

**Optimistic Naturalism:  
Scientific Advancement and the Meaning of Life**

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**Abstract**

Naturalist theories of the meaning of life are often criticised for not setting the bar for what counts as meaningful high enough. Tolstoy's version of this criticism is that Naturalist theories do not describe truly meaningful lives because they do not require that we connect our finite lives with the infinite. Other versions include Naturalist theories not requiring the meaning to be objective and not being able to resolve the Absurd – the vast difference between how meaningful our actions and lives appear from subjective and objective viewpoints. These perceived weaknesses of Naturalist theories have caused many would-be Naturalists to adopt Nihilism or Supernaturalism, as Tolstoy did. This paper defends a novel view, Optimistic Naturalism, in order to refute these criticisms. Optimistic Naturalism is the idea that scientific and technological advancement will allow us to lead truly meaningful lives through the infinite consequences of our purposeful actions. The central tenets of Optimistic Naturalism are: Naturalism; meaningful lives are possible in a purely physical universe, Infinite Consequence; purposeful actions with infinite consequences are sufficient to make a life truly meaningful when accompanied by the appropriate beliefs, and Scientific Optimism; continual scientific and technological advancement will allow our actions to have infinite consequences. Purposeful actions with infinite consequences are argued to connect our finite lives with the infinite in a way that is sufficient to confer subjective and objective meaning, and therefore true meaning, on our lives. In achieving this, Optimistic Naturalism resolves the Absurd and constitutes a refutation of the criticisms mentioned above.

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

## 1. Introduction

In the analytic debate on the meaning of life, theories are predominantly categorised according to a tripartite taxonomy: Supernaturalism; that more than a purely physical universe is required for life to be meaningful, Naturalism; that a meaningful life is possible in a purely physical universe, and Nihilism; that life cannot be meaningful.<sup>1</sup> A major criticism of Naturalist theories is that they offer less meaning than Supernaturalist theories. Tolstoy was amongst the first to articulate a version of this criticism. He identified the inability of Naturalistic theories to offer any kind of meaningful connection with the infinite.<sup>2</sup> In response to these criticisms, this paper has three main aims:

- 1) To explain and argue for the plausibility of a novel Naturalistic position for the meaning of life debate, Optimistic Naturalism, and its three central principles.
- 2) To argue that Optimistic Naturalism is a counterexample to Tolstoy's criticism on the basis that it is a Naturalist theory that *does* allow for us to meaningfully connect with the infinite.
- 3) To argue that Optimistic Naturalism can resolve the tension of the Absurd – the vast difference between how meaningful our actions and lives appear from the subjective and objective viewpoints. Optimistic Naturalism can resolve the Absurd by identifying the objective meaning present in subjectively meaningful activities that have infinite consequences.

This paper begins with some background on Tolstoy's criticism and the criticism that contemplation of the Absurd causes problems for Naturalist theories of the meaning of life. Optimistic Naturalism is then explained and argued to be a refutation of these criticisms. The bulk of this paper is devoted to explaining and arguing for two of Optimistic Naturalism's three core principles: Infinite Consequence; purposeful actions that have an infinite consequence are sufficient to make a life truly meaningful, and Scientific Optimism; continual scientific and

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<sup>1</sup> For more background on the debate and the established positions, see any of these useful reviews: (Metz 2001; 2002; 2007; 2008).

<sup>2</sup> "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 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).

technological advancement will allow our actions to have infinite consequences. The final section provides guidance on how groups with various beliefs should act in light of Optimistic Naturalism.

## 2. Tolstoy's Criticism and the Absurd

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 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. Initially, Tolstoy thought that his writing and his effects on the people around him were making his actions meaningful. Subsequent recognition of the Absurd led Tolstoy to reject his subjective view; that his actions and life as whole were meaningful. He came to believe that all Naturalistic views entailed that his life, and all the potentially meaningful products of his actions, would eventually be destroyed.<sup>3</sup> This led Tolstoy to conclude that Naturalist theories could not provide any meaningful answers to the question of the meaning of life.<sup>4</sup> 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.<sup>5</sup>

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 of the meaning of life.

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<sup>3</sup> "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).

<sup>4</sup> "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).

<sup>5</sup> 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 most recent writings, such as *What I Believe*, Tolstoy stopped discussing the infinite despite still discussing the meaning of life (Flew 1963, p. 117).

He became a Christian of sorts.<sup>6</sup> Indeed, contemplation of the Absurd seems to be a major cause of dissatisfaction with Naturalist theories of the meaning of life. Belief that Naturalism cannot offer the things that make a life truly meaningful can lead those who are tolerant of supernatural beliefs to opt for Supernaturalism and those who are intolerant of them to opt for Nihilism (Boylan 2008; Metz 2008).

The act of mentally stepping back from our lives allows us to question our actions, motives and plans. Many Naturalists believe that from this objective viewpoint we can better evaluate how meaningful our actions and our lives are. From this once-removed position, we are supposed 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 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 confer meaning on our lives. It could, however, be argued that every reasonable person would agree that lovingly raising a family is a meaningful activity.<sup>7</sup> 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 therefore contingent) beliefs of humans, albeit in aggregated form. Relevantly similar aliens, or an omniscient being, might be able to point out the bias all humans are suffering from.

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 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 puts 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 scale up their quest for objective meaning and adopt Supernaturalism or give up and opt for Nihilism.

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<sup>6</sup> 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 4 above.

<sup>7</sup> Darwall argues for a theory that operates along these lines (1983, chap 11-12).

According to Optimistic Naturalism, our actions and lives can achieve objective meaning by having an infinite consequence. Furthermore, this objective meaning can become ‘true meaning’ when coupled with the correct subjective states. For Naturalists like the mid-life Tolstoy, who are deeply affected by the Absurd, Optimistic Naturalism can provide guidance by explaining which actions should be seen as meaningful from both the subjective and objective viewpoints. For Supernaturalists and Nihilists who wanted to have an infinite consequence, but could not conceive of how to achieve it with Naturalism, Optimistic Naturalism explains how this can be achieved in a natural universe. For the rest of the Supernaturalists and Nihilists, and for the Naturalists who are satisfied with limiting themselves to a life that seems meaningful from the subjective viewpoint only, Optimistic Naturalism should be viewed as a challenge to their position. To these groups, the plausibility of Optimistic Naturalism would mean that they could be leading a more meaningful life by following its guidance (in some cases in addition to the guidance of their existing beliefs). The implausibility of Optimistic Naturalism, however, would be also be of interest to these groups, since they could use it to demonstrate the futility of arguing for a ‘truly’ meaningful Naturalist theory of the meaning of life.

### **3. Optimistic Naturalism**

Optimistic Naturalism is the idea that scientific and technological advancement will allow us to lead truly meaningful lives through the infinite consequences of our purposeful actions. Since Optimistic Naturalism holds that a meaningful life does not require more than a purely physical universe, it is a type of Naturalism. However, Optimistic Naturalism’s detailed account of how we can meaningfully connect our finite lives with the infinite stands it apart from the extant Naturalist theories.<sup>8</sup> If plausible, then Optimistic Naturalism will refute the criticisms of Tolstoy and others that Naturalist theories do not provide accounts of the meaning of life that are meaningful enough. Optimistic Naturalism also provides us with the chance to resolve the Absurd by explaining how some of our subjectively meaningful actions could also be objectively meaningful.

Optimistic Naturalism is based on the following three principles:

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<sup>8</sup> 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.

*Naturalism*: meaningful lives are possible in a purely physical universe.

*Infinite Consequence*: purposeful actions with infinite consequences are sufficient to make a life truly meaningful when accompanied by the appropriate beliefs.

*Scientific Optimism*: continual scientific and technological advancement will allow our actions to have infinite consequences.

Belief that all three of these principles are true makes one an Optimistic Naturalist. Optimistic Naturalism is intended to be a hybrid (subjective/objective) Naturalist theory. According to objective theories, the amount of meaning in a life is determined by factors external to the life in question. This meaning-determining role played by external factors in objective theories makes it possible for a hypothetical omniscient observer to inform someone if he or she is right or wrong about how meaningful their life is. According to subjective theories, factors within the mind of the individual are what make that person's life meaningful. Hybrid theories require the union of objective and subjective features for a life to be meaningful, as eloquently captured by the phrase "meaning arises when subjective attraction meets objective attractiveness" (Wolf 1997, p. 211). For example, a subjective theory might make the amount of meaning in a life depend on the extent to which a person's most important desires are satisfied. A similar objective theory might make the amount of meaning in a life depend on the extent to which an objective list of 'ideal' desires are satisfied for that person, regardless of if they actually have those desires. A corresponding hybrid theory might dictate that the amount of meaning in a life is proportional to the amount of satisfied desires from the 'ideal' list that the person also happens to consider important.

Optimistic Naturalism is a hybrid theory because it requires the following subjective and objective elements: the person must believe that having an infinite consequence makes an action meaningful, the action must be performed with the intention that it will have an infinite consequence, and the action must have an infinite consequence. Assuming that a truly meaningful life can be defined as one that includes subjective and objective meaning derived

from the same actions,<sup>9</sup> then Optimistic Naturalism provides us with the chance to lead a truly meaningful life. Theories of what a truly meaningful life is, defined in this way, allow us to resolve the Absurd by helping us recognise which of our actions are subjectively, objectively, and truly meaningful. This definition also helps us to better recognise the different types of meaning that a life might accrue and their relative importance. According to Optimistic Naturalism then, if a life of someone who believes that having an infinite consequence confers meaning includes any actions that were intended to and do have an infinite consequence, then that life can be considered truly meaningful.

### **3.1. Naturalism**

Naturalism is the idea that a meaningful life is possible even if all that exists is purely physical. In line with the majority of recent analytic works on the meaning of life, this paper assumes, rather than argues, that Naturalism is independently plausible (Metz 2007, p. 203). A typical assumption made by Naturalists is that the meanings available in their accounts of the meaning of life are meaningful *enough*. Not all Naturalists would agree if true meaning (as defined above) is necessary to achieve a meaningful enough life. Some naturalists, such as Taylor (2000), find subjective meaning sufficient to make a life meaningful. In order to resolve the Absurd and refute the criticisms from above, however, a higher standard of meaning is required. Since this paper is designed to refute these criticisms, only truly meaningful lives (ones in which subjective and objective meaning are correctly aligned) will be considered meaningful enough.

### **3.2. Infinite Consequence**

Infinite Consequence is the idea that when a purposeful action with infinite consequences is accompanied by the appropriate beliefs that action is sufficient to make the life of the actor truly meaningful. Within this broad conception of Infinite Consequence, there are three important components. First, purposefully performing an action with the beliefs that the action is meaningful and that it will have an infinite consequence is more than sufficient to make a life subjectively meaningful. Second, actions with infinite consequences can also be objectively

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<sup>9</sup> This is argued for later.

meaningful, even from a distant objective viewpoint. Third, the correct alignment of subjective and objective meaning can make a life truly meaningful. The first two components of Infinite Consequence will be argued for. Then, the third component will be stipulated and motivated.

From the subjective viewpoint, how meaningful an action is depends on the mental states of the individual. As a result, the subjective viewpoint permits practically any action to be seen as meaningful to someone. Some subjective theories of the meaning of life require that actions must comply with a person's carefully considered or innermost desires to be able 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 hunting through second hand detritus at garage sales. Subjective theories of the meaning of life are often criticised for allowing such ostensibly inane actions to confer meaning. It could be argued that avid marble collectors would recognise their hobby as absurdly meaningless if they examined it from the 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. It is precisely this feature of the Absurd that makes it so difficult to resolve for many people.

A more constructive approach to evaluating the meaning of such actions draws on the distinction between subjective, objective, and true meaning discussed above. 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. Subjectively meaningful actions should only be considered truly meaningful, however, if they are also objectively meaningful. Assuming this tiered approach to evaluating meaning is reasonable, there are few, if any, grounds for arguing against any sort actions being able to confer subjective meaning on people with suitably organised mental states.

The principle of Infinite Consequence stipulates that the coincidence of the following three conditions is more than sufficient to make an action subjectively meaningful: the action has the purpose of having an infinite consequence, the action is accompanied by the belief that it will have an infinite consequence, and the action is accompanied by the belief that it is meaningful. Since these conditions are sufficient for subjective meaning (as opposed to being necessary), the

principle of Infinite Consequence remains silent about other potential ways to achieve subjective meaning.

Given that attaining subjective meaning in life is usually understood to be merely a matter of believing that one's life is meaningful, the principle of Infinite Consequence's addition of two further sufficiency conditions makes subjective meaning harder to obtain. However, the addition of the conditions that the action be both purposefully performed and accompanied by the belief that the action will have an infinite consequence can be easily motivated.

The kinds of actions that nearly all of us find subjectively meaningful are those that we purposefully carry out with a specific goal or consequence in mind. As we teach and care for our children, we hope that they grow up to be healthy and happy. We consider putting time and effort into lovingly raising children in this way as a particularly meaningful activity. If the intention for our actions to achieve the consequence is removed, however, the action loses its subjective meaning. If our children happen to grow up to be healthy and happy without our purposefully having tried to facilitate that outcome, then our life seems no more meaningful. Our belief that the goal or consequence can be achieved also affects the meaningfulness of the corresponding action. Overzealous parenting might seem subjectively meaningful at the time because the goal of happy children appears achievable. When the children turn out to be miserable, however, their parents will question if their actions were as meaningful as they thought them to be.

Something that could make purposeful actions such as these more subjectively meaningful is if the intended consequence or goal is increased. Imagine an aid worker was making his life more subjectively meaningful by purposefully increasing the wellbeing of those in need. If the aid worker can help 10,000 needy people instead of 100, then his actions would be more subjectively meaningful. Imagine a young philosopher who considers her action of writing a book to be subjectively meaningful because it will bring her fame and fortune. The more people who buy and read the philosopher's book, the more subjectively meaningful her action of writing the book is. Those who consider some of their purposeful actions to be subjectively meaningful because they achieve a finite goal should also accept that having an infinite consequence can be subjectively meaningful. For example, if the philosopher's book becomes a central text in philosophy *for infinity*, then her action of writing it becomes even more subjectively meaningful.

As mentioned, none of this excludes other conditions that might permit actions to confer subjective meaning on a life. However, the principle of Infinite Consequence is concerned with these specific conditions because they can lead to a truly meaningful life. In light of this, Infinite Consequence's stipulation that purposeful actions with infinite consequences are sufficient to confer subjective meaning when accompanied by the appropriate beliefs is clearly plausible.

More importantly, it is also plausible that a life could be made objectively meaningful by containing these subjectively meaningful actions. The second component of Infinite Consequence stipulates that purposeful actions with infinite consequences are sufficient to make a life objectively meaningful. 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 from our subjective viewpoint, however, infinite consequences do not vanish into meaninglessness.

By taking a step back from the subjective viewpoint of the philosopher who desired fame and fortune, her goals seem to be idiosyncratic, tainted by subjective values, and unlikely to confer objective meaning. Many of the extant Naturalist objective 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). Some of these claims need more detail to be usefully action-guiding. Who decides which challenges are fundamental, for example? The accounts that are detailed enough stipulate 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 objective theories appear to be strongly influenced by subjective values.

The particular kinds of goals that we strive for will all seem unimportant from a distant objective standpoint, their professed significance ineluctably stained with subjective values. As

we 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, 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, indelibly influencing future events. Having an infinite consequence is objectively meaningful because infinite consequences will always be significant, no matter how far we step back.

The third component of Infinite Consequence is that the correct alignment of subjective and objective meaning from the first two components can make a life truly meaningful. According to the first two components of Infinite Consequence, a purposeful action with infinite consequences can be objectively meaningful and also subjectively meaningful if it is accompanied by the appropriate beliefs. The third component dictates that if *a single action* achieves *both* subjective and objective meaning in this way, then it has met the sufficient conditions to confer true meaning on the life of the actor. Although this component is definitional in character, its inclusion will be briefly motivated.

A person, whose life is only subjectively meaningful, might rightfully worry if her actions are actually meaningful or if they merely seem that way. This worry could be allayed by external or objective evaluation of the actions. When the objective evaluation is negative, then the Absurd arises. If the evaluation is positive, however, then the person can be confident that their life is truly meaningful. True meaning is much better to have than solely subjective meaning. Similarly, true meaning is better to have than solely objective meaning. Someone whose life was objectively meaningful, but was not aware of it or hated that their life was objectively meaningful, also lacks something that would make their life more meaningful.

Even someone whose life was both subjectively and objectively meaningful might not have a truly meaningful life, however. Imagine a person whose subjective meaning came from objectively meaningless actions, and who was disgusted by his actions that were objectively meaningful. This person would not be sure that the meaning he experienced from the subjective viewpoint was actually meaningful and he would experience nothing meaningful about his objectively meaningful actions. This person's life would be more meaningful if his subjectively

meaningful actions were the same as his objectively meaningful actions. If the objective and subjective meaning of this person's actions were aligned in this way, then he would get to enjoy his objectively meaningful actions and be free from the suffering that doubt of the authenticity of his subjectively meaningful actions would bring.

The concept of a truly meaningful life, as defined here, is useful because it allows us to acknowledge that the correct alignment of subjective and objective meaning is much more desirable than the alternatives mentioned above. The concept of a truly meaningful life is also useful for identifying a theoretical possibility for resolving the problem of the Absurd. Indeed, the very situation of comparing the subjective and objective meaning of our actions reveals the value of actions which cause those meanings to coincide. By valuing truly meaningful actions over the others, the tension between the different perspectives of the Absurd begins to dissolve.

To completely resolve the Absurd in a positive way (avoiding Nihilism), a plausible theory of how subjective and objective meaning can coincide is required. The principle of Infinite Consequence provides the theory; the kinds of actions that are sufficient to confer both subjective and objective meaning on a life. Recall that, Infinite Consequence is the idea that when a purposeful action with infinite consequences is accompanied by the appropriate beliefs that action is sufficient to make the life of the actor truly meaningful. But what does it really mean for our actions to have an infinite consequence?

In the context of the meaning of life for human beings, infinite consequences are the results of an action that affect humankind (or perhaps other forms of life) and continue to do so. The consequences need not affect all humans at any moment, but need to continue to affect some humans (or perhaps other forms of life) as time goes by. The consequences need not be of infinite value in any moment of time (if that is possible), such as by making someone infinitely happy. The duration of the consequences must, however, be infinite. This could take the form of one continuous consequence or many sequential consequences. The consequences need not be affecting life constantly for infinity; periodic consequences for infinity are sufficient for infinite consequences.

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 does not entail that any of those particular actions would be

truly meaningful. If none of those actions had infinite consequences, then none of them would be truly meaningful. For Infinite Consequence, a life must contain at least one truly meaningful action to be considered meaningful. Living for infinity does seem to increase the chances of performing a truly meaningful action, however.

With this description of Infinite Consequence in mind, we can see that the following purposeful actions can confer true meaning on a life because of their infinite consequences and appropriate accompanying beliefs. Imagine a musician who considers it a meaningful goal that his music influences humankind infinitely. Because the musician believes that his music is important, he gains subjective meaning from performing and recording it. If his music does in fact influence humankind for infinity, he will also gain objective meaning from these actions. Whether the musician's actions are truly meaningful, then, rests most heavily upon the condition that his music continues to influence people for infinity. Ultimately, the influence his work will have on others is something that the musician cannot control. All he can do is attempt to make his work as good, and as easily available, as possible. Furthermore, even if his music is popular throughout his life, the musician will never be able to 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 of knowing that we have already made our lives truly meaningful and having trouble working out what to do next. Indeed, lack of certainty about if we have achieved true meaning in our life will motivate us to keep on striving to perform meaningful actions.

Imagine also a scientist who devises a new technology that allows humankind to escape a disaster that would otherwise have destroyed all sentient life on Earth, such as the supernova of the sun. 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 humankind-saving discovery, and many other tangentially related people have all played some degree of causal role in ensuring the ongoing existence of all future humans. Performing an action with a non-trivial causal role in humankind

persisting for an infinite period of time is objectively meaningful according to Infinite Consequence. However, only those like the scientist, who performed these actions with both the purpose of enabling humankind to live on for infinity and the beliefs that the continuation of humankind is a meaningful achievement and that they will be successful, conferred true meaning on their lives.

Both of these examples of how to achieve a truly meaningful life require that humankind does actually live on for infinity. If the universe became permanently inhospitable due to heat death sometime after the scientist helped us avoid the supernova of the sun, humankind would still fail to live on for infinity. If humankind does not live on for infinity, then both the philosopher and the scientist fail to achieve their 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 issue of whether it is possible for human life (or perhaps other sentient life) to live on for infinity is discussed in the next section.

### **3.3. Scientific Optimism**

The principle of Scientific Optimism holds that continual scientific and technological advancement will allow our actions to have infinite consequences. 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 will allow humankind (or perhaps other forms of life) to live on for infinity. Belief in Scientific Optimism does not require the belief in any specific account of how life will come to live for infinity. It merely requires the belief that continual scientific and technological advancement will make it possible *somehow*.

Scientific Optimism will be argued for here because the plausibility of Optimistic Naturalism, its usefulness for resolving the Absurd, and its ability respond to the criticisms mentioned above all depend on it. If Scientific Optimism is implausible, then belief in Infinite Consequence will provide no solace to those in the grip of the Absurd. Such people will see a theoretical solution to the tension between how meaningful their lives are from the subjective and objective viewpoints, but they will also see no physical possibility for enacting that solution.

Scientific Optimism might seem incredibly optimistic because of its stipulation that continual scientific and technological advancements will enable humankind to live on for infinity. Readers can be forgiven for thinking that science has confirmed as a fact that humankind 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. The leading alternate theory predicts that the Big Bang and subsequent expansion of matter will reverse at some point. If all matter is eventually drawn back together, no life is expected to survive this Big Crunch. There are other Naturalistic theories about the fate of the universe, however, including some with a more optimistic outlook about the chances of humankind's ongoing survival.

One live theory in cosmology, Eternal Inflation, predicts that new baby universes will always bubble out from our existing one.<sup>10</sup> If this theory turns out to be true, then the right kinds of technology might enable humankind to escape into new universes whenever the existing one was becoming uninhabitable and, thereby, live on for infinity.

Several leading scientists have successfully modelled the theoretical possibility of how humankind might intentionally create a new area of inflation (usually called a baby or bubble universe).<sup>11</sup> Two practical problems still stand in the way of creating a useful baby universe 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 baby universe 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 baby universe, however, the intense forces involved might make it impossible to transport humans into it before it slips out of contact with our universe (Kaku

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<sup>10</sup> Or, perhaps it would be more accurate to say that new parts of this universe are inflating all of the time while other parts come to a halt because many physicists use 'universe' to mean 'all that there is', and others use it to mean 'all that there is that obeys this set of physical laws' (Bettini 2005). See Aguirre (2006) for an accessible introduction to Eternal Inflation.

<sup>11</sup> Research on the topic includes: Farhi & Guth (1987), Farhi, Guth & Guven (1990), Fischler, Morgan & Polchinski, (1990a; 1990b), Guendelman & Portnoy (1999; 2001), and Sakai et al. (2006).

2004). In response to this worry, Kaku theorises that we could use more energy to stabilise the new universe long enough for humans or nanobots to enter it. If nanobots could survive the transition to a new universe, then they might also be programmed to collect and combine the raw materials necessary to create human life. If this or other similar processes prove to be physically as well as theoretically possible, then repeatedly recreating human life in new universes would allow humankind to live on for infinity.

An objection to the possibility of scientific and technological advancement enabling humankind to continue to avoid disasters in this way might arise at this point. If there is a greater than zero probability that some disaster will prevent humankind from surviving in any finite period of time, then a disaster *definitely will* prevent humankind from surviving at some point over an infinite amount of time. This objection does not provide a good reason to believe humankind could not live on for infinity. At best it provides a reason to think that it is unlikely that humankind could live on for infinity. To see why, consider rolling a die; the probability of rolling a six is quite small if the die is only rolled once, and if the die is rolled four or five times, then the probability of rolling at least one six is much higher. Notice, however, that a robot could roll a die over and over indefinitely and it is possible that a six would *never* come up. In the same way, it is entirely possible that, despite the strong odds against it, an unavoidable humankind-destroying disaster never occurs even if we survive for infinity.

Furthermore, there is a good reason to think that the longer humankind survives (assuming that we continue to advance science and technology), the better equipped we will be to avert potentially humankind-destroying disasters. We have seen amazing scientific and technological advancements over the past century and the near future promises even more and at an increasingly faster rate. Ray Kurzweil and other technologists and philosophers predict the future merging of human mind and machine to create advanced artificial intelligence (AI+).<sup>12</sup> 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

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<sup>12</sup> See Kurzweil's *The Singularity in Near* (2005).

Scientific Optimism becomes much more plausible. Furthermore, the objection that humankind is exceedingly likely to be wiped out by some disaster in the very distant future becomes correspondingly less convincing.

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 will be enough for us to avoid local disasters, such as catastrophic climate change or the Earth being consumed by the sun as it turns into a red dwarf (assuming that we actually try to survive them). Furthermore, the predicted death of our observable universe is potentially trillions of years away, leaving plenty of time to find a method for enabling humankind to live on 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 be able to imagine what we could achieve in a few trillion years.

Taken individually, any specific theory about how scientific and technological progress might allow for us to meaningfully connect with the infinite seems (at least at this stage) 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. To believe in the principle of Scientific Optimism only entails belief that scientific and technological progress will make it possible for humankind (or perhaps other forms of life) to live for infinity *somehow*. Perhaps Kaku’s theory will turn out to be true. Or, more plausibly, perhaps scientific advancement will allow humankind to live on for infinity in some other way. There are countless ways in which scientific and technological advancement might allow humankind to live on 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).

Critics might insist that Scientific Optimism is wildly implausible. They might claim that belief in Scientific Optimism is irrational because the likelihood of science and technology enabling humankind to live on for infinity is vanishingly small. Coupled with the fact that no one will ever be able to know if humankind does live on for infinity, belief in Scientific Optimism is

quite similar to faith in a supernatural entity. Two points in response. First, it is not sensible for anyone to claim that a logically possible future of the universe is implausible because it is unlikely. Given that any number of advances, discoveries, and unexpected events can occur in just a few years, predicting the future of the universe contains too many unknown variables to be done with any accuracy. Second, given all the possible natural and supernatural 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 two responses, there is no reason to think that Scientific Optimism is any less plausible than other logically possible theories of the meaning of life.

If Scientific Optimism is plausible, however, it is reasonable to believe that one can resolve the Absurd and achieve a really meaningful life by performing actions that one finds subjectively meaningful and expects to have infinite consequences. Belief in the plausibility of Scientific Optimism is required for an Optimistic Naturalist to properly resolve the vast difference between the meaning their life seems to have from the subjective and objective viewpoints. If an Optimistic Naturalist did not consider it plausible that scientific and technological advancement will enable humankind (or perhaps other forms of life) to live on for infinity, then they would not believe that their actions were likely to be objectively meaningful. Despite this lack of objective meaning, their actions would still seem meaningful to them from the subjective viewpoint, leaving them in the grip of the Absurd.

#### **4. How to Act in Light of Optimistic Naturalism**

Like Tolstoy did, many Naturalists find contemplation of the Absurd deeply distressing. The feeling that he might have been wrong about how meaningful his life was, and the worry that it might have had no objective meaning at all, depressed Tolstoy to the point where he felt paralysed (2000, pp. 11-12). Any Naturalist who finds themselves worrying about the tension between how meaningful their life seems from the subjective and objective viewpoints should consider becoming an Optimistic Naturalist. If they can find subjective meaning in any actions that could have infinite consequences, and if they believe that having infinite consequences

makes that action objectively meaningful, then they have a theoretical blueprint for a bridge that crosses the gap between the subjective and objective viewpoints. To resolve the Absurd, however, these Naturalists would also have to believe that scientific and technological progress will somehow allow humankind (or possibly other forms of life) to live on for infinity and thereby provide the materials necessary to make that theoretical blueprint a reality. Any Naturalist who takes on these two beliefs, Infinite Consequence and Scientific Optimism, becomes an Optimistic Naturalist.

How then should these new Optimistic Naturalists live in order to achieve a truly meaningful life? There are many potential options for someone to achieve a truly meaningful life according to Optimistic Naturalism. All of these options, however, depend on the person purposefully performing an action that has infinite consequences. The most obvious options include trying to significantly influence the future of humankind for infinity. This could be achieved in a variety of ways, including by 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 humankind will actually live on for infinity. Unfortunately, humankind'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. Since the objective and true meaningfulness of Optimistic Naturalists' lives depends on humankind living on for infinity, if they can help to increase the probability of that happening, then they probably should.

There are many ways for Optimistic Naturalists with different tastes and capabilities to contribute to the advancement of science and technology. For some Optimistic Naturalists this might mean continuing their research in a specific sub-field of physics. For others it could mean focussing on their business enterprises and using the profits to establish scientific research centres. It may even mean raising children to have a keen interest in science. No matter what the style of contribution to the advancement of science and technology, all such actions could have infinite consequences by helping to enable humankind (or possibly other forms of life) to live on for infinity. Furthermore, these contributions to the advancement of science and technology

could also enable other kinds of actions, such as creating an infinitely significant work of art, to confer true meaning on people's lives.

In addition to trying to advance science and technology as much as possible, Optimistic Naturalists should also consider pursuing other compatible Naturalist theories of the meaning of life. Consideration of other theories is possible because the principle of Infinite Consequence only provided sufficient conditions for true meaning; the conditions were not described as necessary or exhaustive. Any additional theories should not be in tension with any of the principles of Optimistic Naturalism and should also bridge the gap between the subjective and objective viewpoints characteristic of the Absurd. If the other theories do not bridge the gap between the subjective and objective viewpoints, then belief in them will only exacerbate the tension of the Absurd.

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 2000). Such strict subjective Naturalists should consider the arguments for Infinite Consequence and Scientific Optimism from above. If they find them convincing, then it would be rational to adopt Optimistic Naturalism in addition to any 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 more 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. 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 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. Tolstoy's version of this criticism is that Naturalist theories are not truly meaningful because they cannot connect our finite lives with the infinite (2000, p. 17). The principle of Infinite Consequence reveals the theoretical blueprint for how purposeful actions with 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 will somehow become a physical reality. If Infinite Consequence and Scientific Optimism are plausible, then Supernaturalists would have to cease with the criticism that Naturalist theories of the meaning of life do not offering truly meaningful lives (at least in the sense of 'truly meaningful' used in this paper).

## 5. Conclusion

Optimistic Naturalism is the idea that scientific and technological advancement will allow us to meaningfully connect our finite lives with the infinite by having an infinite consequence. In this way, Optimistic Naturalism provides us with the chance to lead a truly meaningful life.

Optimistic Naturalism is based on the principles of Naturalism, Infinite Consequence, and Scientific Optimism. Most of the arguments in this paper were in support of Infinite Consequence and Scientific Optimism because both must be plausible for Optimistic Naturalism to be able to resolve the Absurd and refute the criticism that Naturalist theories do not provide accounts of the meaning of life that are meaningful enough.

The principle of Infinite Consequence dictates that a purposeful action with infinite consequences can confer both subjective and objective meaning, the combination of which confers true meaning on a life. Most importantly, actions with infinite consequences were argued to be objectively meaningful because, after all subjective values are stripped away by adopting a more and more distant objective viewpoint, infinite consequences can still be seen to have effects on humankind (or perhaps other forms of life).

The principle of Scientific Optimism holds that continual scientific and technological advancement will allow our actions to have infinite consequences, most likely enabling humankind (or perhaps other forms of life) to live on for infinity. The plausibility of Scientific Optimism was argued for using an example based on the theory of Eternal Inflation and a general argument about the unfathomable possibilities of future scientific and technological advances. In

the end, however, belief in Scientific Optimism was argued to require a leap of faith, although not of the kind that would make Optimistic Naturalism implausible.

It was argued that Optimistic Naturalism refutes a general criticism of Naturalist theories of the meaning of life and also Tolstoy's more specific version of this criticism. By explaining the importance and possibility of correctly aligning naturally derived subjective and objective meaning, Optimistic Naturalism refutes the general criticism that Naturalist theories do not provide accounts of the meaning of life that are meaningful enough. Furthermore, by explaining how it is plausible that we can perform actions with infinite effects, Optimistic Naturalism refutes Tolstoy's criticism that Naturalist theories cannot connect our finite lives with the infinite.

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 physical possibility of, bridging the vast divide between how meaningful our actions appear from the subjective and objective viewpoints. Advice was also given to readers on the implications for their own beliefs and actions if Optimistic Naturalism is plausible. Most importantly, Optimistic Naturalists were urged to focus their activity on the advancement of science and technology, assuming they find such activities subjectively meaningful.

### Reference List

- Aguirre, A. (2006). Where Did It All Come From? *Sky & Telescope*, November: 36-41.
- Bettini, S. (2005). A Cosmic Archipelago: Multiverse Scenarios in the History of Modern Cosmology, arXiv:physics/0510111.
- Boylan, M. (2008). *The Good, the True and the Beautiful: A Quest for Meaning*, Continuum International: New York.
- Darwall, S. (1983). *Impartial Reason*, Ithaca: Cornell University Press.
- Dworkin, R. (2000). *Sovereign Virtue*, Cambridge: Harvard University Press.

Farhi, E., Guth, A. (1987). An Obstacle to Creating a Universe in the Laboratory, *Physics Letters B*, 183(2): 149-155.

Farhi, E., Guth, A. & Guven, J. (1990). Is it Possible to Create a Universe in the Laboratory by Quantum Tunneling?, *Nuclear Physics B*, 339: 417-490.

Fischler, W., Morgan, D. & Polchinski, J. (1990a). Quantum Nucleation of False Vacuum Bubbles, *Physics Review D*, 41: 2638.

Fischler, W., Morgan, D. & Polchinski, J. (1990b). Quantization of False-Vacuum Bubbles: A Hamiltonian Treatment of Gravitational Tunneling, *Physics Review D*, 42: 4042.

Flew, A. (1963). Tolstoi and the Meaning of Life, *Ethics*, 73(2): 110-118.

Guendelman, E. & Portnoy, J. (1999). The Universe out of an Elementary Particle?, *Classical Quantum Gravity*, 16: 3315.

Guendelman, E. & Portnoy, J. (2001). Almost Classical Creation of a Universe, *Modern Physics Letters A*, 16: 1079.

Hurka, T. (1993). *Perfectionism*, New York: Oxford University Press.

Kaku, M. (2004), *Parallel Worlds: A Journey Through Creation, Higher Dimensions, and the Future of the Cosmos*, Doubleday: New York.

Kurzweil, R. (2005). *The Singularity is Near: When Humans Transcend Biology*, Viking Penguin: New York.

Metz, T. (2001). The Concept of a Meaningful Life, *American Philosophical Quarterly*, 38(2): 137-153.

- Metz, T. (2002). Recent Work on the Meaning of Life, *Ethics*, 112 (July 2002): 781-814.
- Metz, T. (2003). The Immortality Requirement for Life's Meaning, *Ratio (new series)*, XVI 2 June 2003 0034-0006: 161-177.
- Metz, T. (2007). New Developments in the Meaning of Life, *Philosophy Compass*, 2/2 (2007): 196-217.
- Metz, T. (2008). The Meaning of Life, in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy (Fall 2008 Edition)*, URL = <http://plato.stanford.edu/archives/fall2008/entries/life-meaning/>
- Nagel, T. (1986). *The View from Nowhere*, New York: Oxford University Press.
- Railton, P. (1984). Alienation, Consequentialism, and the Demands of Morality, repr. in *Consequentialism and Its Critics*, S. Sheffler (ed.), New York: Oxford University Press, 1988: 93-133.
- Sakai, N., Nakao, K.-I., Ishihara, H. & Kobayashi, M. (2006). Is it Possible to Create a Universe out of a Monopole in the Laboratory? *Physics Review D*, 74: 024026.
- Singer, I. (1996). *Meaning in Life, Volume 1: The Creation of Value*, Baltimore: Johns Hopkins University Press.
- Starobinsky, A. (2000). Future and Origin of our Universe: Modern View, *Gravitation and Cosmology*, 6:157-163.
- Tolstoy, L. (2000). My Confession, in E.D. Klemke (ed.), *The Meaning of Life*, 2<sup>nd</sup> edition, 11-20. New York: Oxford University Press. Reprint from the 1905 Leo Wiener translation published by J M Dent in London.

Tolstoy, L. (1940). *My Confession*, London and New York: Oxford University Press. Translated by A. Maude.

Wolf, S. (1997). Happiness and Meaning: Two Aspects of the Good Life, *Social Philosophy and Policy*, 14: 207-25.