

Optimistic Naturalism: Scientific Advancement and the Meaning of Life

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Abstract

Naturalist theories of the meaning of life are sometimes criticised for not setting the bar high enough for what counts as a meaningful life. Tolstoy's version of this criticism is that Naturalist theories do not describe really meaningful lives because they do not require that we connect our finite lives with the infinite. Another criticism of Naturalist theories is that they cannot adequately resolve the Absurd—the vast difference between how meaningful our actions and lives appear from subjective and objective viewpoints. This paper proposes a novel view, Optimistic Naturalism, in order to refute these criticisms. Optimistic Naturalism is the view that scientific and technological advancement might allow us to lead Truly Meaningful lives in a purely physical universe by enabling our actions, which we find meaningful partly because they might have particular infinite consequences, to actually have infinite consequences for life. The central tenets of Optimistic Naturalism are Infinite Consequence and Scientific Optimism. By explaining how the correct connection of the subjective and objective meaning of actions can result in True Meaning, Infinite Consequence provides a theoretical blueprint for resolving the Absurd. Scientific Optimism provides reason to think that it is possible to follow that blueprint in a purely physical universe. Therefore, when taken together, these two principles provide relatively plausible reasons to think that at least one kind of Naturalist theory can connect the finite with the infinite in a meaningful way and resolve the Absurd.

Keywords: the meaning of life, scientific advancement, Optimistic Naturalism, Infinite Consequence, Scientific Optimism, the Absurd, Tolstoy, True Meaning

1. Introduction

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This paper proposes a novel view, Optimistic Naturalism, in order to refute two criticisms of Naturalist theories of the meaning of life. Optimistic Naturalism, the structure of the meaning of life debate, and the criticisms Optimistic Naturalism is designed to refute are outlined in this introductory section.

1.1. Optimistic Naturalism and the meaning of life debate

Optimistic Naturalism is the view that scientific and technological advancement might allow us to lead truly meaningful lives in a purely physical universe by enabling our actions, which we find meaningful partly because they might have particular infinite consequences, to actually have infinite consequences for life. Optimistic Naturalism is based on the following two principles:

Infinite Consequence: performing an action that has infinite consequences for life is sufficient to confer True Meaning on the life of the actor, if the actor finds those particular infinite consequences to be subjectively meaningful (in part) because they are infinite.

Scientific Optimism: continual scientific and technological advancement might allow our actions to have infinite consequences for life in a purely physical universe.

In the analytic debate on the meaning of life, theories are predominantly categorised according to two tripartite taxonomies: The first regards what is required for the possibility of a meaningful life and the second concerns what determines whether a life is meaningful and how we can know. The first taxonomy includes these three categories: Supernaturalism about the meaning of life (henceforth Supernaturalism)—that more than a purely physical universe is required for life to be meaningful; Naturalism about the meaning of life (henceforth Naturalism)—meaningful lives are possible in a purely physical universe; and Nihilism about the meaning of life (henceforth Nihilism)—that life cannot be meaningful.² Since Optimistic Naturalism can explain how a life might become Truly Meaningful in a purely physical universe (i.e. without recourse to supernatural entities), it is a type of Naturalism. Note also that Optimistic Naturalism sets a higher bar for meaning than the default version of Naturalism, which only requires meaning, not

² For more background on the debate and the established positions, see any of these useful reviews: (Metz 2001; 2002; 2007; 2008).

True Meaning (discussed below). Furthermore, Optimistic Naturalism's detailed account of how we can meaningfully connect our finite lives with the infinite also stands it apart from the extant Naturalist theories of the meaning of life (henceforth Naturalist theories).³

The second common taxonomy in the meaning of life debate includes these three categories: Objectivism about the meaning of life (henceforth Objectivism); Subjectivism about the meaning of life (henceforth Subjectivism); and Subjective-Objective Hybridism about the meaning of life (henceforth Subjective-Objective Hybridism). According to Objectivist theories of the meaning of life (henceforth Objectivist theories), the meaningfulness of an individual's life is determined by whether the life satisfies certain criteria (that are not set by that individual). This meaning-determining role played by the non-subjective criteria in Objectivist theories makes it possible for an omniscient observer to inform someone whether he or she is correct about how meaningful his or her life is. According to Subjectivist theories of the meaning of life (henceforth Subjectivist theories), the meaningfulness of an individual's life is determined by the subjective opinion of that individual. According to Subjective-Objective Hybrid theories of the meaning of life (henceforth Subjective-Objective Hybrid theories), the meaningfulness of an individual's life is determined by the coincidence of his or her life satisfying the objective criteria with that individual finding his or her life meaningful because it satisfies those objective criteria; as eloquently captured by the phrase "meaning arises when subjective attraction meets objective attractiveness" (Wolf 1997, p. 211). For example, a Subjectivist theory might make the meaningfulness of a life depend on the extent to which a person felt that their most important meaning-conferring desires are satisfied. A similar Objectivist theory might make the meaningfulness of a person's life depend on the extent to which an objective list of 'ideal' meaning-conferring desires are satisfied for that person, regardless of if he or she actually has those desires. A corresponding Subjective-Objective Hybrid theory might dictate that the meaningfulness of a person's life is proportional to the amount of satisfied desires from the 'ideal' list that he or she also happens to consider meaningful.

Optimistic Naturalism is a Subjective-Objective Hybrid theory because it requires that actions satisfy both subjective and objective criteria in the right way in order to confer the important kind of meaning on a life. The subjective and objective criteria are that the actor must

³ The idea that it is in principle possible to meaningfully connect with the infinite in a natural universe has been hinted at in the literature (e.g. Metz 2003, p. 171), but has never been discussed in any detail.

(subjectively) believe that performing a particular action is meaningful (in part) because it might have particular infinite consequences and that the action must (objectively) have those infinite consequences.

Optimistic Naturalism is also a theory of True Meaning. For the purposes of this paper, a life is Truly Meaningful if contains at least one action that is subjectively and objectively meaningful in a way that resolves the Absurd. The Absurd is the vast difference between how meaningful our actions and lives appear from subjective and objective viewpoints. The subjective viewpoint is the first-person one we usually occupy when experiencing and evaluating our own life and actions. The objective viewpoint is a third-person viewpoint, or the universe's-eye view—an external, non-subjective, view about the life and actions in question. Unless stated otherwise, subjective and objective meaning henceforth refer to meaning attributed to a life from the subjective and objective viewpoints (respectively). This use of Truly Meaningful is defended in Section 2.2.

Assuming that a Truly Meaningful life can be defined as one that includes the correct alignment of the subjective and objective meaning derived from certain actions, as argued for below, then Optimistic Naturalism provides a practically realisable method for leading a Truly Meaningful life. Theories of what a Truly Meaningful life is, defined in this way, are important because they provide a useful way to resolve the Absurd; they help us to recognise which of our actions are subjectively, objectively, and Truly Meaningful, and the relative significance of these different types of meaning. According to Optimistic Naturalism then, if someone who believes that at least one of her actions is meaningful (in part) because of the particular infinite consequences it might have for life in a purely physical universe, and it does have those consequences, then her life can be considered Truly Meaningful.

1.2. The criticisms Optimistic Naturalism is intended to refute

A common criticism of Naturalist theories is that they offer less meaning than Supernaturalist theories about the meaning of life (henceforth Supernaturalist theories). Tolstoy was amongst the first to articulate a version of this criticism. He identified the inability of Naturalist theories to offer any kind of meaningful connection with the infinite.⁴ A related criticism is that Naturalist

⁴ “I understand that... the answer given by rational knowledge was only an indication that the answer might be got if the question were... the question of the relation of the finite to the infinite. I also understand that, no matter how

theories cannot adequately resolve the Absurd—the vast difference between how meaningful our actions and lives appear from subjective and objective viewpoints.

In addition to explaining and arguing for the plausibility of Optimistic Naturalism, and its central principles, Infinite Consequence and Scientific Optimism, this paper has two main aims:

- 1) To argue that Optimistic Naturalism is a counterexample to Tolstoy's criticism on the basis that it *does* explain how to meaningfully connect the finite with the infinite in a purely physical universe.
- 2) To argue that Optimistic Naturalism also provides a way to resolve the tension of the Absurd by explaining how to meaningfully connect the subjective and objective meaning of certain actions.

With Optimistic Naturalism briefly explained and the target criticisms identified, this paper now turns to additional background on these criticisms and on why the term True Meaning is useful for addressing these criticisms (Section 2). Optimistic Naturalism's central principles are then explained and argued for in Section 3 (Infinite Consequence) and Section 4 (Scientific Optimism). How Optimistic Naturalism refutes the two criticisms of Naturalist theories is then discussed in Section 5. Following this, Section 6 discusses the implications of Optimistic Naturalism, and Section 7 summarises the main points.

2. The target criticisms of Naturalism and the role of True Meaning

2.1. The target criticisms of Naturalism

Tolstoy's criticism of Naturalism arose because he began questioning the importance of his actions and the very meaning of his life (Tolstoy 2000). Tolstoy was a dedicated Naturalist about the meaning of life (henceforth Naturalist) who became paralysed by what Nagel (1986) and others have referred to as 'the Absurd'—the vast difference between how meaningful our actions and lives appear from the subjective and objective viewpoints. Tolstoy (initially) thought that his writing and his effects on the people around him were making his life meaningful. However, subsequent recognition of the Absurd led Tolstoy to reject this initial subjective view; he came to believe that all Naturalist views entailed that his life, and all the potentially meaningful products

irrational and monstrous the answers might be that faith gave, they had this advantage that they introduced into each answer the relation of the finite to the infinite." (Tolstoy 2000, p. 17).

of his actions, would eventually be destroyed.⁵ This led Tolstoy to conclude that Naturalist theories could not provide any meaningful answers to the question of the meaning of life.⁶ Specifically, Tolstoy was looking for a theory of the meaning of life that acknowledged the importance of connecting with the infinite in a meaningful way, something none of the extant Naturalist theories offered.⁷ It is later argued that Optimistic Naturalism would have satisfied Tolstoy in this regard.

In the end, Tolstoy's recognition of the Absurd and his disappointment with Naturalist theories led him to reject Naturalism and adopt a Supernaturalist theory; he became a Christian of sorts.⁸ Indeed, contemplation of the Absurd could be a major cause of dissatisfaction with Naturalist theories. Contemplation of the Absurd often involves the act of mentally stepping back from our lives, which allows us to question our actions, motives and plans. It is supposed that from this objective viewpoint we can better evaluate how meaningful our actions and our lives are. From this once-removed position, we are meant to be able to see obvious truths about what has meaning. We should see, for example, that our watching every episode of *The Simpsons* ten times in reverse in order to enter the Guinness Book of World Records is not as meaningful as lovingly raising a family. But, we can step back again. From this twice-removed viewpoint, we can see that our subjective standards of evaluation are still being used to decide which actions are meaning-conferring. It could, however, be argued that every reasonable person would agree that lovingly raising a family is a meaningful activity.⁹ Even if this claim about what other people would believe is correct, it is not enough to make that action objectively meaningful. By taking another step back, we can see that the evaluative measure used is still the subjective (and

⁵ "All my affairs, no matter what they might be, would sooner or later be forgotten, and I myself should not exist." (Tolstoy 2000, p. 13). "You are an accidentally cohering globule of something. The globule is fermenting. This fermentation the globule calls its life. The globule falls to pieces." (Tolstoy 2000, p. 15).

⁶ "My situation was a terrible one. I knew that I should not find anything on the path of rational knowledge but the negation of life, and there, in faith, nothing but the negation of reason, which was still more impossible than the negation of life." (Tolstoy 2000, p. 16). "I sought in all the sciences, but far from finding what I wanted, became convinced that all who like myself had sought in knowledge for the meaning of life had found nothing." (Tolstoy 1940, p. 23).

⁷ While he was dealing with his dilemma, Tolstoy's conception of connecting with the infinite in a meaningful way involved living forever or creating something that persists infinitely (Flew 1963, p. 113). However, Tolstoy's conception later changed to be explicitly supernatural; "What real result will come of my life?—Eternal torment or eternal bliss. What meaning has life that death does not destroy?—Union with the eternal God: heaven." (Tolstoy 1940, p. 50). In his more recent writings, such as *What I Believe*, Tolstoy stopped discussing the infinite despite still discussing the meaning of life (Flew 1963, p. 117).

⁸ Tolstoy often used Christian terminology in his later works of non-fiction and studied the Gospels extensively, but he also studied several other religions (Flew 1963, p. 116). See also note 6 above.

⁹ Darwall argues for a theory that operates along these lines (1983, ch. 11-12).

therefore contingent) beliefs of humans, albeit in aggregated form. An omniscient being might be able to point out a bias all humans are suffering from, which makes us all believe that a particular action is meaning-conferring.

When we continue stepping further and further back from our subjective viewpoint in this way, two notions become salient. The first is that it is not clear our actions have the meaning we attribute to them. The second is that, even if our actions are meaningful, they have a finite amount of meaning. Evaluating a finite amount of meaning from a great distance (from the far side of the universe, say) makes it seem vanishingly small—virtually meaningless from a distant objective viewpoint. Consideration of these two points can put one deep in the grip of the absurdity of natural human existence. Being in the grip of the Absurd in this way likely encourages many would-be Naturalists to believe that subjective meaning is not enough, which, in turn, could encourage them to search for objective meaning and adopt Supernaturalism (if they can stomach supernatural beliefs) or to give up and opt for Nihilism (Boylan 2008; Metz 2008). It is argued later that Optimistic Naturalism offers another alternative for people in the grip of the Absurd; resolving it by explaining how our subjectively meaningful actions might be meaningful to us for the right reasons, even from a distant objective viewpoint.

2.2. The role of True Meaning

According to Subjectivism, how meaningful an action is depends on the mental states of the individual. As a result, Subjectivism permits practically any action to be seen as meaningful to someone. Some Subjectivist theories require that actions must comply with a person's carefully considered or innermost desires to confer meaning upon that person's life (Metz 2008). But even theories with these restrictions sanction avid-*enough* marble collectors to meaningfully use their time sifting through second-hand detritus at garage sales in search of a long-forgotten and unappreciated Ruby Red Mica Snowflake.¹⁰ Subjectivist theories are often criticised for allowing such ostensibly inane actions to confer meaning. An Objectivist about the meaning of life (henceforth Objectivist) could argue that avid marble collectors would recognise their hobby as absurdly meaningless if they could examine it from an objective viewpoint. But many people who spend their whole lives absorbed in seemingly fruitless hobbies admit that their hobbies seem objectively meaningless and nonetheless continue to find them subjectively meaningful.

¹⁰ A rare kind of marble.

Indeed, Subjectivists see Objectivists' inflexible paternalism about what is meaningful to be a weakness of Objectivism.

The True Meaning approach to evaluating the meaning of subjectively-but-not-objectively-meaningful actions respects the differences between Subjectivism, Objectivism, and Subjective-Objective Hybridism, and makes better sense of them. On the True Meaning approach, if an action seems meaningful to the corresponding actor, no matter how objectively meaningless it might be, then it should be considered to confer subjective meaning on a life. Such an approach accurately captures the meaning of Subjectivism and stays neutral about the relative value of subjective meaning (since such value should be set by each individual). However, in acknowledgement that objective meaning is also important, subjectively meaningful actions should only be considered to confer True Meaning on a life if they are also objectively meaningful and if the subjective and objective meanings are aligned in a way that resolves the Absurd.

True Meaning is an evaluative label in the sense that it implies that the correct alignment of subjective and objective meaning captured by Subjective-Objective Hybridism is more valuable than subjective or objective meaning alone, and even of 'incorrectly' aligned objective and subjective value. Assigning this higher value is perfectly reasonable. Consider that someone whose life is only subjectively meaningful, might rightfully worry if her actions are actually meaningful or if they merely seem that way from her subjective viewpoint. This worry could be allayed by a positive evaluation of her actions from an objective viewpoint, which would mean that the person might have a Truly Meaningful life.¹¹ True Meaning is an improvement on subjective meaning alone (at least) because the addition of objective meaning adds a valuable aspect to the life. Similarly, True Meaning is plausibly an improvement on just objective meaning because someone whose life was objectively meaningful, but did not believe that their life was meaningful, seems to lack something that would make his life more meaningful.

Even someone whose life was both subjectively and objectively meaningful might not have a Truly Meaningful life. Imagine a person whose subjective meaning came from objectively meaningless actions (e.g., marble collecting), and who was disgusted by his actions that were objectively meaningful (e.g. creating inspiring art). This person would not be sure that the meaning he experienced from the subjective viewpoint was *actually* meaningful and he would

¹¹ But if such an objective evaluation is negative, then the Absurd arises.

experience nothing meaningful about his objectively meaningful actions. It seems that this person's life would be more meaningful if his subjectively meaningful actions were also objectively meaningful. Furthermore, if the subjective meaning this person found in his actions was for the same reasons that the actions were objectively meaningful, then this correct alignment of subjective and objective meaning seems to make his life even more meaningful. If the objective and subjective meaning of this person's actions were aligned in this way, and the person was aware that his actions were subjectively and objectively meaningful for the same reasons, then he would get to enjoy his objectively meaningful actions and be free from the suffering that Tolstoy experienced—doubting the True Meaning of his subjectively meaningful actions.

The concept of a Truly Meaningful life, as defined here, is a useful evaluative label because it allows us to acknowledge that the correct alignment of subjective and objective meaning is much more desirable than the alternatives mentioned above.¹² True Meaning is also useful as a non-evaluative label, since its corresponding content identifies the kind of meaning required to resolve the problem of the Absurd. Truly Meaningful actions are those that resolve the tension between the different perspectives characteristic of the Absurd by identifying subjectively meaningful actions that can withstand scrutiny from the objective viewpoint. The concept of True Meaning, therefore, is useful because, when used in conjunction with both subjective and objective meaning, it makes it clear what kind of meaning is being discussed and what purposes it fulfils.

3. Infinite Consequence

Infinite Consequence is the view that performing an action that has infinite consequences for life is sufficient to confer True Meaning on the life of the actor, if the actor finds those particular infinite consequences to be subjectively meaningful (in part) because they are infinite. Within this conception of Infinite Consequence, there are three important components. The first concerns the necessary criterion for actions to confer subjective meaning, the second concerns a sufficient criterion for actions to confer objective meaning, and the third concerns the sufficient criteria for actions to confer True Meaning (the alignment of subjective and objective meaning

¹² Readers who are not convinced that True Meaning is more valuable than subjective or objective meaning alone, or together but not properly aligned, should at least acknowledge that anyone in the grip of the Absurd will find True Meaning more valuable.

that resolves the Absurd). Each of these components of Infinite Consequence is discussed below, followed by some additional notes and examples.

3.1. Subjective meaning

Using the distinctions from above, subjective meaning is the meaning an action or a life is thought to have from an individual's own perspective. So, an action confers subjective meaning on a person's life if that person believes it to do so—if that person finds it meaningful. In line with this, the necessary criterion for an action to confer subjective meaning set out by Infinite Consequence is merely that the actor must find that action meaningful. There are many reasons why someone might think that one of their actions confers subjective meaning on their life, but these reasons are not judged when assessing subjective meaning; it doesn't matter *why* someone finds their actions or life meaningful, it only matters *that* they find them meaningful.

3.2. Objective meaning

Objective meaning is the meaning that an action or life has from a third-person viewpoint, or the universe's-eye view—an external, non-subjective, view about the life and actions in question. This essentially means that actions and lives are objectively meaningful if they satisfy the 'correct' criteria, which are not set (but may be endorsed) by the individual whose life is in question.¹³

The objective component of Infinite Consequence stipulates that an action's having infinite consequences for life is sufficient to make that action objectively meaningful and thereby confer objective meaning on the life of the actor. As mentioned, many subjectively meaningful actions seem meaningless when examined from the objective viewpoint, creating an absurd asymmetry between how meaningful our actions should seem objectively and how they actually do seem to us subjectively. Indeed, the further we step back from the subjective viewpoint, the more meaningless our subjectively meaningful actions become. No matter how far we step back

¹³ Satisfying the 'correct' criteria is important because satisfying some incorrect set of criteria will provide only the appearance of objective meaning, not any actual objective meaning. It's not clear how anyone could know exactly what the 'correct' criteria for objective meaning are, so, in line with current philosophical practise, theories about what confers objective meaning must just be plausible when viewed alongside other prominent theories with the same aim.

from our subjective viewpoint, however, infinite consequences do not vanish into meaninglessness.

Imagine a philosopher, who desired fame and fortune through her philosophy. When assessed from the objective viewpoint, her goals seem to be idiosyncratic and tainted by subjective values in a way that makes it hard to deem them objectively meaningful. Many of the extant Naturalist Objectivist theories of the meaning of life seem to have been developed from a position only one step back from the subjective viewpoint—a *near* objective viewpoint. Consider the following claims about which kinds of actions confer objective meaning on a life: actions that maximise friendship, beauty, knowledge, and some other goods (Railton 1984); actions that promote our rational nature (Hurka 1993); actions that improve the wellbeing of sentient creatures (Singer 1996, ch. 4); and actions that lead us to overcome the fundamental challenges of the time (Dworkin 2000, ch. 6). While some of these claims need more detail to be usefully action-guiding (e.g. who decides which challenges are fundamental?), others provide this detail, clearly stipulating that certain actions, such as promoting friendship and beauty, are objectively meaningful. But, by taking more steps back, to a *distant* objective viewpoint, these more-detailed Naturalist Objectivist theories appear to be strongly influenced by subjective values. Aside from a concern about who decides what is beautiful and what is not, we might also ask why promoting beauty confers objective meaning on a life at all (especially if the promoted beauty is all destroyed soon afterwards as Tolstoy expected of his writings). It seems that most actions that are thought to confer objective meaning on a life would be better understood as conferring collectively or aggregately subjective meaning—a transient kind of meaning that would not have satisfied Tolstoy.

Indeed, many of the goals that we commonly strive for will seem unimportant from a distant objective standpoint, their professed significance ineluctably stained with subjective values. As we continue to step back, the specific goals and subjective values drop away, but the significance of the size of an action's consequences remains. After a few more steps, nearly all of the consequences become vanishing small, all of them except for the infinite consequences. No matter how far we step back, and no matter how distant the objective viewpoint is, infinite consequences will never vanish into insignificance. When all the values and finite consequences have disappeared into the distance, actions with infinite consequences remain, ineluctably influencing future events.

But what significance would those consequences have if there were no life in the universe? Since Optimistic Naturalism is a theory of the meaning of life, it seems sensible to limit objective meaning to infinite consequences *for life*. This means that actions with particular infinite consequences for humans, other animals, sentient or intelligent life, or life in general, *but not* inanimate objects, have objective meaning.¹⁴ Imagine that someone performs an action with the effect of making the universe completely devoid of movement or change for infinity. While this action would affect life in a very important way at one point, it doesn't continue to affect life for infinity. From a distant objective viewpoint, this action could be seen, but there is no, and never will be any, life to see it. This action leaves a big mark on the universe, but one that cannot have any significance to anyone or any living thing, since it has removed all possibility for movement, change, life, or meaning. An action having infinite consequences *for life* is objectively meaningful because it leaves a permanent mark on the universe that *will* always be significant, to something significant, no matter how far we step back and no matter what values are subscribed to—this is what Tolstoy craved.

So, especially when considered in light of the low bar set by the other Naturalist Objectivist views of the meaning of life, Infinite Consequence's stipulation that an action's having infinite consequences for life is sufficient to make that action objectively meaningful, and thereby confer objective meaning on the life of the actor, is plausible.¹⁵

3.3 True Meaning

As defined above, an action is Truly Meaningful if it is both subjectively and objectively meaningful in a way that resolves the Absurd. In other words, an action is Truly Meaningful if we can find it subjectively meaningful for the right reasons—reasons that withstand scrutiny from a distant objective viewpoint—and if it has infinite consequences for life. When describing the criterion for subjective meaning above, it was noted that the particular reasons for finding an action subjectively meaningful are not important. While that is true for subjective meaning in general, it is not true of the types of subjective meaning that are a component of True Meaning. To resolve the Absurd without abandoning subjective or objective meaning entirely, the great

¹⁴ A more conservative version of Infinite Consequence might require that the consequences would have to be for humans, in order to confer objective meaning on a life, but this version seems to anthropocentrically take a human's-eye view, rather than a universe's-eye view as the objective viewpoint.

¹⁵ Note that Infinite Consequence only sets out a sufficient criterion for objective meaning, not a necessary one, which would be a much more difficult claim to defend.

personal significance of some of our actions needs to be externally validated. This can be achieved by discovering that our reasons for finding an action subjectively meaningful overlap with objective reasons for that action being meaningful. This overlap would enable anyone in the grip of the Absurd to identify at least some cases in which the great significance they place on their actions is justified from a distant objective viewpoint, a realisation which would have cured Tolstoy's paralysis without the need for belief in supernatural entities. The True Meaning component of Infinite Consequence provides an account of what reasons for believing an action to be subjectively meaningful connect with Infinite Consequence's objective meaning component in the right way to achieve True Meaning.

The True Meaning component of Infinite Consequence stipulates that, in order for the subjective meaning of an action to connect with Infinite Consequence's objective meaning component in the right way, the action must be found subjectively meaningful for reasons that include the action potentially having some particular infinite consequences for life. In other words, subjective meaning must be found in an action's having some particular infinite consequences *for the reason* that it has those infinite consequences. Imagine that a romantic man finds his writing a love note to his betrothed subjectively meaningful. The romantic man's betrothed then publishes the love note, which is so good that it influences romantic literature for infinity and thereby confers objective meaning on his life. Unless the man finds it subjectively meaningful that his love note influences romantic literature for infinity, he might still find it impossible to reconcile the subjective meaning of his actions with the meaning they have from a distant objective viewpoint.¹⁶

So, the key to the True Meaning component of Infinite Consequence is that an action must be found subjectively meaningful (at least in part) because it might have an infinite amount of some particular consequences for life, and not just some finite amount of those particular consequences. Finding subjective meaning in the idea that one of our actions might have some

¹⁶ While Infinite Consequence stipulates that a reason for an action having objective meaning is its having infinite consequences for life, it should be noted many kinds of infinite consequences for life are very unlikely to be found subjectively meaningful by anyone. In contrast to the objective viewpoint, from which personal values are not supposed to play a role, the subjective viewpoint is necessarily value-laden. As a result, individuals are much more likely to find only particular kinds of infinite consequences for life to be subjectively meaningful. For example, bringing enjoyment or knowledge to an infinite number of people is likely to be considered meaningful by nearly everyone, but causing minute changes in atmospheric pressure on an inhabited planet for infinity or accidentally unleashing a virus that impairs humankind for infinity are unlikely to be considered meaningful by many, if any, people.

particular infinite consequences for life is perfectly understandable. Those who consider their actions to be subjectively meaningful because they achieve a particular finite goal should, generally speaking, find their actions even more meaningful if they achieve that particular goal infinitely. Imagine an aid worker was finding his life more subjectively meaningful by helping an increasing number of needy people. If the aid worker can help 10,000 needy people instead of 100, then he would likely deem his actions to be more subjectively meaningful. And, if the aid worker creates a charity that seems as if it might help thousands of needy people every year for infinity, this would likely seem even more meaningful to him.

3.4 Notes and examples

So, taken together, the three components of Infinite Consequence stipulate that performing an action that has infinite consequences for life is sufficient to confer True Meaning on a life, if the actor finds those particular infinite consequences to be subjectively meaningful (in part) because they are infinite. But what does it really mean for our actions to have infinite consequences for life? In terms of the extent of the infinite consequences, the particular consequences need not affect all life or be of infinite value at any moment of time, such as by making someone infinitely happy. But the consequences do need to continue to affect some form of life as time goes by. This could take the form of one continuous consequence or many sequential instances of a particular consequence.¹⁷

With this description of infinite consequences in mind, we can see that the following actions can confer True Meaning because of their infinite consequences for life and their appropriate accompanying beliefs. Imagine a musician who considers it a meaningful goal that his music influences music-appreciating life infinitely. Because the musician believes that his music is important, he gains subjective meaning from performing and recording it. He also gains subjective meaning from his music-making because he believes that his music might bring

¹⁷ Note that living for infinity does not entail that your life is classified as Truly Meaningful, according to the principle of Infinite Consequence. Living for infinity would permit performing an infinite amount of actions, but it's possible that none of those particular actions would have True-Meaning-conferring infinite consequences for life. For Infinite Consequence, a life must contain at least one Truly Meaningful action to be considered Truly Meaningful. So, while living for infinity does seem to increase the chances of performing a truly meaningful action, it does not guarantee it.

pleasure to people for infinity. If his music does in fact bring pleasure to people for infinity, then he will also gain objective and True Meaning from these actions.¹⁸

Imagine also a scientist who devises a new technology that allows us to avoid the supernova of the sun—a disaster that would otherwise have destroyed all life on Earth. All of the scientist's forebears, many of the people that she interacted with during her life, tax payers who helped to fund her research institute, other past and present scientists whose findings were relevant for her learning and her life-saving discovery, and many other tangentially related people have all played some degree of causal role in ensuring the ongoing existence of humankind. Performing an action with a non-trivial causal role in life persisting for an infinite period of time is objectively meaningful according to Infinite Consequence. However, only those like the scientist, who performed her actions with the belief that they might enable life to persist for infinity and that this prospect makes her life more subjectively meaningful, conferred True Meaning on their lives.

Both of these examples of how to achieve a Truly Meaningful life require that life (or music-appreciating life for the musician) persists for infinity. If the universe eventually becomes permanently inhospitable due to heat death sometime after the scientist helped us to avoid the supernova of the sun, life would still fail to persist for infinity, and so both the musician and the scientist would fail to achieve their desired infinite consequences. Since this failure would happen after their deaths, it would not affect the subjective meaning that they experienced during their life. It would mean, however, that their actions were never objectively meaningful and thereby never Truly Meaningful. The important issue of whether it is possible for the universe to support life for infinity is discussed in the next section.

4. Scientific Optimism

¹⁸ Ultimately, the influence the musician's work will have on others is something that he cannot control. All the musician can do is attempt to make his work as good, and as easily accessible, as possible. Furthermore, even if his music is popular throughout his lifetime, the musician will never be able to really know if his music will be admired by future listeners *for infinity*. These two elements—striving to achieve some kind of effect on something outside of himself and not being able to know for sure if he has succeeded—seem apt for a truly meaningful life. At least they prevent two potential problems. First, affecting others is not always directly under our control, adding some appropriate difficulty and uncertainty to the task of achieving True Meaning in life. Second, the fact that we cannot know if any of our actions will have the right kind of consequences *for infinity* means that we will never be in the potentially boring position, which Taylor (1981) worries about, of knowing that we have already made our lives Truly Meaningful and trying to work out what to do next. Indeed, lack of certainty about whether we have achieved True Meaning in our life is likely to motivate us to keep on striving to perform meaningful actions.

The principle of Scientific Optimism holds that continual scientific and technological advancement might allow our actions to have infinite consequences for life in a purely physical universe. In light of the discussion in the previous section, the most important facet of adherence to Scientific Optimism is the belief that continual scientific and technological advancement might ensure that the universe can support life for infinity. Belief in Scientific Optimism does not require belief in any specific account of how the universe will be able to support life for infinity; it merely requires the belief that continual scientific and technological advancement might make it possible *somehow*.

Scientific Optimism might seem overly optimistic because of its stipulation that continual scientific and technological advancements might enable the universe to support life for infinity. Readers can be forgiven for thinking that science has confirmed as a fact that all life in the universe will eventually be annihilated. Indeed, most cosmologists do believe that the universe will be unable to support life indefinitely (Starobinsky 2000). The most common justification for this belief is the prediction that the universe will continue to expand and cool until there is no free energy left to support life. There are other Naturalist theories about the fate of the universe, however, including some with a more optimistic outlook about the prospect of life persisting.

One live theory in cosmology, Eternal Inflation, predicts that new parts of the universe will always bubble out from our existing one.¹⁹ If this theory turns out to be true, then the right kinds of advanced technology might enable some form of life to escape into new parts of the universe whenever the existing parts were becoming uninhabitable and thereby persist for infinity. Several leading scientists have successfully modelled the theoretical possibility of how we might intentionally create a new area of inflation.²⁰ Two practical problems still stand in the way of creating useful areas of inflation in this way, however; the energy required to create them, and finding a way to safely travel into them.

To condense the required materials into the tiny space needed to create the new area of inflation would take approximately the total energy output of a galaxy (Kaku 2004). While this seems like a prohibitive amount of energy, prominent physicist Michio Kaku is confident that we will have the technology to harness this huge amount of energy well before the sun envelopes the Earth. Even if we could create a new area of inflation, however, the intense forces involved

¹⁹ See Aguirre (2006) for an accessible introduction to Eternal Inflation.

²⁰ E.g.: Farhi & Guth (1987), Farhi, Guth & Guven (1990), Fischler, Morgan & Polchinski, (1990a; 1990b), Guendelman & Portnoy (1999; 2001), and Sakai et al. (2006).

might make it impossible to transport humans into it before it becomes inaccessible from our current location (Kaku 2004). In response to this worry, Kaku theorises that we could use more energy to stabilise the new area of inflation long enough for nanobots to enter it. If nanobots could survive the transition into this new part of the universe, then they might also be programmed to collect and combine the raw materials necessary to create new, possibly human-like, life. If this or other similar processes prove to be physically as well as theoretically possible, then repeatedly recreating life in newly created parts of the universe would allow life (and possibly human-like life) to persist for infinity.

But how likely is it that humans will be able to wield the power of galaxies and avoid the long list of possible disasters heading our way? Ray Kurzweil (2005) thinks that our chances are good, especially if we meld our minds with computers to create advanced artificial intelligence (AI+). AI+ combines the strengths of human intelligence with mechanical hardware's processing power to create intelligence more powerful than anything currently existing. The creation of AI+ would most likely result in the law of accelerating returns applying to scientific and technological advancement. If this happens, then science and technology will increase exponentially and so too will our problem-solving power. If scientific and technological advancement is exponential, then any worries about humankind being wiped out by some disaster before we can work out how to avoid it can be allayed and Scientific Optimism becomes much more plausible.

Even if AI+ is impossible to create, and science and technology do not advance exponentially, all that is required for Scientific Optimism to have some credibility is that science and technology continue to advance quickly (something that seems overwhelmingly likely). Mere linear advancement of science and technology should be enough for us to avoid local disasters, such as catastrophic climate change or Earth being consumed by the sun as it turns into a red dwarf.²¹ Furthermore, the predicted death of our observable universe is at least a sexdecillion (10^{51}) years away (Krauss & Starkman 2000), leaving plenty of time to find a method for enabling life, possibly including human-like life, to persist for infinity. If humans can progress the output of aeronautical science all the way from 'jumping' to 'interplanetary travel' in a hundred years or so, then we cannot sensibly claim to know what we can and cannot achieve in a sexdecillion years.

²¹ Assuming that we actually try to survive them.

Taken individually, any specific theory about how scientific and technological progress might allow life to persist for infinity seems very unlikely to be true. Indeed, firm belief that Kaku's theory is *the* way that scientific advancement will allow for us to meaningfully connect with the infinite is not plausibly justifiable. But, to believe in the principle of Scientific Optimism only entails belief that scientific and technological progress might make it possible for some kind of life to persist for infinity *somehow*. Perhaps Kaku's theory will turn out to be true. Or, more plausibly, perhaps scientific advancement will allow life to persist for infinity in some other way. There are countless ways in which scientific and technological advancement might allow life to persist for infinity. Considering these myriad possibilities in combination with our continually-increasing ability to achieve things that seemed impossible only years before, belief in the plausibility of Scientific Optimism is perfectly rational (if perhaps a little optimistic).²²

This is good news for Optimistic Naturalists because belief in the plausibility of Scientific Optimism is required for them to properly resolve the vast difference between the meaning their lives seem to have from the subjective and objective viewpoints. If a Naturalist was convinced of the plausibility of Infinite Consequence, but not of Scientific Optimism, then they might believe that there is a theoretical way to correctly align their subjective meaning with objective meaning, but no physically possible way to align them, leaving them in the grip of the Absurd.

5. How Optimistic Naturalism refutes the target criticisms

5.1. Tolstoy's criticism

Tolstoy's comments, in *My Confession* (2000), give the impression that he agreed with Infinite Consequence's sufficient conditions for True Meaning, but also that he could not see a way for his actions to have infinite consequences in a purely physical universe. Tolstoy found his effects

²² Critics might claim that belief in Scientific Optimism is irrational because it's very unlikely that any scientific or technological progress could enable life to persist for infinity and that no one will ever be able to know if life does persist for infinity. Indeed, they might claim that belief in Scientific Optimism is similar to faith in a supernatural entity. First, it is not sensible for anyone to claim that a logically possible future of the universe is implausible because it is unlikely because predicting the future of the universe contains too many unknown variables to be done with any accuracy. Second, given all the possible Naturalist and Supernaturalist theories about the meaning of life, belief in any one particular theory also requires a leap of faith. Since there are infinite possible mutually exclusive theories of the meaning of life, any one particular theory only has a vanishingly small chance of being true. Furthermore, unless a very surprising advance in philosophy is made, we will never have a way to verify if any particular theory of the meaning of life is actually true. Considering these responses, there is no reason to think that Scientific Optimism is any less plausible than other logically possible theories of the meaning of life.

on others, especially through his writing, subjectively meaningful until he tried to validate that meaning from an objective viewpoint and found that every trace of his actions in the physical universe would eventually be destroyed. But Tolstoy's belief that it was impossible to have infinite consequences in a purely physical universe was based on his strict adherence to the scientific consensus of his day. If Tolstoy were alive today, and could see the immense advances in science and technology that have been made over the last 100 years, then he might have become a Scientific Optimist—he might believe that the universe could sustain life for infinity and thereby afford his finite actions the chance of meaningfully connecting with the infinite through having infinite consequences for life. Indeed, belief in the plausibility of Scientific Optimism could have cured Tolstoy of his paralysis without requiring him to adopt the supernatural views that he found so “irrational and monstrous” (Tolstoy 2000, p. 17). Since Optimistic Naturalism explains how a meaningful connection can be forged between our finite actions and infinity in a purely physical universe, it constitutes a counter example to Tolstoy's criticism that Naturalist theories cannot do this.

5.2. Resolving the Absurd

Like Tolstoy did, some Naturalists find it deeply distressing to contemplation of the Absurd—the vast difference between how meaningful our actions and lives appear from subjective and objective viewpoints. The feeling that he might have been wrong about how meaningful his life was, and the worry that his life might have had no objective meaning at all, depressed Tolstoy to the point that he felt paralysed (2000, pp. 11-12). Optimistic Naturalism provides a way to resolve the tension of the Absurd by explaining how to meaningfully connect the subjective and objective meaning of certain actions. There are other ways to resolve or dissolve the Absurd, including settling for subjective meaning, adopting supernatural beliefs, and becoming a Nihilist. But for a Naturalist who finds subjective meaning insufficient and the extant Objectivist Naturalist theories unable to provide objective *enough* meaning to resolve the Absurd, Optimistic Naturalism provides a viable solution.

Infinite Consequence provides a theoretical blueprint for resolving the Absurd; it describes the kinds of actions that can confer both subjective and objective meaning on a life *for the same reason*—because they have particular infinite consequences for life. If Infinite Consequence provides a theoretical blueprint for resolving the Absurd, then Scientific Optimism

explains how it is practically feasible to follow that blueprint in a purely physical universe. Scientific Optimism points out that, even though most cosmologists believe that the universe will eventually be unable to support life, we have reason to believe that the continual advancement of science and technology might allow us to leave personally significant, life-affecting, and everlasting marks on a purely physical universe.

Taken together, Infinite Consequence and Scientific Optimism show us that someone can resolve the Absurd by being an Optimistic Naturalist; by believing that at least one of his or her actions is meaningful (in part) because of the particular infinite consequences it might have for life in a purely physical universe. The musician's belief that his music is meaningful because it might influence music-appreciating life for infinity and the scientist's belief that her discovery is meaningful because it might enable humankind to live on for infinity are the kinds of beliefs that can resolve the Absurd. Optimistic Naturalism resolves the tension of the Absurd by explaining why some of our actions confer only subjective meaning, some only objective meaning, and others True Meaning, without recourse to supernaturalism, or abandoning the pursuit of objective meaning, or abandoning the pursuit of meaning altogether.

6. The implications of Optimistic Naturalism

Practically speaking, how should an Optimistic Naturalist live in order to achieve a Truly Meaningful life? All of the many potential options for someone to achieve a Truly Meaningful life, according to Optimistic Naturalism, depend on the person performing an action that has infinite consequences and that they find meaningful because of the infinite consequences it might have. The most obvious options include trying to significantly influence the future of humankind (or other forms of life) for infinity. This could be achieved in a variety of ways, including through creating art, contributing to existing philosophical or scientific knowledge, and even lovingly raising children with the aim that they will do the same. In order to achieve these infinite consequences, though, Optimistic Naturalists need it to be true that life will actually persist. Unfortunately, life's infinite existence is something that they could not rationally be sure of. For this reason, it would be prudent for any Optimistic Naturalist who finds subjective

meaning in actively progressing science and technology to focus their efforts on just that (in an effort to increase the probability that life persists).²³

Not all Naturalists find contemplation of the Absurd causes them any distress, however. Naturalists who are unaffected by the Absurd tend to be satisfied with subjective meaning and often consider objective meaning to be illusory (e.g. Taylor 1981). Such strict subjective Naturalists should consider the arguments for Infinite Consequence and Scientific Optimism from above. If they find them convincing, then it might be rational to adopt Optimistic Naturalism in addition to any compatible theories they currently use to guide their actions. If these subjective Naturalists do not find Infinite Consequence plausible, however, they at least have an idea of how far a theory might have to go to bridge the gap between the subjective and objective viewpoints and make a Truly Meaningful life possible.

The plausibility of Optimistic Naturalism will also be important to some Nihilists. Some would-be Naturalists have turned to Nihilism after contemplation of the Absurd. Like Tolstoy did during his depression, some Nihilists believe in the following two claims. First, actions can only be rationally considered as subjectively meaningful if they are also objectively meaningful. And second, Naturalist theories of the meaning of life cannot provide objective meaning (only aggregately subjective meaning, or some other kind of meaning that is not objective enough). If such Nihilists are persuaded by the arguments for Infinite Consequence and Scientific Optimism, then they should become Optimistic Naturalists. If they are not persuaded, then they might find some strange comfort in the idea that they now have even more reason to think that life is meaningless.

The plausibility of Infinite Consequence and Scientific Optimism is also relevant to any Supernaturalist who criticises Naturalist theories for not offering accounts of a meaningful life that are meaningful enough, particularly if they claim that Naturalist theories are not truly meaningful because they cannot connect our finite lives with the infinite. The principle of Infinite Consequence reveals the theoretical blueprint for how actions with certain infinite consequences can in fact connect our finite lives with the infinite. Furthermore, the principle of Scientific Optimism describes why it is plausible to believe that the blueprint might somehow

²³ There are many ways for Optimistic Naturalists with different tastes and capabilities to contribute to the advancement of science and technology. For some this might mean continuing their research in a specific sub-field of physics and for others it could mean focussing on their business enterprises and using the profits to establish scientific research centres, or even raising children to have a keen interest in science.

become a physical reality. If Infinite Consequence and Scientific Optimism are plausible, then it will no longer be reasonable to criticise Naturalist theories for not being able to offer a meaningful connection with the infinite.

7. Conclusion

Optimistic Naturalism is the view that scientific and technological advancement might allow us to lead truly meaningful lives in a purely physical universe by enabling our actions, which we find meaningful partly because they might have particular infinite consequences, to actually have infinite consequences for life. It was argued that Optimistic Naturalism is a counter example to Tolstoy's criticism that Naturalist theories cannot meaningfully connect the finite with the infinite, since it explains how it is plausible that we can perform meaningful actions with infinite consequences. It was also argued that those who find themselves in the grip of the Absurd should adopt Optimistic Naturalism. This was argued on the basis that Optimistic Naturalism provides both the theoretical blueprint for, and the practical possibility of, bridging the vast divide between how meaningful our actions appear from the subjective and objective viewpoints. Finally some advice on the implications of Optimistic Naturalism was offered, including encouraging some Optimistic Naturalists to focus their activity on the advancement of science and technology, since that seems like the best bet for achieving a Truly Meaningful life.²⁴

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²⁴ I would like to thank the anonymous reviewers at Sophia and Nick Agar for several comments that helped to improve earlier versions of this paper considerably.

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