of traditional philosophy for having taken the senses as being the basis of all deceptions and confusions in philosophy (*TI* 'Reason' 1). Instead he pays his regard to Heraclitus:

With the highest respect, I except the name of *Heraclitus*. When the rest of the philosophic folk rejected the testimony of the senses because they showed multiplicity and change, he rejected their testimony because they showed things as if they had permanence and unity. Heraclitus too did the senses an injustice. They lie neither in the way the Eleatics believed, nor as he believed—they do not lie at all. What we *make* of their testimony, that alone introduces lies; for example, the lie of unity, the lie of thinghood, of substance, of permanence. (*TI* 'Reason' 2)⁷⁵

The senses do not lie. It is our language, and reasoning, that can lead to confusion. We can see Nietzsche's position as a somewhat more radical version of the Machian account—a radicalization that perhaps can be traced to Spir. Mach talks of natural tendencies to get confused by the usefulness of designating things with single names—Nietzsche will talk about falsification brought on by language. Mach's language is certainly gentler than Nietzsche's. Compare Mach:

If, to the physicist, bodies appear the real, abiding existences, whilst sensations are regarded merely as their evanescent, transitory show, the physicist forgets, in the assumption of such a view, that all bodies are but thought-symbols for complexes of sensations (complexes of elements).⁷⁶

And Nietzsche:

Formerly, alternation, change, any becoming at all, were taken as proof of mere appearance, as an indication that there must be something which led us astray. Today, conversely, precisely insofar as the prejudice of reason forces us to posit unity, identity, permanence, substance, cause, thinghood, being, we see ourselves somehow caught in error, compelled into error. . . . 'Reason' in language—oh, what an old deceptive female she is! I am afraid we are not rid of God because we still have faith in grammar. (*TI*'Reason' 5)⁷⁷

But despite the difference in tone, the point is essentially the same. Language, and conscious reasoning that must occur in language, misleads and thus claims about the world, expressed as they must be in language, tend to mislead (Mach) or falsify (Nietzsche).⁷⁸ As Mach writes elsewhere:

Language, with its helpmate, conceptual thought, by fixing the essential and rejecting the unessential, constructs its rigid pictures of the fluid world on the plan of a mosaic, at a sacrifice of exactness and fidelity but with a saving of tools and labor.⁷⁹

Compare this to one of Nietzsche's notes:

A concept is an invention that doesn't *completely* correspond; but a lot of it does correspond a little: a sentence such as 'two things that are identical to a third are identical to each other' presupposes 1) things 2) identities: both don't exist. But with this invented rigid concept- and number-world man gains a means to grasp a huge quantity of facts with symbols and imprint them in memory. This symbol-apparatus is his superiority precisely because it distances him as far as possible from the individual facts. The reduction of experiences to *symbols*, and the increasing quantity of things which can therefore be grasped, is his *highest power*. The mental as the ability to be a master through symbols of a huge quantity of facts. *This mental world, this symbol-world, is sheer 'appearance and deception'*, just as every 'thing of appearance' already is. (KSA 11:34[131])

Sometimes in fact the language they use is almost exactly the same. Mach quotes with approval a famous aphorism from Lichtenberg emphasising that one should say 'It thinks' rather than 'I think'—a point that Nietzsche makes without explicit reference to Lichtenberg in *BGE* 17.⁸⁰ Similar comparisons can be made between Nietzsche's comments on atomism in the rest of *BGE* 17 and Mach's view of atomism.⁸¹

A Machian reading of Nietzsche gives us various possibilities for accounting for talk of perspective: the first is the visual way, namely, to use Mach's language, 'with different *K L M* different *A B C* . . . are associated'; second, we can take talk of perspective to be essentially talk of interpretation. Within a Machian reading an interpretation of the world, and thus a perspective on the world, is a theory of

the world that sets up names for particular clusters of sensory elements and the relations they stand in. Such interpretations in general will involve falsification since grammar misleads us to think our theory refers to objects and picks out explanatory causal relations. A particular claim can be false in a way to be distinguished from this general falsification: consider the term—the name as Mach would say—‘desk’ that I use to pick out the cluster of mostly brownish elements in front of me. The claim ‘There is a desk in front of me’ falsifies in that at least ‘desk’, ‘me’ and perhaps even ‘in front of’ involve commitments that go beyond the facts—that go beyond what is indeed true of the sensory elements. The sentence says too much, but part of what it says, gets things right.⁸² The claim ‘There is a desk on top of me’ gets things wrong even more and fails drastically for purposes of, as Nietzsche says, ‘designation and communication’ and of course of life (*BGE* 21). Interpretations can thus certainly vary in the degree to which they get the sensory elements right.⁸³ As Nietzsche would of course remind us, getting it right in any case isn’t everything. Standard physics and an account of the world in terms of will-to-power would be two ways of interpreting the world—two ways of lumping together complexes and picking out relations between complexes—and perhaps even two ways that get things right about equally. But one could always have other grounds for choosing between them.

Mach thus provides for us a basis on which we can interpret much of what Nietzsche says about scientific theories and the role of the senses in a way that would be compatible, at least by a Machian’s own lights, with some kind of falsification thesis.

4. Machian Reading of *BGE* 15

Let us return to *BGE* 15 and its role in Clark’s interpretation of Nietzsche’s epistemological and metaphysical views. As we saw, *BGE* 15 plays a crucial role in her overall interpretation: her reading of this passage is meant to explain why he eventually gives up on the falsification thesis. This passage expresses Nietzsche’s realization that the empirical theories of knowledge that he relies on elsewhere in *BGE* to support the falsification thesis, don’t actually support the falsification thesis. I raised several puzzles about the resulting interpretation of both the rest of *BGE* and the passage itself. In this section I will defend a reading of *BGE* 15, and thus of *BGE* as a whole, that uses a Machian reading of Nietzsche to provide an interpretation that responds to these puzzles.

We ended the section on the puzzles surrounding *BGE* 15 with an extended discussion of sensualism. The basic puzzle was why Nietzsche was using the term ‘sensualism’ to express what is supposed to be the conclusion of the first argument in *BGE* 15. As I suggested, and as Clark seems also to think, in the background of this part of *BGE* is surely, among other sources, Lange’s discussion, in his *History of Materialism*, of what the physiology of the sense organs shows us regarding our epistemic access to reality. Lange though, as we

saw, argues that contemporary physiological investigations of sense organs actually undermine materialist accounts of us and the world—such physiological investigations in fact undermine their own presuppositions.⁸⁴ That there is some connection between this kind of claim and the argument, or arguments, in *BGE* 15 is obvious, but *what* the relation involves is not at all obvious. Interestingly, as we saw, Lange's chapter on the physiology of sense organs twice mentions one specific way out, namely, Czolbe's sensualism. It is hard not to think that this is relevant to interpreting Nietzsche's use of 'sensualism' in *BGE* 15. Recall however that Czolbe's sensualism seemed to fly in the face of empirical evidence. Thus despite the neatness of thinking, given the background in Lange, that it is Czolbe's sensualism Nietzsche is thinking of here, it seems quite implausible to think that Nietzsche could simply ignore Czolbe's ignoring of the empirical counter-evidence.

I suppose that at this point it comes as no surprise that, as the *Historisches Wörterbuch der Philosophie* points out, 'though Mach himself didn't use the term "Sensualism" his *Analysis of Sensations* was generally seen as a foundational work of sensualism'.⁸⁵ There are continuities between Czolbe and Mach, and others labelled as sensualists, that allow us to see, or so I shall argue, why alluding to sensualism in the context of the discussion of self-undermining physiological theories in *BGE* 15 would make sense.

Recall how Czolbe achieves, and thinks other materialists should achieve, a 'good conscience': perception presents us with qualities such as colours, sounds—the various sensations—without mediation by change into, say, electrical currents. The nerves are merely portals through which the qualities can be conveyed directly without being changed into something else as part of the process of transmission. This of course runs up against empirical evidence.

Shifting the framework in which the discussion is carried out to that of Mach's sensualism we get another way of taking Czolbe's point about unmediated transmission of sensory qualities. In a Machian picture the equating of reality with sensory elements is, in a crucial sense, empirical. In other words, we simply accept the world of sensory elements presented to us—we do not give an argument for it on the basis of some special *a priori* insight into the nature of reality. It is the fact that we see the world of sensory elements that leads us to equate reality with the world of sensory elements. Once we realise that the 'thing-in-itself' makes no sense then the world we see is the only world there is. Thus we do have, in one sense, an unmediated awareness of sensory qualities—the qualia do directly arrive in consciousness without being changed first into some other form.

I say 'in one sense' because the minute I use my representational capacities to state something about the world of sensory elements, falsification enters the picture. Given this falsification, there is thus another sense in which there is no unmediated access. Any attempt to have a thought that represents something about the world of sensory elements uses concepts that falsify—they are the falsifying medium, so to speak, that shape all attempts to represent something about the sensory elements.

Within the Machian framework, I can thus accept a modified version of what Czolbe took to be essential to doing physiology consistently, namely, that I do have direct empirical access to reality by having direct access to qualia or sensations.

However the view of the status of physiological accounts is quite different and this will explain why the empirical puzzles for Czolbe can be avoided by Machian sensualism. A physiological account of the role of sense organs is not for Mach a fundamental explanation of our awareness of this world of sensory elements. For Mach, a physiological account—like any purported physical explanation—would be an interpretation of the world of sensory elements that would pick out some clusters or complexes of sensory elements rather than others and identify their associations, but it would not be an *explanation* of our access to the world of sensory elements.

I take this to be the point Nietzsche is trying to make in the following passage from the *Nachlaß*: '[P]hysical explanation, which is the illustration [Verbildlichung] of the world out of sensation and thought, cannot itself again make sensation and thought produce or arise: on the contrary physics must for *consistency* also construe the sensed world *as without sensations and goals*' (KSA 10:24[13]). The physical explanation is a way to illustrate connections between the sensory elements. It doesn't itself provide an explanation of how they come about themselves. Our access to the sensory elements is simply the fundamental empiricist starting point about the given. This is the sense in which I interpret Nietzsche's comments in *BGE* 14 that physics is '*not* a world-explanation' but rather 'is only an interpretation and exegesis of the world (to suit us, if I may say so!)' (*BGE* 14). Physics doesn't provide an explanation for why the world of sensory elements itself is there or why the elements stand in the relations to each other that they do. Accepting the claims of physics as an interpretation of the world is not to regard them as literally describing the actual structure of the reality of sensory elements.

For the Machian Nietzsche, causal claims thus also falsify. In the reality of sensory elements there are various clusters, complexes or groups of elements that stand in certain relations with each other. Our causal claims state purported relations between objects or events involving objects, but for the sensualist there are really no such objects and so no such events. Causal claims are of course still useful for communicating information about relatively stable complexes of sensations and their relations—they are still useful, as Nietzsche puts it in the following passage, for 'designation and communication':

One should not wrongly reify 'cause' and 'effect,' as the natural scientists do (and whoever, like them, now 'naturalizes' in his thinking), according to the prevailing mechanical doltishness which makes the cause press and push until it 'effects' its end; one should use 'cause' and 'effect' only as pure concepts, that is to say, as conventional fictions for the purpose of designation and communication—*not* for explanation. In the 'in-itself' there is nothing of 'causal connection,' of 'necessity,' or of 'psychological

non-freedom'; there the effect does *not* follow the cause, there is no rule of 'law.' It is *we* alone who have devised cause, sequence, for-each-other, relativity, constraint, number, law, freedom, motive, and purpose; and when we project and mix this symbol world into things as if it existed 'in itself,' we act once more as we have always acted—*mythologically*. (BGE 21)

Talk of the 'in-itself' is in quotes here because, or so I interpret Nietzsche, he is not talking of the traditional Kantian 'in-itself', but rather he is referring to the way the only reality left after we reject the Kantian thing-in-itself—the reality of sensory elements—is in itself. For the Machian Nietzsche, and Spir, causal claims falsify the world of sensory elements.

The status and role of physical and physiological theories is thus understood in a manner that is presumably quite different from the way they were understood by materialist physiologists. It is this difference between Nietzsche and the physiologists that explains why the rhetorics of BGE 15 are set-up so as to distance Nietzsche from a straightforward acceptance of physiology and materialism (the common label for the physiologists). Nietzsche only makes a claim about what physiology with a good conscience would require and not that *he* has a good conscience about doing physiology. The following sentence, namely, that sensualism is accepted as 'regulative hypothesis, if not as a heuristic principle' does sound as though it is more in Nietzsche's own voice. My suggestion is that we take Nietzsche to be in the first instance suggesting something like Czolbe's sensualism, but, as the lack of any attempt to deal with its empirical implausibility shows, he doesn't intend to straightforwardly accept it in the way the physiologist would, namely, as an explanation of what is going on. Rather it is the Machian sensualist view that is really accepted and taken aboard as the fundamental guiding principle. As we've seen, according to the Machian view we do have direct access to all the reality there is, namely, the world of sensory elements. In one sense then we can say that the senses show us the way the world is by directly transmitting the qualia to us—as doing physiology with a good conscience would require—but not quite in the sense that a physiologist like Czolbe would want. But the interpretation of the world that we are constructing in physics and in physiology is an account that literally construed takes the world to be a world of physical objects standing in causal relations (even though of course this is all a way of keeping track of relations between sensory elements). It is this interpretation that has to include and thus be shaped by something like Czolbe's claim that the sense organs—understood within such interpretations as objects standing in causal relations—show us the way the world is. This claim is thus a hypothesis that regulates our interpretation of the world, but not a claim that is straightforwardly true. It too, like the other parts of the physical interpretation of the world, falsifies even while it conveys important information.⁸⁶

What has been undermined in the first argument in BGE 15 is the consistency of a view that takes the inner world of sensations as causally generated. And the Machian account is a view that precisely doesn't assume that the 'inner world' is

generated. The second argument in *BGE* 15 deals with the opposite claim to the claim made in the first argument, namely, that the outer world *is* the work of our sense organs. And 'work' here means 'causation'. And here, I take it, the target is again a certain kind of contemporary physiologist, perhaps those committed to some theory of 'external projection'.⁸⁷ Here, Nietzsche suggests, we are left with *reductio ad absurdum*, namely, that we are forced to posit a *causa sui*. This is different from the first argument, since in the first argument we came to the conclusion that sensualism was a way out of the self-undermining nature of physiological accounts of knowledge.

The *reductio* is pretty straightforward so I won't go into it in detail. The interesting feature of the second argument—or rather the second part of the aphorism—is the last question. An obvious response to the *reductio* is to reject the claim that the external world is the work of our organs. One way to reject this claim is to *accept* the claim that the external world is *not* the work of our organs. But I take it that the question at the end of the passage is designed to prevent any straightforward version of this way out. The suggestion clearly is that there is a 'third' way—and a way that in some altered sense of the words involved might still be, perhaps misleadingly, expressed by the claim that the external world is the work of our organs. Machian positivism or sensualism provides just such an interpretation.⁸⁸ The world of sensory elements is the only world there is; as Mach remarked those collections of sensory elements, *A B C . . .*, that aren't my body, *K L M . . .*, may for some purposes be plausibly treated as 'external' to my body—this is, as he suggests, what we do in physics.⁸⁹ But, of course, to quote Mach again:

Precisely viewed, however, it appears that the group *A B C . . .* is *always* codetermined by *K L M*. A cube of wood when seen close at hand, looks large; when seen at a distance, small; it looks different with the right eye from what it does with the left; sometimes it appears double; with closed eyes it is invisible. The properties of the same body, therefore, appear modified by our own body; they appear conditioned by it. But where, now, is the *same* body, which to the appearance is so *different*? All that can be said is, that with different *K L M* different *A B C . . .* are associated.⁹⁰

Thus changes in our sense organs, understood as particular complexes of sensory elements, are connected to changes in the way things in the external world are where talk of the external world is now understood as the complexes that do not form my body or my thoughts. Or, as he puts it more dramatically later:

All elements *A B C . . .*, *K L M . . .* constitute a *single* coherent mass only, in which, when any one element is disturbed, *all* is put in motion; except that a disturbance in *K L M . . .* has a more extensive and profound action than in *A B C*. A magnet in our neighbourhood disturbs the particles of iron near it; a falling boulder shakes the earth; but the severing of a nerve sets in motion the *whole* system of elements.⁹¹

To sum up in Mach's words:

There is no rift between the psychical and the physical, no inside and outside, no 'sensation' to which an external 'thing,' different from sensation, corresponds. There is but one kind of elements, out of which this supposed inside and outside are formed—elements which are themselves inside or outside, according to the aspect in which, for the time being, they are viewed.⁹²

Let me conclude this section by summarizing how we have dealt with the puzzles raised originally about *BGE* 15. (i) We can now understand how, despite Nietzsche's giving up on the thing-in-itself *and* despite *BGE* 15, the falsification thesis would remain present, as Clark herself grants, in at least the rest of *BGE*. (ii) We can now see how the falsified 'chaos of sensations' can be identified with reality by Nietzsche even though we naturally talk of the chaos of sensations as generated by the sense organs. Of course, the physiological account according to which the sensations are generated by the sense organs is itself just an interpretation of the flux of sensations—a way of keeping track of complexes of sensations. The chaos can be identified with reality because reality just is the world of sensory elements. (iii) We have a plausible story of how *BGE* 15 fits in with the discussions of physiological accounts of the sense organs in Lange and others. (iv) We have an interpretation of *BGE* 15 that reflects its rhetorical complexity including the distinctive use of the term 'sensualism'.

5. Falsificationist Passages in the Last Six Works

Let me return finally to the question of purported falsificationist passages in Nietzsche's last six works that I mentioned in the introduction. The interpretation of Nietzsche as Machian positivist or sensualist allows us to see how, unsurprisingly in the end given his historical context, it is possible to reconcile the falsification thesis with Nietzsche's empiricism. Furthermore, for Spir, Mach and Nietzsche ordinary empirical claims could still convey information about the flux of sensations despite being literally false. The claim 'The president is in the White House' conveys information about the flux of sensations while the claim 'The angel Gabriel is talking to me' doesn't.⁹³ For Nietzsche, as for later sense-datum theorists within logical positivism, it is this lack of empirical significance that allows him to criticize, I would argue, both Christianity and morality.

Thus I think the Machian reading removes some of the hermeneutical pressure to interpret away *prima facie* evidence of falsificationism. As I mentioned in the introduction to this paper, the question of falsification in Nietzsche's later works has already received quite a bit of attention.⁹⁴ I suspect that any attempt to use particular passages as 'proof texts' will often be unconvincing to opponents. Particular passages are of course interpreted in the light of one's overall interpretation of the text or texts in question—any other methodology would be inappropriate. Unless an interpretation is completely implausible, the most one

can do is emphasize the relative recalcitrance of a particular passage, emphasize the degree to which it needs to be interpreted 'away' rather than being one of the passages on which the interpretation in question finds its source, inspiration or central foundation. In the end, though, whether an interpretation convinces will be a function of its overall fit with the whole range of texts. My fundamental goal in this paper has been to introduce an interpretation whose overall fit with Nietzsche's texts is at least as plausible as the fit of existing interpretations such as Clark's. This does not require of course that Clark's interpretation, for example, simply cannot account for some passage. What it does require is emphasizing that some passages don't fit as smoothly as one might have thought and that the proposed alternative fits, overall, at least as smoothly.

Beyond the discussion of *BGE 15* and its role in Clark's interpretation, I do not have much new to add to the arguments about falsification in the last six works. If I'm right about *BGE 15* and we want to maintain Clark's claim that Nietzsche is not committed to the falsification thesis in the last six works starting with *GM*, then we will need at least to find an alternative account of why Nietzsche gave up the falsification thesis. I have obviously not shown that no such alternative explanation is possible. As I've already pointed out, some pressure to search for such an alternative explanation will be removed once we see how we can simultaneously ascribe both the falsification thesis and empiricism to a positivist Nietzsche. Nonetheless in the end much will turn on what we make of the apparent lack of repeated declarations of the falsification thesis in the later works and how we interpret the couple of passages that sound falsificationist.

I will not attempt a full-scale engagement with the debate surrounding these later passages here—the central thrust of the paper, namely, the presentation of an alternative Machian Nietzsche and the corresponding interpretation of *BGE* does not require this. My sympathies lie with those who claim that the falsification thesis is present in the later works, but a full discussion of these later works, including the complicated issues surrounding the perspectivism of *GM*, will have to await another occasion.⁹⁵ However, there are a couple of points I think worth emphasizing once again. In the spirit of my above comments on relative recalcitrance to interpretation, I will briefly discuss two features of one of the passages from *TI*, and Clark's discussion of it, that might bear further emphasis in the ongoing debate. Consider the following passage:

Today . . . precisely insofar as the prejudice of reason forces us to posit unity, identity, permanence, substance, *cause*, thinghood, being, we see ourselves somehow caught in error, compelled into error. (*TI* 'Reason' 5; my emphasis)⁹⁶

I've emphasized the use of '*cause*' here because I think this does put some pressure on Clark's interpretation—it makes this passage more recalcitrant than I think she grants. Clark wants to claim that *TI* and *A* provide no support for the falsification thesis, 'the view that human truths, science, logic, mathematics, or causality falsify reality' (Clark 1990: 105). She grants that *TI* 'Reason' 2–5 present

an apparent counterexample, but she wants to argue that what Nietzsche is talking about here is a 'metaphysical concept of a substance, the concept of an unchanging substrate that underlies all change' (107). Philosophers have mistakenly adopted this concept and the use of this concept falsifies reality. This metaphysical concept of substance has thus nothing to do with 'the common sense picture of the world of relatively enduring middle-sized objects or the scientific world-view' (108)—the domain in which the less mature Nietzsche accepted falsification. This is the concept of thing—and presumably unity, identity, permanence, substance, and being—and not our ordinary notion of thing that is being discussed in these sections of *TI* 'Reason'. Unfortunately, Clark doesn't directly address, or mention, the use of 'cause' in *TI* 'Reason' 5 that I have emphasized above. This is unfortunate, I think, because the mention of 'cause' above puts pressure on her attempt to distinguish the list of concepts that falsify here from lists of concepts that falsify in books such as *BGE* precisely because the notion of causation *is* a fundamental part of the scientific world-view.

The fact that Nietzsche read Spir carefully also makes some of the implicit appeals to the principle of charity in developing her interpretation of *TI* 'Reason' less convincing.⁹⁷ Let me quote her argument:

It seems highly implausible that 'everything empirical plainly contradicted' the assumption that this concept of a thing has application. But that is precisely what Nietzsche says about the concepts or categories of reason he calls 'lies' and 'errors' (*TI* III, 2–5). To avoid attributing to Nietzsche such an implausible position, we can take the concept of a thing he calls a 'lie' to be the metaphysical concept of a substance ... (107)

Now the position may or may not be an implausible one, but surely the fact that Spir *explicitly* holds the position that it is the *ordinary* notion of a thing that is contradicted by everything empirical, should make us more willing to ascribe such a position to Nietzsche.

6. Conclusion

The very limited addition in the previous section to what has already been said by others, on both sides, about the presence of falsification in the last six works does not of course settle the issue. In the end such passages have to be interpreted in the context of an interpretation of the rest of Nietzsche's works and the overall development of his thought. I've of course attempted in this paper to present at least the beginnings of an alternative framework that could be used to interpret the above discussed passages from *TI*, and the discussions of perspectivism in *GM*, as presenting essentially the same claims about falsification as the relevant passages in *BGE*. This interpretation of Nietzsche as a Machian positivist or 'sensualist' allows us to interpret him as simultaneously rejecting the thing-in-itself, accepting a falsification thesis and defending empiricism.⁹⁸

I used Ernst Mach for a couple of reasons: first, as I hope to have shown, because much of what Mach says is strikingly similar to what Nietzsche says, in particular in his attempt to get rid of the distinctions between appearance and reality and the internal and external world; second, a Machian reading of Nietzsche allows us to deal with the puzzles generated by *BGE* 15; and finally because Mach's own views and career show us how one can take science and the senses quite seriously without straightforwardly accepting 'the common sense picture of the world of relatively enduring middle-sized objects or the scientific world-view.'⁹⁹ There is thus useful rhetorical force in using someone whose pro-science credentials are hard to criticise to interpret and articulate Nietzsche's similarly sceptical, though more strident, claims about physics, and our common sense view of the world, as merely interpretations of the world—and interpretations that simplify and mislead and thus falsify.¹⁰⁰

Nadeem J. Z. Hussain
 Department of Philosophy
 Stanford University
 Stanford, CA 94305
 USA
 nadeem.hussain@stanford.edu

NOTES

¹ For forceful statements of this reading of Nietzsche as a naturalist see Clark and Leiter 1997 and Leiter 2002:1–72. See also Leiter 1994, Schacht 1983: Chap. II, Wilcox 1974: Chap. VI, Nola 1987, Westphal 1984a, Westphal 1984b, Gemes 1992, and Clark 1990.

² In citing Nietzsche's texts I have basically followed the guidelines of the North American Nietzsche Society; I use the following standard English title acronyms: *The Antichrist* (*A*) (Nietzsche 1982 [1895]), *Beyond Good and Evil* (*BCE*) (Nietzsche 1966 [1886]), *Ecce Homo* (*EH*) (Nietzsche 1967 [1908]), *Gay Science* (*GS*) (Nietzsche 1974 [1887]), *On the Genealogy of Morals* (*GM*) (Nietzsche, 1989 [1887]), *Human, All Too Human* (*HH*) (Nietzsche 1986 [1886]), *Philosophy in the Tragic Age of the Greeks* (*PTA*) (Nietzsche 1962), *Twilight of the Idols* (*TI*) (Nietzsche 1982 [1889]), and 'On Truth and Lies in a Nonmoral Sense' (*TL*) (Nietzsche 1979). *WP1* refers to the selection from Nietzsche's notebooks entitled 'The Will to Power' in volume XV of the first 'Großoktavausgabe' (Nietzsche 1901–1907). *WP2* refers to the expanded selection of notes in volumes XV and XVI of the second 'Großoktavausgabe' also entitled 'The Will to Power' (Nietzsche 1901–1913). References to *TI* list abbreviated chapter title and section number. The translations, where available, are listed in the bibliography. All other translations are mine. Roman numerals refer to major parts or chapters. Arabic numerals refer to sections. For the German text I refer to the *Kritische Studienausgabe* (*KSA*) (Nietzsche 1980) and the *Kritische Gesamtausgabe: Werke* (*KGW*) (Nietzsche 1967–1978). For Nietzsche's correspondence I refer to the *Sämtliche Briefe. Kritische Studienausgabe* (*KSB*) (Nietzsche 1986). For passages from *WP1*, I have also listed the locations in *WP2* and *KSA* as follows (an '*' indicates that there are differences between the text in *WP1* or *WP2* and *KSA*): e. g. *WP1* 289*(*WP2* 583*/*KSA* 13:14[103])

³ Clark may not grant that *BGE* 21 is an assertion of the falsification thesis. As we shall see, on her reading Nietzsche at this stage denies that there is a Kantian thing-in-itself, so perhaps we should not read this passage as implying that causal claims falsify reality (my thanks to Clark for pressing this point). I propose an alternative reading of this passage below (see pp. 352–3). In any case, Clark grants that there are passages which do seem to commit Nietzsche to the falsification thesis in *BGE*—she cites, for example, *BGE* 4 (Clark 1990: 122).

⁴ Brian Leiter appropriately calls this the 'Skeptical Reading' (Leiter 2002: 13).

⁵ The argument is presented in Clark 1990. See also, for some revisions, Clark 1998. I will only discuss the version of 1990 in this paper.

⁶ Clark 1990: 83.

⁷ Green 2002: 29–32. See also Anderson 1996. I return below to the issue of textual evidence for the presence of the falsification thesis in Nietzsche's later works.

⁸ Leiter 2002: 14.

⁹ Clark 1990: 3–4 and Leiter 2002: 13–14.

¹⁰ Clark 1990: 109.

¹¹ Clark 1990: 79–81.

¹² Clark 1990: 122.

¹³ Of course, there are those who think that contradictions in Nietzsche are intentional for, in some sense, their own sake—this is presumably a way out that Clark would not want to take. One could also think that the contradiction is intentional and a means, somehow, to convey a philosophical view that is in itself coherent, but such a reading requires coming up with an interpretive account of what this philosophical view is and why the surface contradiction is a means to convey the view. In either case more would obviously need to be said.

¹⁴ My thanks to Clark for suggesting this.

¹⁵ Lange 1879 [1873]: III, 202. For discussions of Nietzsche's reading of Lange, see Salaquarda 1978; Salaquarda 1979; Stack 1983. I usually refer to the English translation of Lange 1879 [1873]. When this translation is inadequate, I refer to the German text and follow with the page numbers for the English translation.

¹⁶ Lange 1879 [1873]: III, 205–219.

¹⁷ Lange 1879 [1873]: III, 215, 223.

¹⁸ Lange 1879 [1873]: III, 219. See also 223–224.

¹⁹ Lange 1879 [1873]: III, 230.

²⁰ Indeed it is this argument from Lange that Nietzsche approvingly quotes in a letter to his friend Carl von Gersdorff at the end of August, 1866 (*KSB* I: 159–60) reporting he recently having come across Lange's *History of Materialism* and recommending the book. In the letter Nietzsche quotes of course from the 1866 first edition in which the first sentence of the third step reads differently: 'Unsre wirkliche Organisation bleibt uns daher ebenso unbekannt, wie die wirklichen Aussendinge' (Lange 1866: 493). I do not think this affects the basic point of the argument in the text. Nietzsche does take Lange's talk of 'real' organisation and things to be equivalent to talk of transcendental things-in-themselves; after quoting this section from Lange in his letter, he continues to summarize Lange's point as follows: 'Also das wahre Wesen der Dinge, das Ding an sich, ist uns nicht nur unbekannt, sondern es ist auch der Begriff desselben nicht mehr und nicht weniger als die letzte Ausgeburt eines von unsrer Organisation bedingten Gegensatzes'.

It should be noted that Nietzsche did eventually read the 1882 reprint of the 1873 second edition at the latest in 1884 (Salaquarda 1978: 240). See also Salaquarda 1979: 146–147.

²¹ The quoted phrase is from Clark 1990: 123.

²² Spir 1877:1:119. Nietzsche read Spir repeatedly, refers to him often in his notes, and seems to have been quite influenced by him (Green 2002). I discuss Spir further below.

²³ Notice that this may presuppose that these electrical impulses stand in certain relations or patterns—that there is not complete chaos. Lange grants as much (III: 225), but this doesn't mean that we can infer anything about how the world is beyond this from the way it looks to us. It could be a pattern of electrical impulses, or, if Spir's view about nerve stimulation were correct, a pattern of 'pinchings' of the nerves.

²⁴ It doesn't of course help to imagine myself investigating my own brain. I would still have to assume that whatever was the complicated mirror-like device I was using to look at my own neurons existed and that my sense organs existed. Again precisely the claims the evidence for which would be undermined by the physiological theories that would result from my investigation.

²⁵ For her account of perspectivism, see Clark 1990: Chap. 5. See also the related discussion in Chap. 2.

²⁶ And some might suspect that deeper worries about the ability of causal accounts or passive models of knowledge in general lie behind these physiological theories. Again though it isn't clear how *BGE* 15 could express such a realization or point to an appropriate response.

²⁷ In this section I'm simply assuming Clark's view that Nietzsche does accept these falsificationist physiological theories in *BGE* 4 and 11. As will become clear below, I don't in fact endorse this reading. This is one reason why I don't deal with the question of whether such theories support a strictly falsificationist thesis or just some kind of agnosticism.

²⁸ Of course we have to allow for the possibility that on occasion I am, say, merely hallucinating.

The physiologist though has to assume that he is not usually hallucinating. This is assuming a 'veil of perception' model that I think Nietzsche actually doesn't in the end accept (see below).

²⁹ Lange 1873–75:I:26/1879[1873]:I:37

³⁰ Lange 1873–75:I:26–27/1879[1873]:I:37–38. Emphasis in the original.

³¹ His reading of Spir would have reinforced this understanding of 'sensualism' (see below). Lange 1873–75:II:421, 428/1879[1873]: II:217, 224.

³² 1873–75:II:105–114/1879[1873]:II:284–94. Lange discusses Czolbe initially in an earlier chapter on philosophical materialism after Kant.

³³ Czolbe 1855. See also Czolbe 1856 where he tries to respond to objections raised by Lotze.

³⁴ Czolbe 1855: vi. Lange 1879[1873]: III:286.

³⁵ Czolbe 1856: 27–28.

³⁶ Czolbe 1855: 14. See also Czolbe 1856: 15–16, 27–28. Czolbe eventually gives in to the empirical evidence about electrical currents in nerves, but his new solution involves the perhaps even more questionable positing of a world-soul (Czolbe 1865: 210–212).

³⁷ Czolbe 1856: 14. He's presumably quoting from Lotze's review which I have not yet been able to obtain (Lotze 1855).

³⁸ Czolbe 1855: 16–17.

³⁹ Lange 1873–75:I:111–112/1879 [1873]: II:291.

⁴⁰ My claim that there are two arguments here does not rest of course on the fact that the section is presented in two paragraphs in Kaufmann's translation; in the German there is no paragraph break.

⁴¹ Clark 1990: 109–117. See also Wilcox 1974: 123–124 and Magnus 1978: 117–140.

⁴² Green 2002. I am very grateful to Green's book for forcing me to look carefully at Spir; however, our interpretations of Spir and his influence on Nietzsche are very different. I don't discuss these differences in this paper; I just present my own reading of Spir. For a brief discussion of Spir's book, see my Hussain 2004b.

⁴³ For arguments against the phenomenalist version, see Bird 1962 and Prauss 1971. See also Pippin 1982, particularly Chapter 2: 'Sensations', and Allison 1983. That a phenomenalist interpretation of Kant may be mistaken as an interpretation of Kant does not of course mean that there were no phenomenalist interpretations of Kant or phenomenalist neo-Kantian positions, nor that these interpretations or positions would not have influenced Nietzsche.

⁴⁴ Spir 1877:1:113, 1:123.

⁴⁵ Spir's own interpretation of Kant appears to be of the 'intentional object' variety (1:69–70). By only allowing for representations, Spir argues, Kant cannot account for mistakes since there is nothing outside of our representations for them to be mistaken about. Cf. Aquila 1983.

⁴⁶ It's just a fundamental fact that we have representations on the one hand and sensations on the other (1:63).

⁴⁷ The world of experience also appears to show the 'combination of the different' (1:194): the desk is both hard and brown. Spir argues that this would be impossible for things that satisfied the law of self-identity (1:194). Related to this is his claim that if experience did indeed conform to the law of identity, then we would be able to, and would have to, express the entire content of experience only in analytic sentences (1:166). Finally, because the appearance of sensations is controlled by laws external to them, this means that they are not unconditioned (1:379–380).

⁴⁸ Green 2002: 61.

⁴⁹ This language is of course from *TI* 'World'.

⁵⁰ Nietzsche may simply have accepted Spir's response to what Green calls 'the problem of the flexibility of conceptualization: no matter what the world is like, it appears possible for our concepts to accommodate themselves' (18). Spir just declares that the concept of body is independent of our changing opinions and cannot be changed (1:124–125).

⁵¹ Teichmüller 1882: 18–19, 35. Nietzsche refers to Teichmüller explicitly in many places in his notes: *KSA* 10:7[153], 10:7[223], 10:16[84], 10:20[4], 11:26[416], 11:39[18], 11:40[12], 11:40[24], 11:40[30], 11:42[6], 12:10[120], 13:21[1].

⁵² Interestingly enough Teichmüller here compares his view here to Buddhist worries about the identity of objects.

⁵³ Comte 1970 [1830]: 1. An equivalent of this introduction was present in Nietzsche's library: 'Comte, Auguste, Einleitung in die positive Philosophie. Deutsch v. G. H. Schneider. Leipzig, 1880' (Oehler 1942: 18).

⁵⁴ Comte 1970 [1830]: 2.

⁵⁵ Comte 1970 [1830]: 8.

⁵⁶ Mill 1969 [1865]: 265–66. This too is a source on Comte Nietzsche may well have read. Nietzsche's library contained a marked-up copy of John Stuart Mill's collected works translated into German including 'August Comte und der Positivismus' (Oehler 1942: 41). Lange also refers to this book in his discussions of Comte in *The History of Materialism* (Lange 1879 [1873]). As is well known, Nietzsche read Lange's book carefully (Salaquarda 1978; Salaquarda 1979; Stack 1983).

⁵⁷ *PTA* 5–8; *D* 83, 86, 119; *GS* 54, 57–59, 109; *GM* III:16; *A* 13–14, 59; *BGE* 23, 134, 230; *TI* 'Errors' 6; 'Reason' 1–3, 6; *TI* 'World'; *EH* 'Clever' 2; *WP* 2 466, 479.

⁵⁸ Cf. Magnus 1978: 132–36.

⁵⁹ Oehler 1942: 20. Mach produced several later editions that included more material. The English translation done in 1897 of the first edition already includes material not present in the first German edition of 1886. This new material is then incorporated into, and added to, in later German editions. The second German edition doesn't appear till 1900 and thus surely too late to influence Nietzsche.

Thomas Brobjer points out that 'Nietzsche sent Mach his *Zur Genealogie der Moral* at the end of 1887, suggesting that he read Mach that year' (Brobjer 1997: 692 n. 10).

Let me just say in passing that I am not suggesting that calling Mach a positivist is in any way inappropriate as long as we bear in mind that this is a typology imposed to some degree retrospectively (cf. Sommer 1985: 18).

⁶⁰ Hussain 2004a. This article also contains a briefer, and less adequate, discussion and interpretation of *BGE* 15.

⁶¹ Mach 1897 [1886]: 23 n. 1.

⁶² Mach 1897 [1886]: 10, 12. Sommer uses the label 'Empfindungsmonismus' for Mach's view (Sommer 1985: 18). For a quick summary of Mach's view, see Del-Negro 1970: 11–12.

⁶³ For a useful discussion of Mach's avoidance of subjectivism see also Sommer 1985: 81.

⁶⁴ Mach 1897 [1886]: 19.

⁶⁵ Mach 1897 [1886]: 3.

⁶⁶ Mach 1897 [1886]: 5–6.

⁶⁷ Mach 1897 [1886]: 6.

⁶⁸ Mach 1897 [1886]: 8.

⁶⁹ Mach 1897 [1886]: 11.

⁷⁰ Mach 1897 [1886]: 9 n. 1.

⁷¹ Mach 1897 [1886]: 9.

⁷² For one attempt at such a defence see Sommer 1987. For a somewhat different reading of Mach's monism, see Sterrett 1999.

⁷³ Mach 1898: 192 and Teichmüller 1882: 132. Cf. also Lange 1873–75: II:416/1879 [1873]: III:211.

⁷⁴ KSA 11:40[12]. Emphasis is in the original.

⁷⁵ See also Nietzsche, *PTA*: 5–8.

⁷⁶ Mach 1897 [1886]: 22. Presumably it is not just physicists that make this mistake.

⁷⁷ Clark has suggested in correspondence that this passage leaves open the possibility that there is some basis other than the 'prejudice of reason' for positing unity, identity, etc. that perhaps does not lead to error. I grant that the passage *could* be read that way. It still seems natural to me to read it as pointing to the 'prejudice of reason' as the *explanation* for the occasions when we do posit unity and identity.

⁷⁸ This discussion gives me the opportunity to argue against a claim Blackmore makes in his Mach biography. Blackmore argues that Nietzsche and Mach differ not only in their ethical views but also because 'Mach treated sensations as facts and Nietzsche suspected they were only interpretations' (Blackmore 1972: 123). The Nietzsche text Blackmore cites is *WP2* 481:

Against positivism, which halts at phenomena—'There are only *facts*'—I would say: No, facts is precisely what there is not, only interpretations [Gegen den Positivismus, welcher bei dem Phänomen stehen bleibt 'es giebt nur Thatsachen', würde ich sagen: nein, gerade Thatsachen giebt es nicht, nur Interpretationen].

We cannot establish [feststellen] any fact 'in itself': perhaps it is folly to want to do such a thing.

'Everything is subjective', you say; but even this is *interpretation* [emphasis not in Kaufmann's translation but is in the German]. The 'subject' is not something given, it is something added and invented and projected behind what there is.— Finally, is it necessary to posit an interpreter behind the interpretation? Even this [Schon das] is invention, hypothesis.

In so far as the word 'knowledge' has any meaning, the world is knowable; but it is *interpretable* otherwise, it has no meaning behind it, but countless meanings.— 'Perspectivism'

The use of 'feststellen' suggests that Nietzsche is making a claim about *our* ability to establish and state some fact about the world and not about the nature of the world itself. Given the nature of language, and given in particular the nature of concepts, a positivism that took our most fundamental statements about the phenomena to be fully and accurately stating the facts about the phenomena would indeed be mistaken. But, as I've tried to show in this section, this is not a view that we should ascribe to Mach either. And for both, the world, even if we cannot simply state the facts but can only interpret the world, is still knowable.

Erich Heller, in his introduction to Hollingdale's translation of *HH*, renders the first line of the last paragraph quoted above as follows: 'In so far as the word "knowledge" has any meaning, the world is *unknowable*' (xvi; my emphasis). He goes on to take this as 'the occasion to correct the fatal error in Kaufmann's or the printer's English rendering of the sentence: the "un" in "unknowable" is missing' (xvi). Heller's introduction appears in revised form, with notes, as the essay 'Nietzsche, the Teacher of "Free Spirits"' in his book *The Importance of Nietzsche* (Heller 1988). Heller makes the same point against Kaufmann's translation there (66). 'Knowable' is a translation of 'erkennbar'. As the associated note makes clear, the German edition Heller is using is the Musarion edition (190 n. 9). The Musarion edition does indeed have 'unerkenbar' (Nietzsche 1920–29: XIX:13); however Nietzsche 1901–1913: XVI:12, Nietzsche 1954–56: III:903, and KSA 12:7[60] all consistently have 'erkennbar'. It also seems to me that the 'aber' in the full sentence makes most sense with 'erkennbar': 'Soweit überhaupt das Wort "Erkenntniß" Sinn hat, ist die Welt erkennbar: aber sie ist anders *deutbar*, sie hat keinen Sinn hinter sich, sondern unzählige Sinne "Perspektivismus"'.⁷⁹

⁷⁹ Mach 1898: 192. Cf. Teichmüller 1882: 132.

⁸⁰ Mach 1897 [1886]: 22. See Lichtenberg 1968–71: 2: 412.

⁸¹ Mach 1897 [1886]: 152.

⁸² As Skorupski points out in discussing related issues in Mill, such claims don't have to commit one to supposing that there could be a language which could get it right without saying too much (Skorupski 1989: 235).

⁸³ Something like this must be the reading of Nietzsche implicitly defended by Philipp Frank in his comparison of Nietzsche and Mach (Frank 1941). See his discussion of 'auxiliary concepts' (37–51) and the Nietzsche texts he cites: *WP1* 287 (*WP2* 579/*KSA* 12:8[2]), *WP1* 289* (*WP2* 583*/*KSA* 13:14[103]), *WP1* 291 (*WP2* 560/*KSA* 12:9[40]).

See also the similar reading of Nietzsche's perspectivism in Vaihinger 1935.

⁸⁴ Recall that we came across a similar argument in Spir.

⁸⁵ Ritter and Eisler 1971: 618. Mittelstrass 1980: 790 also presents Mach as the primary proponent of sensualism in the nineteenth century.

⁸⁶ Cf. the use of 'regulative Hypothese' in the following passage from the *Nachlaß*:

'Action at a distance' is not eliminable: something pulls on another, something feels pulled. This is the fundamental fact. By contrast the mechanistic conception of pressure and impulse is only an hypothesis based on visual appearance and tactile sensation, though it could certainly be valid for the world of appearances as a regulative hypothesis! (KSA 11:34[247])

See also GS 344, KSA 11:26[263] and the discussion, and references, in Vaihinger 1935: 353 n. 2.

Such an account bears some analogy to the role that materialist explanations play in Lange's neo-Kantian story. Such materialist accounts are fine as long as their status is appropriately appreciated. They have to be restrictively applied to the world of appearances where they can be used for practical purposes and indeed for a certain kind of knowledge, but any attempt to treat them as providing more fundamental explanations or as part of a metaphysical account leads to trouble.

⁸⁷ Lange 1879 [1873]: III, 208–217 and Mach 1959: 39.

⁸⁸ For Clark's reading of this last line, see Clark 1990: 123 n. 4. She similarly sees this question as 'an invitation to recognize that we need not . . . deny that our interpretations of the world depend on something about us, for example, the type and range of our sense organs'. But this dependency, on her reading of Nietzsche's mature perspectivism, does not involve falsification. Her overall interpretation of Nietzsche turns on her reading of the rest of BGE 15. It is this interpretation of BGE 15 that has been the target of much of this paper.

⁸⁹ Mach 1897 [1886]: 13.

⁹⁰ Mach 1897 [1886]: 9.

⁹¹ Mach 1897 [1886]: 14. Some of the prior discussion in Mach suggests that he's thinking in particular here of auditory and visual nerves.

⁹² Mach 1959: 310.

⁹³ Or conveys information about a very different domain of the world of sensory elements, namely, the part of the world that we describe in the language of psychology. It conveys information, as we would say, about my psychology.

⁹⁴ Clark 1990: 105–109, Anderson 1996, Green 2002: 30–32 and Leiter 2002: 17–18 n. 18. Leiter responds specifically to Anderson's criticisms of Clark's 1990 on this point. Like Anderson, Green rejects the claim that later works don't express the falsification thesis.

⁹⁵ The discussion of Nietzsche's perspectivism also requires a much more detailed study of Teichmüller; something at least called perspectivism plays a central role in his work.

⁹⁶ Clark mentions other parts of this aphorism, but doesn't discuss the use of 'cause' here.

⁹⁷ See again Green 2002.

⁹⁸ I agree with others that the very early Nietzsche did accept the thing-in-itself and thus I accept the distinction traditionally drawn between the first and second periods in the development of Nietzsche's thought. As one could guess from the thrust of the argument of this paper, I find myself in agreement with Vaihinger and Kaufmann that when it comes to Nietzsche's positivism in metaphysics and epistemology there is not a

major difference between the supposed second and third periods of Nietzsche's development despite the persistent label, 'positivistic', for the second period (see Vaihinger 1905: 113 and Kaufmann 1974: 422-423).

This division into three periods dates back at least to Andreas-Salomé 2001 [1894]. All seem to agree that the so-called 'positivistic' period begins with *HH*, but there is disagreement about when the third period begins; Riehl and Rittelmeyer, for example, both see the third period as beginning with *Zarathustra* (Riehl 1901: 80 and Rittelmeyer 1903: 50), but Vaihinger and Andreas-Salomé start the third period with *GS* (Vaihinger 1902: 54 and Andreas-Salomé 2001 [1894]: 82-83. Ziegler 2000 [1901]: 131 also takes the third period to begin with *Z*, but sees *D* and *GS* as transitional books.

⁹⁹ Clark 1990: 108.

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