

Nietzsche's Aesthetic Critique of Darwin

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ABSTRACT – Despite his position as one of the first philosophers to write in the “post-Darwinian” world, the critique of Darwin by Friedrich Nietzsche is often ignored for a host of unsatisfactory reasons. I argue that Nietzsche’s critique of Darwin is important to the study of both Nietzsche’s and Darwin’s impact on philosophy. Further, I show that the central claims of Nietzsche’s critique have been broadly misunderstood. I then present a new reading of Nietzsche’s core criticism of Darwin. An important part of Nietzsche’s response can best be understood as an *aesthetic* critique of Darwin, reacting to what he saw as Darwin having drained life of an essential component of objective aesthetic value. For Nietzsche, Darwin’s theory is false because it is too intellectual, because it searches for rules, regulations, and uniformity in a realm where none of these are to be found – and, moreover, where they *should not be* found. Such a reading goes furthest toward making Nietzsche’s criticism substantive and relevant. Finally, I attempt to relate this novel explanation of Nietzsche’s critique to topics in contemporary philosophy of biology, particularly work on the evolutionary explanation of culture.

KEYWORDS – Darwin, Nietzsche, will to power, aesthetics, culture

I want to show that Nietzsche did praise Darwin. He put him as one of the three great men of his century. And he put Darwin among the three great men, his supermen were merely the logical outgrowth of the survival of the fittest with will and power, the only natural, logical outcome of evolution.

William Jennings Bryan, Day 5 of the Scopes Monkey Trial¹

¹The quotation continues: “And Nietzsche, himself, became an atheist following that doctrine, and became insane, and his father and mother and uncle were among the people he tried to kill.” Humorously, Nietzsche’s father died when he was only five years old. Cited, among other places, in the original trial report (Darrow and Bryan 1997, 182).

Introduction

Friedrich Nietzsche occupies – or rather, should occupy – a significant place in the history and philosophy of biology. Jean Gayon (1999, 155) rightly notes that he was, excepting Herbert Spencer (and, we should add, William James²), “the first major philosopher who felt the need for a dialogue with Darwin,” writing in the genuinely “post-Darwinian” world of the 1870s and 1880s. Further, and despite recurring views like those of Bryan, it is clear that most of Nietzsche’s writing on Darwin is negative, at times even *ad hominem*. On the other hand, Nietzsche’s ideas remain in part a product of his time and they arose in a culture that had been profoundly changed by the impact of the Darwinian worldview – Nietzsche could not help assimilating some of the Darwinism that had already become prevalent in his day. However, in spite of this interesting historical position, Nietzsche’s critique of Darwin has been largely ignored. Three reasons are immediately apparent: many assume that first, Nietzsche simply is a (Social) Darwinist, second, Nietzsche has no idea what he is talking about, or third, Nietzsche’s philosophy is to be ignored, primarily due to his (anachronistic) association with the Nazis. Thankfully, the third claim already rings hollow, due primarily to the work of Walter Kaufmann and the generation of philosophers which has followed him, in both the analytic and continental traditions, who have encouraged us to interpret Nietzsche’s bombastic rhetoric in context and to recover the true Nietzsche from the distortions of poor translations and poor editing. And if we are to take either of the first two claims seriously, we owe it to ourselves to analyze Nietzsche’s argument, not dismiss it out of hand.

What, then, are we to make of Nietzsche’s critique of Darwin? What are its core claims? Are they legitimate? How do the points of contact between Nietzsche and Darwin reveal the heart of both Nietzschean and Darwinian thought? These are the questions I approach in this paper, through cautious interpretation of Nietzsche’s writings on Darwin. Notably, this is not the same enterprise as attempting to find the “underlying Darwinian core” of Nietzsche’s thought, an effort which has been masterfully engaged by John Richardson (2004) and others (though more on the positive relationship between Nietzsche and Darwin will

² James’s first publication was an unsigned review of Huxley’s *Lectures on the Elements of Comparative Anatomy* (James 1865), and he published two reviews of Darwin’s *Variation of Animals and Plants under Domestication* (James 1868a; 1868b). Darwinian thought also featured prominently in *Great Men, Great Thoughts, and the Environment* (James 1880). For secondary discussion, see Richards (1989, 425-450). I thank an anonymous reviewer for bringing James’s contributions to my attention.

come in the following sections). My concern here is the Nietzschean critique and what this critique has to say about both Nietzsche and Darwin.

I argue that one of the threads in Nietzsche's attack on Darwin – as with most of Nietzsche's targets, there are many such threads – constitutes an intriguing and unusual approach to Darwin's theory. One of Nietzsche's critiques of Darwinian evolution argues not that it leaves too much to randomness, chance, or disorder (*pace* today's creationists), but that it places an over-intellectualized view of life – an over-Apollonian view of life, in the terminology of Nietzsche's early works – at the foundation of biology, a biology which Nietzsche recognized would have profoundly distasteful philosophical implications. This critique, developed early in Nietzsche's career, can be seen throughout his writings on Darwin.

First, however, we must clear the ground for our inquiry. I proceed in the next section to consider some inaccurate interpretations of the connection between Nietzsche and Darwin. In the third section, I introduce two facets of Nietzsche's attack that, while indisputably present in his philosophy, I believe are largely unimportant primarily due to the fact that they only superficially engage Nietzsche's core philosophical beliefs. In section four, I consider a view argued best by Richardson and Keith Ansell Pearson, which focuses on the will to power. Finally, I move to my own approach, which hearkens back to Nietzsche's early work and looks at Darwinian evolution in the context of the opposition between the Apollonian and the Dionysian. The last section provides a concluding review and a reading of this new analysis of Nietzsche in the context of current debate in the philosophy of biology.

Some Incorrect Interpretations

Scholarship on the connection between Nietzsche and Darwin has, unfortunately, left us with a few interpretations that attack Nietzsche on points that are factually inaccurate. We owe it to ourselves to begin by sweeping these under the rug.

Nietzsche as pro-Darwin

One common trope has it that Nietzsche's criticisms are all bluster, because he was in fact a dyed-in-the-wool Darwinian. Daniel Dennett (1995, 465), for example, quotes from *On the Genealogy of Morality* (*GM*) at length and explains that “aside from Nietzsche's characteristic huffing and puffing about some power subduing and becoming master,

this is pure Darwin.” If this is taken as seriously asserting that Nietzsche was simply a Darwinian, then I think it hardly merits refutation. Of course, Nietzsche did owe a significant debt to Darwin, and he had a habit of pushing away those who influenced him the most – his talk of Schopenhauer and Wagner should be enough to convince us of that. But the fact that Nietzsche carries some obligation to Darwin does not entitle us to write off Nietzsche’s critique. To do so is to give Nietzsche far too little credit.

Nietzsche as Simply Confused

A representative example of another mistaken evaluation can be found in Cox, who says that

Nietzsche seems to have known Darwin primarily through what Stephen Jay Gould has recently called “Darwin’s spin doctors,” who, under the guise of disseminating Darwinism, continued to insinuate ontotheological posits into the theory of natural selection. In his quest to eliminate the “shadows of God,” Nietzsche subjects such “Darwinism” to a naturalizing critique. (Cox 1999, 224-225)

Nietzsche, on this view, is not to be taken seriously when he talks about “Darwinism.” He is, at best, referring to some sort of distorted view of Darwin passed to him secondhand by disingenuous German commentary and, at worst, tilting at windmills, unleashing his fury on a straw man. This view, regardless of its philosophical reading of Nietzsche’s arguments, is historically inaccurate.

Did Nietzsche read Darwin? This question we can answer almost assuredly in the negative. As Thomas Brobjer (2004, 22ff) persuasively argues, Nietzsche came to an interest in natural science relatively late in life and we know that his study of scientific works, like all his reading, was hampered by his poor knowledge of foreign languages and his near-blindness. It seems all but certain that Nietzsche never read any of Darwin’s major works.³

What, then, were Nietzsche’s sources for his knowledge of evolutionary theory? The books most commonly cited are F.A. Lange’s *History of Materialism* (1866),⁴ Wilhelm Roux’s *Struggle of Parts in the Organism*

³ Roughly the same conclusion has been reached by Dennett (1995) and Johnson (2001). Brobjer mentions one possible Darwinian reading: a relatively inconsequential article of Darwin’s on the psychology of infants (Darwin 1877).

⁴ Translation available as Lange (2000). This is a largely pro-Darwinian work; a helpful evaluation of it is available at Teo (2002).

(1881),⁵ W.H. Rolph's *Biological Problems* (1884),⁶ and Hartmann's *Truth and Error in Darwinism* (1875).⁷ Further, Nietzsche discussed Darwinian ideas with various other professors at Basel, including the anti-Darwinians Ludwig Rüttimeyer and Wilhelm His; Basel was at the time something of a hub for debate on Darwin (Johnson 2001, 64).⁸ Without moving too deeply into textual history or detailed analysis of these sources, we can say with some confidence that Nietzsche was exposed to Darwin via what was roughly the mainstream tradition of Darwinian critique and commentary in Germany in the 1870s and 1880s.

Finally, we can ask about the reliability of these sources. Were Nietzsche's comments on Darwinian theory motivated entirely by his having received a slanted or even false view from these commentators? Again, the answer is an almost definite no. We can approach this question from two perspectives, those responsible for the "popular" Darwinism that had already become part of German culture and the German scientific establishment itself. On the first front, Alfred Kelly offers a study of the popular reception of Darwin in Germany, concluding that despite an emphasis on materialism, "the popularizers spent most of their time on a straightforward explication of Darwin's argument, and, in explaining the particulars, they were extremely responsible and accurate" (Kelly 1981, 29). Similarly, though scientists like Haeckel and Weismann certainly offered an idiosyncratic reception of Darwinism (tempered in large part by the influence of German idealism), theirs was no more idiosyncratic than receptions in France (infused with Lamarckism), America (driven by the peculiar demands of American paleontology), and elsewhere.⁹ Darwin was not being butchered by the German scientific, philosophical, or even popular community. If Nietzsche is to be faulted for his understanding of Darwin, the faults are his own.

⁵ Again, a largely pro-Darwinian work, in the tradition of Haeckel (and later, Weismann). Good secondary material can be found in Richards (2008a, 189-192) and a contemporary review in Romanes (1881).

⁶ Rolph replaced the "will to preservation" with something like a "will to increase," clearly an important insight for Nietzsche. See Welshon (2004, 66).

⁷ Again, a mainstream critical work on Darwin. Brobjer (2004) lists all of the above as Nietzsche's references, Johnson (2001) singles out Lange, and Small (2004) mentions Lange and Rolph. Moore (2004) mentions Rolph, Roux, and Rüttimeyer. An illuminating discussion of Nietzsche's borrowings from these various commentators can be found in Moore (2002).

⁸ I thank a reviewer for the reference to His, who was rector at Basel in 1869, an opponent of Haeckel and no friend of Darwinism. Rüttimeyer was also a staunch opponent of Haeckel.

⁹ No better references can be found for the German reception than the two monographs of Richards (2002; 2008a).

Nietzsche Against the Social Darwinists

Another common strain of thought pits Nietzsche only against those who wished to derive a normative theory of morality using Darwinian ideas as a basis – usually with an emphasis on the claim that this was not Darwin’s idea.¹⁰ Despite the fact that Herbert Spencer is mentioned by name in *GM*,¹¹ this evaluation is shortsighted. Clearly, Nietzsche disliked Spencer’s program. But Nietzsche, at least occasionally, presented genuinely scientific responses to Darwinian evolution. The best example comes from the *Nachlass* (7[25], Nietzsche 2003, 134-135), in which Nietzsche notes that during the evolution of some particular characteristic in an organism, it is frequently the case that said characteristic is not useful during the organism’s development – and further, it is not even clear what is meant by “useful” in such contexts. Both of these were very common criticisms in the scientific community just after the introduction of Darwin’s theory – for example, they were published by Fleeming Jenkin (1973, 318-319) in his review of Darwin’s *On the Origin of Species* (*Origin*), to which Darwin responded directly in the *Origin*’s sixth edition. Despite having been debunked, they have stayed around in one form or another until today. In any case, these are complaints about Darwin’s theory as it applies to the development of life – not just to ethical extrapolations therefrom. Insofar, then, as this interpretation claims that Nietzsche’s focus on Darwin came exclusively from a desire to attack early Social Darwinists, it does not have it right.¹²

Nietzsche’s Knowledge and the Scope of his Critique

Therefore, I want to argue from a particularly strong conception of Nietzsche’s knowledge of and response to Darwin. Nietzsche may never have read the *Origin*, but his criticisms are based on a well-reasoned, fairly thorough picture of Darwinian evolution and they span the full range of Darwinian theory, albeit focused, as Nietzsche himself was, in the ethical domain. As Nickolas Pappas says (2005, 204), “[his] is not a complete account of natural selection but it’s not uninformed

¹⁰ Clark and Swensen say exactly this when talking about the “Anti-Darwin” section of *Twilight of the Idols* (*TWI*) (Nietzsche 1998, 261). Notably, it isn’t even clear that Darwin *wasn’t* trying to espouse a theory of normative ethics *himself* (on this, see Lewens 2007, 167ff). Other authors making the same claim about Nietzsche and Social Darwinism include Brobjer (2004) and (though less emphatically) Dennett (1995).

¹¹ “[I]ndeed life itself is defined as an ever more purposive inner adaptation to external circumstances (Herbert Spencer)” (*GM* §II.12, Nietzsche 1998, 52).

¹² Ansell Pearson (1997, 99) goes so far as to call such views “woefully inadequate.”

either. The question of Nietzsche's antipathy is not trivial." We cannot shy away from the difficult interpretive issues here by claiming either that Nietzsche did not know what he was talking about or that he was habitually short-sighted.

Nietzsche, Malthus, and Higher Types

Now we turn to two components of Nietzsche's critique of Darwin – his attack on Darwin's use of Malthus and his attack on what he perceives as Darwin's notion of progress – which, I claim, should be seen as only peripheral to Nietzsche's primary concerns. As Richardson notes (2004, 11), looking at Nietzsche's view of Darwin "brings us quickly to the middle of his thought." Since these two criticisms do not do that, I think we are right to consider them unimportant.

Darwin and Malthus

First, Nietzsche railed against Darwin's adaptation of the Malthusian "struggle for existence." The best example comes from *The Gay Science* (GS §349), where he writes that "in nature, it is not distress which *rules*, but rather abundance, squandering – even to the point of absurdity. The struggle for survival [i.e., Darwin's 'struggle for existence'] is only an *exception*, a temporary restriction of the will to life" (Nietzsche 2001, 208).¹³ Thus, as Darwin's theory is founded on a struggle of this kind, it must be false.

Despite a rousing defense (and reinterpretation) of this line of criticism by Gayon (1999, 161-173), I find it unconvincing for several reasons. First, it is obviously compatible with everything Darwin (or even the Social Darwinists) said. Darwin is careful frequently to emphasize that his "struggle for existence" is not solely negative; that is, it is not merely the struggle of an organism with the destructive forces of predation, starvation, and so forth. Included in the struggle for existence is "(which is more important)... success in leaving progeny" (Darwin 1859, 62). And not only numerical success, for Darwin recognized that positive contributions of the organism toward its own increase – the "accumulation" of "variations useful to any organic being" (Darwin 1859, 127) – are also part of the "struggle for existence." It is not, as

¹³ We can see this also in *TWI* "Skirmishes" §14 (Nietzsche 2005, 199) and *Beyond Good and Evil* (BGE) §13 (Nietzsche 2004, 15). Strangely, Smith (1981) goes so far as to call this the "entirety" of Nietzsche's critique of Darwin.

Nietzsche seems to think, merely “confus[ing] Malthus with nature” (TWI “Skirmishes,” Nietzsche 2005, 199). Further, Darwin recognizes the very “abundance” at the basis of Nietzsche’s criticism – consider his famous metaphor of the “ten thousand sharp wedges” (Darwin 1859, 67). It is this very abundance that causes the struggle for existence, a connection that Nietzsche seems not to recognize.

Second, Nietzsche’s attack on the struggle for existence does not provide us any real insight into deeper realms of Nietzsche’s work. We do see here that Nietzsche has a genuinely positive view of nature, a view, in fact, which Darwin shared.¹⁴ But Nietzsche’s philosophical project is not about a characterization of the relationship between man and nature: this point is merely peripheral. Nietzsche’s concern with the struggle for existence, therefore, is not a particularly interesting element of his critique and, as we will see, it is not nearly sufficient to appreciate the breadth of Nietzsche’s opposition to Darwin’s theory.

Darwin and Progress

More frequent is Nietzsche’s criticism of what he perceives to be evolution’s inherent reliance on a sense of “progress.” He says, for example, at *GM*, that “the ‘development’ of a thing, a practice, an organ is accordingly least of all its *progressus* toward a goal, still less a logical and shortest *progressus*, reached with the smallest expenditure of energy and cost” (Nietzsche 1998, 51). Even more explicitly, in the *Nachlass* he writes that

What surprises me most when surveying the great destinies of man is always seeing before me the opposite of what Darwin and his school see or *want* to see today: selection in favor of the stronger, in favor of those who have come off better, the progress of the species. The very opposite is quite palpably the case... (14[123], Nietzsche 2003, 258-260)¹⁵

We must begin with caution regarding Nietzsche’s language. First, the use of “development” (*Entwicklung*) in the first quotation above need not be evolutionary. We know that Nietzsche is preoccupied with the idea of history, where historical development is simply change from one state to another over time.¹⁶ Here, then, we have a descriptive claim about the “messiness” of history, not a critique of Darwin. As the context

¹⁴ Among other reasons, due to Darwin’s deep appreciation for Humboldt. See Richards (2002, 522ff).

¹⁵ We can also see this point made at *The Will to Power (WP)* §§684-685 (Nietzsche 1968, 361-365).

¹⁶ He may have taken this view from Burckhardt – Salomon (1945, 234) calls Burckhardt’s “material” “the life of history, always unfolding between an origin and an end, in continuous movement and change.”

makes clear – a discussion of the development of the idea of punishment – Nietzsche’s point is something like the following: a “thing, a practice, an organ” has not taken a reasonable, but rather a highly contingent historical route to its destination. This is a claim with which Darwin would surely agree.¹⁷

On the other hand, in the *Nachlass* Nietzsche is clearly talking about Darwinian evolution. Here we are to consider the fact that biological, evolutionary development – selection, in Darwin’s sense – has not come off in favor of the better, in a highly normative, Nietzschean sense. Darwin’s relationship to teleology and progress is a matter of much debate. For one, Darwin himself is inconsistent on the issue. He says in a letter to Hooker that “with respect to ‘highness’ & ‘lowness’, my ideas are *eclectic & not very clear*” (Darwin 1854, original emphasis). In favor of an inherent sense of “progress” in evolution, he says in the *Origin* that “all corporeal and mental endowments will tend to progress toward perfection” (1859, 489). In the above-mentioned letter to Hooker, he argues that “‘highest’ usually means that form, which has undergone most ‘morphological differentiation’ from the common embryo or archetype of the class” (Darwin 1854). On the other hand, he argues elsewhere in the *Origin* that “natural selection will not produce absolute perfection” (Darwin 1859, 202) and is frequently careful to talk about the fact that an organism succeeds only when it might “have a better chance of living and leaving descendants” (Darwin 1859, 94) – not according to any absolute scale of progress. The secondary literature is similarly split. Michael Ghiselin (1994) and James Lennox (1993; 1994) both argue that Darwin’s teleological language should not be read as indicating any genuine “progress,” but rather, to quote Lennox, only as referring “*to the activities performed by the part in virtue of which it has been, or is, selected*” (1993, 415, original emphasis).¹⁸ This is relatively far removed from the normative sense in which Nietzsche intended to refer to “those who have come off better.” In support of Darwin’s use of “progress,” Robert Richards has frequently and persuasively argued that “Darwin’s theory is indeed progressivist, and his device of natural selection was designed to produce evolutionary progress” (Richards 2008b, 48). In short, Nietzsche’s criticism of Darwin may well be on

¹⁷ For example, Darwin claims that the course of the development of a species “depends on many complex contingencies” (Darwin 1859, 314).

¹⁸ Lennox and Ghiselin are locked in a rather bitter argument in these two articles, but I think there is more common ground here than there is genuine disagreement – at least with respect to the point I’m considering. Ghiselin and Lennox seem to disagree over how to understand Darwin’s teleological language, but both, I think, would agree that the Nietzschean, normative sense of teleology is absent from Darwin.

the mark, but it is difficult for us to settle the issue here. Darwin's use of "progress" remains, even today, an open issue in Darwin scholarship.

Further, though there is certainly something here of Nietzsche's insistence on the blooming, buzzing confusion of the historical record and his view of the humdrum progress of history punctuated by occasional outbursts of human greatness (see, for example, his claim in *Human, All Too Human (HA)* that "the strongest natures *preserve* the type, the weaker [i.e., the fragile, creative 'genius'] help it to *evolve*" (Nietzsche 1996, 107), these facets of the relationship between Nietzsche and Darwin, again, do not take us very deeply into Nietzsche's philosophy. In sum, neither Nietzsche's criticism of the Malthusian struggle for existence nor his focus on progress have produced results. It is high time we turn to an interpretation of his critique which does.

Darwinism and the Will to Power

Now we come to a pervasive strand in Nietzsche's anti-Darwinian writings, and one that reaches the heart of Nietzsche's philosophy. Nietzsche claims that insofar as natural selection posits something like the "will to self-preservation" as a goal or end of life, it is incorrect, for this place is in fact held by the will to power. Consider *GM*:

In so doing [focusing on adaptation and natural selection], however, one mistakes the essence of life, its *will to power*; in so doing one overlooks the essential pre-eminence of the spontaneous, attacking, infringing, reinterpreting, reordering, and formative forces, upon whose effect the "adaptation" first follows; in so doing one denies the lordly role of the highest functionaries in the organism itself, in which the will of life appears active and form-giving. (Nietzsche 1998, 52)

What is more, at points throughout his work Nietzsche seems to define life itself as the will to power.¹⁹ Here, then, we have indisputably hit upon a deep vein in Nietzsche's philosophy. This thread has not been lost on commentators, either – Ansell Pearson (1997) and Richardson (2004) make it central to their arguments,²⁰ How shall we evaluate it?

First, it is too prevalent in Nietzsche to be ignored and clearly constitutes one of Nietzsche's most significant arguments against

¹⁹ *WP* §681 (Nietzsche 1968, 361), *Thus Spoke Zarathustra (Z)* "Self-Overcoming" (Nietzsche 2006, 90), *BGE* §13 (Nietzsche 2004, 15).

²⁰ We also see it in Heidegger (1980), Moore (2002, 27-28), Hollingdale (Nietzsche 1990, 201), Mensch (1996, 200-201), and Brobjer (2004, 22-23).

Darwin.²¹ Further, it is a claim that is indisputably *contra* evolutionary theory; if such a will to power is operative in nature, it is unexplained by evolution (though more on this in a moment). We thus have to spend some time unpacking it.

The Problem of Nietzsche's Teleology

To begin, what is the will to power? Richardson, in his extended work drawing out the implications of Nietzsche's will to power for his metaphysics (2002, 21), speaks of it as a claim that "the beings or units in [Nietzsche's] world are crucially end-directed, and to understand them properly is to grasp how they're directed or aimed." Further, this direction – toward power – is best interpreted if we see power as a multifaceted, highly variable concept, which clusters around "growth, in level of activity or in 'strength'," as well as the "mastery of others" by "bringing another will into a subordinate role within one's own effort, thereby 'incorporating' the other as a sort of organ or tool" (Richardson 2002, 28, 33). We can clearly see the influence of Nietzsche's reading in biology, particularly Roux's struggle between the cells and organs within an organism.

If this is the will to power on which Nietzsche was focused, Richardson does perhaps the best job of elucidating this Nietzschean argument and posing the most crucial question we must ask of it.

Apparently, from such passages, [Nietzsche] conceives these two to be competing answers to the question of the end or goal of life: he takes Darwin to claim that organisms are "toward" survival, and he argues that they're toward power. More specifically, he supposes that *both* of these are meant as goals of a "will" or "basic drive" of life. [...] Nietzsche's main point is that this life will is *not* a will *to* life, but to power. What is the force of this "to"? What type of goal does it imply? (Richardson 2004, 20)²²

That is, if we are to take "will to power" as a competing answer to the question of the end or goal of life – as it certainly seems Nietzsche intends it – what are we to do with this concept of "end"? Nietzsche is deeply concerned with teleology here, a concern we might not expect to find in his work. At one point, Nietzsche even refers to the lack of

²¹ In addition to the two quotations cited, we can also see it at *GS* §349 (Nietzsche 2001, 207-208), and at 7[44] (Nietzsche 2003, 136-137), among others.

²² Moore (2002, 50) puts the point a bit differently, but just as well: "But while the later Nietzsche also repudiates the notion of an instinct for self-preservation because he claims that it is a redundant teleological principle, he is perfectly happy to replace it with a *Trieb* [drive] that is no less teleological than the one which he rejects."

teleology as a defect in Darwin. He demeans “the Darwinians and anti-teleologists who work in physiology, with their principle of the ‘smallest possible force’ and greatest possible stupidity” (Nietzsche 2004, 16). Of course, Nietzsche also claims that his philosophy is aimed at the naturalization of humanity. In *Beyond Good and Evil* he calls this “the insane task” (Nietzsche 2004, 123). What sort of naturalization is it that naturalizes by way of teleology? I see two answers here. One naturalizes the teleology itself, but, I think, at the expense of distorting Nietzsche’s writings. The other accepts the teleology, but at the expense of making the will to power almost incoherent.

The first project, the goal of naturalizing the teleology, is the reading Richardson presents. He claims that we can best understand Nietzsche’s will to power if we see it as itself being a Darwinian claim; that is, if we make the will to power and evolution compatible by making the will to power supplement evolution. We should think of the will to power as a beneficial effect that has been cultivated by the process of natural selection. The problem here is a tenuous reading of Nietzsche. Richardson (2004, 52, 6-8) recognizes this as the “recessive view” in Nietzsche’s work and warns us in his introduction that his interpretation relies on a high level of reconstruction. I fully understand Richardson’s motivation and I, in fact, agree with him that, in a strong sense, his reworking of Nietzsche’s views is the best chance we have at making Nietzsche’s will to power plausible at the end of the day. However, I do not believe we can accept this revisionist reading. Richardson makes his case by connecting the will to power with Nietzsche’s broader concept of drives. He then claims that Nietzsche considers these drives products of a selective history – one reason, he argues, for Nietzsche’s use of genealogical methodology. On this view, drives (will to power among them) were rendered suitable for their goals (which frequently relate to an organism’s fitness) by natural selection. Nietzsche is a through-and-through Darwinian after all.

There is one problem with the tenability of this view. Nietzsche seems fairly clearly to be offering the will to power as an explanation with the ability to supplant the mechanism of natural selection. It would be a vicious circularity indeed to supplant natural selection with a process that depended on selection. We would need to reinterpret not just Nietzsche’s claims regarding teleology, but also his insistence on the biological dominance of the will to power.

Of course, such circles are actually fairly common in Nietzsche (e.g., in his concept of morality), where a particular phenomenon (something such as conscience) manages to make possible the rise of the very feature (the great man) that undermines it. Perhaps, then, this circularity is not

vicious. It merely serves to highlight that feature of natural selection that Nietzsche finds most attractive: its insistence on the accidental and the contingent.²³ But if this is the case, we should expect to hear Nietzsche talk about the will to power as transcending selection. Nietzsche's rejection of selection as a competing explanation would not make sense.

On the whole, I am sympathetic with a view of teleology as emergent from natural selection. In fact, it is a fairly standard way to account for the seeming appearance of design in natural systems (Brandon 1981; Bekoff and Allen 1995). But, for all the reasons above, it is difficult to believe that this view is Nietzsche's view. Further, the narrow notion of teleology that we can extract from Darwinian natural selection (occasionally called "teleonomy"), as argued forcefully by Patrick Forber (2007), is itself insufficient to ground Nietzsche's teleological program. The naturalized account of Nietzsche's teleology simply can not stand up to natural selection's demand for heritable variation with differential fitness, and does not square with the limited conception of "function" provided by natural selection. What are the other possibilities?

What if we simply accept a dash of teleology – brute teleology – as a fact about our world? Consider, for example, *Will to Power* (*WP*):

[What I demand is] that one should take the doer back into the deed after having conceptually removed the doer and thus emptied the deed; that one should take doing *something*, the "aim," the "intention," the "purpose," back into the deed after having artificially removed all this and thus emptied the deed. [...] To have purposes, aims, intentions, *willing* in general, is the same thing as willing to be stronger, willing to grow... (Nietzsche 1968, 356)

This certainly sounds like an exhortation to view teleology and the will to power with it, as a ground-level feature of our metaphysics. There are (at least) two difficulties here.

First, it does not seem at all compatible with Nietzsche's overarching project of naturalism to embed such teleology into one's metaphysics. Any such sort of external goal points dangerously toward a fictitious, ideal realm – one of the things for which Nietzsche so harshly criticizes Christianity. In the *Nachlass*, Nietzsche makes precisely this connection, when he claims that even the supposedly non-religious "perfect man" of the "socialists" and "Utilitarians" constitutes nothing more than that "one has transferred the arrival of the 'kingdom of God' into the future, on earth, in human form – but fundamentally one has held fast to the belief in the *old* [i.e., Christian, fictitious] ideal" (Nietzsche 1968, 186). A similar point is made by Richardson (2004, 22) when he argues that any

²³ Thanks to Karl Ameriks for this possible reply.

such account of brute teleology would necessarily be mentalistic – that is, in having a goal, organisms must also have “some kind of representation of the goal, which picks it out in advance and steers behavior toward it.” Perhaps most convincingly of all, Robert Cummins (2002) argues that such depictions of the biological world launch us on an infinite regress. If this brute teleology is supposed to serve as the ground for features in the natural world, we come upon a problem – for the “guiding and regulating behavior” of the teleology is “itself teleologically explained, but without the hope of a corresponding grounding process” (Cummins 2002, 160).²⁴ Brute, external teleology of this sort thus seems difficult to reconcile with Nietzsche’s other philosophical goals.

One non-mentalistic option, however, might yet be open. It is possible that all teleology, for Nietzsche, is retrospective. That is to say, every place where we think we are acting for a *telos*, we are merely rationalizing our efforts after the fact. In *GS*, for example, Nietzsche claims that “the reasons and intents behind habits are invented only when some people start attacking the habits and asking for reasons and intents” (Nietzsche 2001, 51).²⁵ But this option, too, falls short. If the will to power is to provide an alternative to natural selection, it must explain biological development as we perceive it in the world. Providing such an explanation in terms of a goal that exists only as a rationalization after the fact, is no explanation at all. It may well be the case that, in many instances, such rationalized “goals” are all we can expect to be able to ascribe to historical actors. But this is clearly insufficient when we move into the realm of science.

More importantly, the adoption of brute teleology suffers from an even bigger difficulty – it may well contradict other parts of Nietzsche’s philosophy. If the problem with natural selection is that it is too structured, that it ignores the “spontaneous, attacking, infringing” components of the will to power, then, as Ansell Pearson observes (1997, 107), “what is to prevent us from regarding *this* conception [the will to power], in contrast to the mechanism of natural selection, as enmeshed in a highly anthropomorphic model of purposive, active evolution or becoming?” The will to power, that is, seems even more structured than natural selection, on this view of teleology.

We must be careful here, however. Nietzsche seems to think that there exists an objective (or, at the very least, external) value-structure that underlies our basic aesthetic judgments, our sense of taste.²⁶ Thus, there

²⁴ The same point is even made by as staunch a *defender* of teleology as Denis Walsh (2006).

²⁵ This can also be found at *BGE* §5 (Nietzsche 2004, 8).

²⁶ Raymond Geuss seems to make such a point in his introduction to *BT* (Nietzsche 1999, xxiv-

is some sort of objective (or external) and in that sense natural, facet of human values, some source of natural “order” or “goals.” But Ansell Pearson is still largely right, though we have to acknowledge some such order present in nature, this does not seem like the right sort of thing to support the will to power, and certainly not to the point that it could supplant natural selection as an explanation for the development of life.

Therefore, it seems that both our options for salvaging Nietzsche’s “teleology” come up short. We thus have a fairly strong incentive to look for another interpretation of Nietzsche’s critique of Darwin, one that runs less risk of dashing the remainder of his philosophy upon the rocks.²⁷

Natural Selection and the Apollonian

I would like to take a few steps toward offering a new way in which to conceive the relationship between Nietzsche and Darwin, an interpretation that connects Nietzsche’s biology not to his late work on the will to power, but to his early work on aesthetics.²⁸

The Apollonian and the Dionysian

We must begin by doubling back to Nietzsche’s early works. Nietzsche claims at the very outset of *The Birth of Tragedy* (*BT*) that our goal in that book is to “come to realize [...] that the continuous evolution of art is bound up with the duality of the *Apolline* and the *Dionysiac* in much the same way as reproduction depends on there being two sexes” (Nietzsche 1999, 14). Leaving aside the biological metaphor, we should spend a moment clearing up the distinction between the Apollonian and the Dionysian, a dichotomy vitally important to Nietzsche’s early works. The story is well known, but important nonetheless. Nietzsche sums up his discussion thus far in *BT*:

I have kept my gaze fixed on those two artistic deities of the Greeks, Apollo and Dionysos, in whom I discern the living and visible representatives of *two* art-worlds which differ in their deepest essence and highest goals. Apollo stands

xxv), and Karl Ameriks holds a similar view (Ameriks 2009). Notably, it is quite plausible that Darwin held the same sort of view; see Richards (2002, ch. 14; 2008b).

²⁷ Of course, the proper manner in which to interpret Nietzsche’s many claims regarding will to power and selection is still a problem. But it will, it seems to me, at least be less of a problem if we can find another way to understand Nietzsche’s relationship to Darwin.

²⁸ One could see parts of Johnson’s (2001) reading of Nietzsche on Darwin as expressing a view like mine, but Johnson still cashes his view out entirely in terms of the will to power.

before me as the transfiguring genius of the *principium individuationis* [principle of individuation], through whom alone release and redemption in semblance can truly be attained, whereas under the mystical, jubilant shout of Dionysos the spell of individuation is broken, and the path to the Mothers of Being, to the innermost core of things, is laid open. (Nietzsche 1999, 76)

The Apollonian and the Dionysian, he claims, are two complementary facets of our aesthetic experience, each expressing a different sort of truth about the world.

I also want to draw attention here to another facet of Nietzsche's views. What does Nietzsche believe to be the purpose of exposing this rift between the Apollonian and the Dionysian? For an answer, we can look even earlier in Nietzsche's philosophy. At the beginning of *Philosophy in the Tragic Age of the Greeks*, a posthumously published work dating from around the time of *BT*, he says:

The physicians of our culture repudiate philosophy. Whoever wishes to justify it must show, therefore, to what ends a healthy [i.e., the pre-Socratic Greek] culture uses and has used philosophy. Perhaps the sick will then actually gain salutary insight into why philosophy is harmful specifically to them. (Nietzsche 1962, 27)

Nietzsche's philosophy, then, is intended as a diagnosis of culture. In *BT*, he harps on the Socratic state of modern European society, claiming it suffers from a sickness, a "hypertrophied" sense of the Apollonian at the complete expense of the Dionysian. I do not believe it overstates the point to claim that the most important goal of Nietzsche's genealogical method is to show us, in explicit detail, how we wound up in such a position, and what we are to do about escaping it or perhaps transcending it.

Nietzsche, Evolution, and the Apollonian

How does this, then, relate to Nietzsche's criticism of Darwin? Let us begin with the most poetic of evidence. At the end of *Thus Spoke Zarathustra*, the prophet stumbles upon a man who is called "the conscientious of spirit."²⁹ The man lies in a swamp, covered by leeches, as he studies the workings of their brains. As Zarathustra questions the man, the scientist explains himself:

How long already have I pursued this one thing, the brain of the leech, so that the slippery truth no longer slips away from me here? Here is *my* realm!

²⁹ Ludovici goes so far as to identify this character with Darwin, though such an identification may be highly dubious (Nietzsche 1911, 444).

– this is why I threw away everything else, this is why all else is the same to me, and right next to my knowledge my black ignorance lurks.

My conscience of spirit wants of me that I know one thing and do not know everything else; I am nauseated by all halfness of spirit, all hazy, soaring, rapturous people.

Where my honesty ceases I am blind and also want to be blind. But where I want to know, I also want to be honest, namely venomous, rigorous, vigorous, cruel, and inexorable. (Nietzsche 2006, 202)

That, to put it mildly, is a rather critical characterization of the “scientist,” of the overly-intellectual view of nature. Let’s spend a moment unpacking it, for we run a risk of being carried off by its parody. What we have here is a lampoon of the sort of pursuit in which nineteenth-century scientists like Darwin think they are engaging. In the service of its intellectual “explanation” of life, science (and especially Darwinism) has thrown itself into the mud and taken after the most inconsequential of details – the supposedly intelligent scientist who Zarathustra meets has buried himself in what one might think is a frightfully anti-intellectual pursuit. Furthermore, science has forced itself to ignore the entirety of the aesthetic, consigning it to the realm of “black ignorance;” all “hazy, soaring, rapturous” people – indeed, the very Dionysian elements of life – all are worthless, are “halfness of spirit.” Here we can see the beginnings of a new critique, a critique of Darwin’s theory and all mechanistic science as, in the particularly appropriate language of Nietzsche’s early works, excessively Apollonian. Of course, the Apollonian has its place (about which more later), but we can clearly see that Nietzsche recoils at the insistence of the Darwinians on placing such a highly intellectualized perspective at the most fundamental levels of life itself. As he says in the *Nachlass*, “how can one be so blind as to fail to see clearly *here*?” (14 [123], Nietzsche 2003, 258-260).

This is the first glimmer of a new interpretation of the conflict between Nietzsche and Darwin. Can we find more support for it in Nietzsche’s other writings? Returning to the *Birth of Tragedy*, there is a famous passage at *BT* §5 where Nietzsche says that “only as an *aesthetic phenomenon* is existence and the world eternally *justified*” (Nietzsche 1999, 33). But it is entirely missed that just before this claim lies, I believe, the key to understanding this facet of the relationship between Nietzsche and Darwin. Nietzsche states, in the context of a critique of Schopenhauer, that “the subject, the willing individual in pursuit of his own, egotistical goals, can only be considered the opponent of art and not its origin” (*BT* §5, Nietzsche 1999, 32). Given my earlier discussion of Nietzsche’s critique of Darwin’s “struggle for existence,” it seems clear that Nietzsche envisions that Darwinian struggle as a very narrow

“struggle for survival,” a sort of “distress” which holds only between individual organisms. The struggle for existence, on Nietzsche’s (mis-) interpretation, must therefore be an example of the individual’s pursuit of personal, egotistical goals. Thus, Darwin’s theory is focused on individual actions by which the organism gains no share of participation in the aesthetic, the aesthetic upon which, crucially, the justification of existence itself hangs. Darwin’s theory denies by definition one of the core tenets of Nietzsche’s early works.

The same point is made more broadly a few years earlier in the *Nachlass*. “The only possibility of life: in art. Otherwise a turning away from life. The complete annihilation of illusion is the drive of the sciences: it would be followed by quietism – were it not for art” (Nietzsche 2009, 22). Not just Darwin’s theory, but any mechanistic science the goal of which is truth at any cost will clash with the aesthetic. As he writes later, around the time of the publication of *BT*: “*Now science is restrained only by art*. It is a question of *value* judgments about knowledge” (Nietzsche 2009, 103). Darwin’s theory, I suspect, draws his ire particularly due to its claim to understand life itself. It claims to possess the fundamental truths of life, yet it denies art, that which is, for Nietzsche, “the only possibility of life” itself.

We can see this same theme in Nietzsche’s direct critiques of Darwin, particularly in the unpublished works. The closest that Nietzsche comes to laying out a “systematic” analysis of Darwin is in *WP* §684, where he says that the “second proposition” of his view *contra* Darwin is that

Man as a species does not represent any progress compared with any other animal. The whole animal kingdom does not evolve from the lower to the higher – but all at the same time, in utter disorder, over and against each other. The richest and most complex forms – for the expression “higher type” means no more than this – perish more easily: only the lowest preserve an apparent indestructibility. (Nietzsche 1968, 363)

I want to draw attention to two features of this passage. The first is the identification of “higher type” with the “richest and most complex forms.” Nietzsche intends this to be an aesthetic judgment. He argues just after this that “the higher type represents an incomparably greater complexity...the ‘genius’ is the sublimest machine there is – consequently the most fragile” (Nietzsche 1968, 363). We know that “genius” for Nietzsche is an undeniably aesthetic, creative category, the pinnacle of the “higher type.” Here, we see the earlier “progress” argument against Darwin (see the third section above) as, in fact, a component of the broader aesthetic claim against Darwinism. The only sense in which the Darwinians allow themselves to talk about “progress” – that is, increasing

adaptation to conditions – is insufficient to produce the sort of aesthetic progress that would signal truly higher types.

The second feature worthy of note here is paralleled in *GM*, as quoted earlier, is the emphasis on life as “spontaneous, attacking, infringing, reinterpreting, and formative” (Nietzsche 1998, 52). If these are the most important features of life itself, then it seems obvious that any theory which purports to describe life (especially life at its most fundamental levels) must have a grip on the Dionysian. Any process that is “spontaneous, attacking, infringing” cannot be characterized by a theory which places its focus solely in the Apollonian. We hear echoes of other figures in Nietzsche’s thought in this depiction of life – for example, when Nietzsche describes his tragic art, his art for “convalescents,” in the preface to *GS*: “a mocking, light, fleeting, divinely untroubled, divinely artificial art” (Nietzsche 2001, 7-8), or when he speaks of the qualities he had, in his youth, projected onto Wagner: “the juxtaposition of the brightest and most disastrous forces” (Nietzsche 2005, 111). Surely any genuine understanding of Nietzsche’s tragic art, or any genuine understanding of what Nietzsche (early in his life, at least) believed was at the core of Wagner’s works, could not arise from a perspective which rejects the Dionysian. Darwinism writes all Dionysian characteristics out of living beings by fiat (or, at least, has systematically chosen to ignore them in favor of its own goals) and, thus, cannot be taken seriously. To put it perhaps too poetically, Darwinism denies us our ability to view great human beings as works of art.³⁰

Though the positive connection between Nietzsche and Darwin will not be pursued here in great detail, looking at the relationship between them in this way lets us better understand how Nietzsche could borrow from Darwin without embroiling himself in internal contradiction [after all, he speaks at one point of “the terrible consistency of Darwinism, which, incidentally, I regard as true” (Nietzsche 2009, 131)]. For the problem does not lie, *per se*, within any single one of Darwin’s ideas. Natural selection may be the cause of speciation, variation may exist, and species may be related by common descent. The problem lies with the metaphysical view of life that Darwin’s theory tends to imply; after all, Nietzsche argues, “an essentially mechanistic world would be an essentially *meaningless* world!” (Nietzsche 2001, 239). Mechanism (of which, in Nietzsche’s view, Darwinism is a species) lacks all beauty, all aesthetic character, and thus deprives the world of all its most important meaning.

³⁰ Thanks to Fred Rush for this point.

Objections and Connections

One objection can immediately be raised against the interpretation I present here. Those who focus on the development of Nietzsche's views over time have a tendency to read him as having repudiated the views of *The Birth of Tragedy* in his later works. To some extent, I believe they are correct.³¹ But I have no need to enter into this difficult and contentious debate in Nietzschean interpretation here. I am not arguing that all of Nietzsche's complaints against Darwin are formulated in terms of the distinction between the Apollonian and the Dionysian, nor even that Nietzsche himself was consciously considering this dichotomy as he attacked Darwin in, say, the *Genealogy of Morality*. I am arguing, on the contrary, merely that since Nietzsche's criticisms of Darwin, along with the rest of natural science, began early in his career, there remains a piece of all these critiques that can best be understood in terms of this distinction. Take, for example, the quotation above from *Zarathustra* on the inanity of mechanistic scientific pursuit. Whether or not such a parody was formulated with the distinction between the Apollonian and the Dionysian in mind, an understanding of what Nietzsche is driving at can clearly be obtained by considering this as a critique of the over-Apollonian nature of scientific theorizing. No vocabulary provides us a better summary of this flaw in mechanistic science than Nietzsche's own, first developed in the context of the *Birth of Tragedy*.

Finally, I want to focus on something that is less an objection to than a peculiarity of my reading. Broad, philosophical (or theological) critiques of Darwinism, from Darwin's day to the present, have a tendency to take issue with the lack of purpose in Darwinian evolution. Evolution is powered by randomness, by chance mutations that lack the direction and guidance we should expect a divine, all-knowing creator (or intrinsic vital force, or global idea of progress, etc.) to execute in the creation of man. Evolution, in a word, is too chaotic.

But this is clearly not Nietzsche's point at all. Nietzsche has, as far as I know, the peculiar distinction of standing alone in opposition to both Darwin and such responses to Darwin. Evolution is not too random; rather, it is not random enough. It denies the crucial, even constitutive role played by the impulsive, aggressive forces in living things. Darwin's theory is false because it is too intellectual, because it searches for rules,

³¹ Quite a few authors, however, do argue for a substantial continuity of the Apollonian/Dionysian distinction throughout Nietzsche's career. See, for example, Dennis Sweet (1999), Peter Durno Murray (1999) for morality, or James Porter (1995; 2000), who argues that "Nietzsche's first book [BT] does not mark a rupture with his prior philological undertakings but is in fact continuous with them and with his later writings as well" (2000, 3).

regulations, and uniformity in a realm where none of these are to be found and, moreover, where they should not be found. Perhaps here we can see best why Darwinism is an Apollonian theory – it is an idealization, meant to guard us from the harsh reality of the underlying chaos that Nietzsche took to be present at the heart of the biological world.

To perceive life in this way is not only to make a biological mistake, which Nietzsche clearly believed was being made, at least in the context of the will to power but, further and perhaps even more importantly, to make a cultural or even an aesthetic mistake. Such a failure of understanding in the truly most basic areas of existence would render us unable to appreciate that which provides beauty to the world. Aesthetic experience, like all experience, can be explained naturalistically, but it cannot be reduced to Darwinism.

Conclusions

As with practically every philosophical issue with which he dealt, Nietzsche was by no means single-minded in his assault on the “stuffy air of English overpopulation” (Nietzsche 2001, 208) expressed by Darwin’s theory. But interpreted in the light of Nietzsche’s early works on the distinction between the Apollonian and the Dionysian, we see a profoundly aesthetic thread running throughout these critiques. If we read Nietzsche in part as rejecting Darwin’s denial of the Dionysian core of life – the denial of the aesthetic component to the world which alone can make existence justified, even bearable – then we have a deep, fundamental, philosophical disagreement that brings us to the heart of both Nietzsche and Darwin.

It is now time to attempt to make good on my two-fold claim in the introduction – that we can make such a critique interesting both to Nietzsche scholarship and to Darwin scholarship. As regards Nietzsche, it is rare to see his biology, which is clearly so fundamental a part of his philosophical program, connected to his views on aesthetics, art, music, and in particular his distinction between the Apollonian and the Dionysian.

But how are we to evaluate this critique on the Darwinian side? It is, I think, a different kind of criticism of the post-Darwinian view of life. But has Nietzsche latched onto a genuine weakness in Darwinian theory? This depends on how we reinterpret Nietzsche’s question. It is clear that no neo-Darwinian theorist would claim that there exist truly spontaneous forces of the sort that dominated Nietzsche’s view of life, but I want to close by drawing out several readings of Nietzsche’s

critique that bring him into contact with contemporary problems in the philosophy of biology.

First, on a most simplistic view, we could see Nietzsche as arguing for the impossibility of an evolutionary explanation of the human aesthetic sense. Nietzsche clearly thought that we could obtain some kind of a connection to external aesthetic values, and that this connection could not be explained by biological evolution. The evolutionary explanation of our sense of the aesthetic is a project that has recently received a bit of interest in the popular literature³² and has received academic attention mostly in concert with the questions below.

More fruitfully, I think, we could try to interpret Nietzsche as spotting a larger concern. Aesthetic sense is, broadly speaking, a cultural phenomenon, a fact which Nietzsche surely recognized, given the profound importance he placed on the culture of ancient Greece. What does Darwin's theory, Nietzsche might then ask, have to say about the evolution of culture? And there is evidence that he had precisely this in mind. He argues in *HA* that "the celebrated struggle for existence" cannot possibly account for cultural evolution, because the evolution of culture requires, first, cultural cohesion, and, second, the "possibility of the attainment of higher goals through occurrence of *degenerate* natures and, as a consequence of them, partial weakenings and injurings of the stabilizing force" (Nietzsche 1996, 107, emphasis added). Education (and hence, cultural advancement), he claims, consists not in the increase of fitness, but the intentional damaging of individuals. Most revealingly, in the *Nachlass*, while talking disparagingly of current natural science, he claims that "higher physiology will recognize artistic forces already in our evolution, and not only in that of man, but also of animals: it will say that the *artistic* too begins with the *organic*" (Nietzsche 2009, 110). Such language should sound perfectly familiar to those involved in contemporary philosophy of biology. Positions on the evolutionary development of culture range from culture as a driving force in evolution³³ or a target of evolutionary explanations,³⁴ to the complete rejection of all biological explanations of higher-order cultural features.³⁵ If this is our reading of Nietzsche, he is rather presciently seeing a facet of evolution that would only be addressed in the second half of the twentieth century – the construction of what we might call new and detailed evolutionary

³² For example, Denis Dutton's recent work on the evolution of the appreciation of art (Dutton 2008), or Brian Boyd's work on the evolutionary origin of stories (Boyd 2009).

³³ Richerson and Boyd (2004) have worked substantially on such a position.

³⁴ Two of Jablonka and Lamb's (2005) "four dimensions" of evolution have cultural significance.

³⁵ Such criticisms are fairly rare today; many accuse evolutionary accounts of culture of a pernicious sort of adaptationism (in the classic sense of Gould and Lewontin [1979]).

alternatives to the spontaneous, aesthetic forces that Nietzsche found so important to human experience.

As a criticism of evolution, I think, we can see that Nietzsche's view still has fundamental flaws. However we read the problem he presents, it surely does not point out a feature of life that evolutionary theory is incapable of addressing. Nevertheless, it deserves to be neither neglected nor ignored. Properly and carefully understood, it merits a firm place among the canon of philosophical responses to the Darwinian worldview.

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