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## Virtual Reality in and For Creation

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## *Virtual Reality in and For Creation*

*Jaron Melin*

### 1 Framing the Issue

**W**ithin the last few years, there has been growing excitement and concern in the rise of what is called the metaverse. How do various enthusiasts and observers characterize the metaverse? Bobrowsky on the *Wall Street Journal* reports the metaverse as “an extensive online world transcending individual tech platforms, where people exist in immersive, shared virtual spaces. Through avatars, people are able to try on items available in stores or attend concerts with friends, just as they would offline.”<sup>1</sup> TechXplore reports, “Imagine a world where you could sit on the same couch as a friend who lives thousands of miles away, or conjure up a virtual version of your workplace while at the beach.”<sup>2</sup> Rabindra Ratan, an associate professor of media and information at Michigan State University who specializes in the interaction between people and technology, says, “The Meta-verse is a network of interconnected virtual worlds in the same way the World Wide Web is a network of interconnected websites. [...] I can jump into a web browser and cruise from one website to another. In the future, you will jump in the Metaverse browser from one virtual world to another to another.”<sup>3</sup> According to Mathew Ball, one of the most prominent thought-leaders on the metaverse, “The internet era was defined by the computer being in the living room and the connection to the internet being occasional. [...] The shift to mobile computing meant moving the computer from the living room to the office and into your pocket, and changing access to the internet from occasional to continuous and persistent. Metaverse is the idea of computing everywhere, ubiquitous, ambient. In a simplified sense, think about the Meta-verse as a series of interconnected and persistent simulations.”<sup>4</sup> Mark Zuckerberg, founder of Facebook who changed the name of his company to Meta, says, “It’s a virtual environment where you can be present with people in digital spaces. You can kind of think about this as an embodied internet that you’re inside of rather than just looking at. We believe that this is going to be the successor to the mobile internet.”<sup>5</sup> Zuckerberg also says, “A lot of people think that the metaverse is about a place, but one definition of this is it’s about a time when basically immersive

digital worlds become the primary way that we live our lives and spend our time.”<sup>6</sup> Proponents of the metaverse believe that it is the next technological innovation. Opponents believe that it is creating an alternative reality, essentially denying the physical reality in which we naturally live. Many Christians have focused discussions of it within the realm of worship. Is it actually worship if it occurs in the metaverse? Can sacraments be administered in the metaverse? In general, should we embrace the metaverse as a solution to our problems, or should we avoid it as a dystopia?

The fundamental technology behind the metaverse is Virtual Reality (VR), which has been in development for a few decades. Jaron Lanier was considered to be one of the founders of VR when he and Thomas Zimmerman left Atari in 1985 and founded VPL Research, which became the first company to sell VR-goggles and wired gloves. He is considered to be not only a computer-scientist but also a computer-philosopher. He will be helpful in thinking about the relationship between VR and reality. Before jumping into Lanier’s philosophy, consider a few questions. First of all, what is VR? Are interactions in VR real? What relationship does VR have with humans and reality? In order to get a grasp on these questions, we should consider the definitions and relationships between reality, humanity, technology, and VR.

### **1.1 Creation Defines Reality and Humanity**

Robert Jenson offers some basic theology which helps to put humans and reality in the proper frame.<sup>7</sup> The first reality is God, and the other reality is the creation. There is no other reality. Although God is the source of all reality, the creation is nonetheless distinct from God. Creation is bounded and limited, having a beginning and an end. The creation cannot go beyond itself nor beyond its relationship with the Creator. The creation was declared “good” by the Creator. Humans are creatures who are made in the image of God, having dominion over the other creatures. Although humans are of the reality of creation, God addresses them by His Word. Although there are many ways to interpret the “image of God,” we can at least go with the interpretation that humans are to be God’s representatives to other creatures and that God relates with humans by speaking to them. Although humans are limited creatures, they have access to the unlimited Creator in a relationship which He has established, and they have the task of caring for the creation.

### **1.2 Technology as an Extension of Creation**

There are different approaches to what technology is. Technology can be defined as a product, a methodology, or a branch of knowledge.<sup>8</sup> From Greek, technology just means the study of a skill. Today, technology is thought of as a means for doing something more efficiently, achieved artificially rather than naturally, often by the application of scientific knowledge. The meaning of the word “technology” then has shifted from a practiced activity to a product involved in specialized activity.

For example, in hunting, we can either think about the tools (e.g. bows and arrows or guns) or about the art or skill (e.g. archery or riflery), which may indeed use tools but focuses more on the human activity rather than the products themselves. According to Lanier, technologies are extensions of ourselves.<sup>9</sup> For example, we can have remote eyes and ears through webcams and mobile phones as well as expanded memory through the internet.<sup>10</sup> This might tempt us into thinking that technology places us above nature, but Lanier suggests that we adopt Gregory Bateson's approach: people should not think of themselves as being placed above nature but rather embedded within a larger system.<sup>11</sup> In other words, technology does not take us beyond reality but rather embeds us in reality in new ways. Technology is not something outside of creation but rather a part of it. Technology is not an escape from creation but rather something which helps us to live in creation better. Technology is in and for the creation.

### 1.3 Definitions of VR

If technology is an extension of reality, then VR must also be an extension of reality. Therefore, VR must and should act in ways which embed us in creation for its benefit rather than escaping from it. One expert in the field of VR who makes this case is Jaron Lanier.

Jaron Lanier is often considered to be the man to have coined the term "virtual reality," but he will argue that the ideas of VR came before him. In fact during the 1980s, there were various debates for the terminology to be used such as synthetic reality, artificial presence, virtual environments, artificial reality, telepresence, tele-existence, consensus reality, etc.<sup>12</sup> In any case, he has been one of the forefront pioneers into this field. In *Dawn of the New Everything*, Lanier offers fifty-two different definitions for VR. These definitions are meant to be reflections on his experiences and on the various findings and expressions of VR. No one definition completely unpacks what VR is, so he gives many definitions in order to emphasize various aspects. For our purposes here, I focus on only a few of his definitions. What kind of technology is VR? In Definition 6, VR is an "ever growing set of gadgets that work together and match up with human sensory or motor organs."<sup>13</sup> This leans toward VR as consisting of the devices which simulate reality according to the human senses. In this sense, VR is a tool. However, VR may also be viewed as the study of a certain skill. Consider the following handful of definitions:

9. VR is the investigation of the sensorimotor loop that connects people with their world;<sup>14</sup>

12. VR is the technology of noticing experience itself;<sup>15</sup>

29. VR is a cultural movement in which hackers manipulate gadgets to change the rules of causality and perception in demos;<sup>16</sup>

43. VR is a new art form that must escape the clutches of gaming, cinema, traditional software, New Economy power structures, and even the ideas of its pioneers.<sup>17</sup>

In these examples, Lanier views VR as an investigation, a skill of studying experience, a cultural movement, and even an art-form (e.g. like improvisation in jazz). These definitions suggest that VR is an activity rather than a mere product. VR is the activity of modeling physical reality.

How is VR related to reality? In Definition 40, VR is a generalized tool for cognitive enhancement.<sup>18</sup> Lanier gives an example of how VR can help veterans with suffered memory impairments. In this way, VR is extending people with disabilities so that they may become better embedded in reality, overcoming the brokenness of creation. Lanier shows that the narrative arc of someone in VR is not within a virtual world but rather the real world.<sup>19</sup> Reality is the basis for VR. VR cannot go beyond reality, but it helps us to engage with reality in a new way.



## 2 How VR is Real

Now having a grasp on reality and on VR, how is VR real? How is VR part of creation? I am not claiming that VR is real in every sense, for we should maintain the distinction between physical reality and simulated reality. The model is not the same as the thing which it represents. However, the non-reality of VR is more often posed than its reality. People have often framed VR as an alternative reality. I contend that it is part of reality, part of the creation. If God is the first reality and creation is the second reality, then VR cannot be some third

reality. It must be in the creation or else be God, which would be idolatry. If we promote more realities than God and the world, then we'll soon lose sight of what reality really is at all and start creating our own realities, becoming our own gods. Viewing VR as an alternative reality leads down this idolatrous path.

### 2.1 The Embodiment of the Human Creature

One way to investigate the reality of VR is to explore the reality of humans. Both creational theology and neuroscience shed light on humans as embodied creatures.

#### 2.1.1 Creational Theology

At the most basic level, humans have physical and non-physical components in what we might call "body and soul".<sup>20</sup> The body is good and should not be neglected. Both body and soul are created and exist within the reality of creation. Both are

intertwined in human identity. The body is real, and so is the soul even though it is intangible.<sup>21</sup>

Jaworski supports a holistic view of the human being in order to solve the mind-body problem.<sup>22</sup> The information, organization, or structuring of the body is always irreducibly intertwined with matter in a synthesis of ongoing activity. The soul is not located in only one part of the body but throughout the whole body. No part of the body is lacking in the soul, and the soul is not subdivided by the body.

As humans engage in VR, they are always embodied souls. They cannot leave their bodies in order to be in the virtual world but rather are continuously interacting with their bodies. Their senses of sight, touch, and hearing are engaged. Our sensory organs are always engaged in the realm of VR. If they weren't, then we would cease to be in VR. Our orientation for navigating creation comes from our senses, and it is precisely these same senses which give us our orientation in VR. The means of orientation are the same because we do not leave our bodies as we engage VR; we remain in the creation because we are embodied creatures even in VR.

Even if VR were non-physical in a certain sense, humans already engage in spiritual and non-physical ways and still remain in the reality of creation. Even as we use our senses to read the Bible or hear a sermon, the Holy Spirit works through the Word to strengthen us in faith. We hear the message, and we believe in Jesus. The spiritual reality of the Word does not pluck us out of creation but rather restores us to our relationship with the Creator and guides us in our relationships with other creatures. Similarly, whatever is non-physical about VR need not take us away from creation but can guide us to better serve others. As humans live spiritually, they are still bodily creatures. As humans interact virtually, they are still bodily creatures.

### **2.1.2 Neuroscience**

Neuroscience is often stereotyped into reducing the human identity into only the brain or a bunch of neurons. Modern neuroscience actually proposes a more holistic view of human identity in the realm of embodied cognition. The brain is one part of the whole organism. The brain's role is to integrate sensory experience, working together with other organs and senses. It helps us to become aware of our actions within our environment. It connects receptors and effectors. The brain cannot work by itself. It needs the whole body in order to explore the space around us. The brain needs the body, and the body needs the brain.

Lanier recognizes the holistic view of the human person: "The nervous system is holistic, so it chooses one external world at a time to believe in."<sup>23</sup> In Definition 10, Lanier states, "Reality, from a cognitive point of view, is the brain's expectation of the next moment. In virtual reality, the brain has been persuaded to expect virtual stuff instead of real stuff for a while."<sup>24</sup> For Lanier, physical reality is real because of cognitive expectations as explored in our bodies. Although VR chang-

es those expectations, it is nonetheless providing an environment for exploration. Virtual experience is not the same as physical experience, but it is nonetheless real as it is perceived through an embodied cognition.

From both creational theology and modern neuroscience, there is an uncanny parallel in promoting the holistic nature of the human creature. Neither discipline seeks to be reductionistic. So then, there is overlap between them, and they can pursue some questions together. Seybold speaks on the relationship between our brains and reality:

We interact with reality by having that reality represented in our brains in the form of neural activity. While there is room for subjectivity in our interpretation of that reality, our 'neural story' nevertheless is considered by most scientists, and nonscientists as well, to be an accurate representation of the real world.<sup>25</sup>

There is also a neural story as we perceive VR. When we perceive VR, our neural activity makes representations of it. Those representations are true to the virtual world although they are different from the physical world. Since our bodies are grounded in the reality of creation and the reality of creation is the basis of VR, we are able to bridge the neural story between the physical and virtual worlds and to determine how experiences are different in both. Even though experiences may be different in the virtual world, our frame of reference is the creation, and we are able to translate the differences.

## **2.2 Haptics: The Physical Side of VR**

Just as Word and Sacrament act as the means of grace, haptics act as the means of physicality for VR. Haptics are physical, and without them, VR is nothing. Lanier talks about haptics as the devices of VR which push back at the user.<sup>26</sup> Examples would be goggles, data-gloves, data-suits, treadmills, and the like. Each device is meant to stimulate a particular sense in order to simulate a particular sensation. A treadmill could give the sensation of motion. If a data-suit has the means of heating or cooling, then the user could be given the sensation of being outside in the winter-cold or in the summer-heat. Each of these devices is physical in some way, and they act as the medium for interacting with VR. Lanier says, "People think differently when they express themselves physically."<sup>27</sup> Haptics give a physical way of interacting in VR so that users can express themselves in new ways. These technological gadgets help users to engage in VR as the activity of simulating reality. They extend reality for the users and embed them in new ways within the virtual world. VR is only as good as its haptics, which are physically based in the reality of creation.

Lanier also emphasizes the importance of interactivity between VR and



physical reality. As VR tries to approximate physical reality more and more, the brain will be trained to detect forgeries better and better, and Lanier says “The key to perception is interactivity.”<sup>28</sup> Furthermore, he says, “Through VR, we learn to sense what makes physical reality real.”<sup>29</sup> In other words, VR has the remarkable ability to help us understand the physicality of creation all the more. It sharpens our senses and perceptions to distinguish better and better the physical from the virtual. We are able to make a model and test it against the thing which it models. So then, there is a proper distinction between the models of VR and the things of physical reality, but VR is also able to help us to engage in learning about reality all the more. For example, geometric shapes in mathematics may be modeled in idealistic forms. These abstractions may not be physically real, but they help us to engage in our physical reality. These geometric shapes are not unreal but rather exist in an idealistic form. VR is still part of reality even in its approximation of physical reality.



Technology is an extension of reality, but Hefner takes the further step of proposing a nondualistic view of technology: technology is a form of nature, and it is grounded in the same matrix as humans and their culture.<sup>30</sup> This matrix is in fact the reality of creation. So then, technology is part of the creation, and it is the skill of humans to navigate this creation. According to creational theology, humans who are made in the image of God are to have dominion over the creation. Since technology is part of creation, then they should have dominion over technology as well. Since VR is technology, then humans are to have dominion even in the virtual world.

We have dominion, but we are nevertheless accountable. Being made in the image of God also means that humans have a relationship with God the Creator. This means that they are responsible and accountable to Him for their dominion. Since VR as technology is part of the creation, then humans are accountable to the Creator for their activities within the virtual world as well. Even in VR, we cannot escape God the Creator. Humans as creatures are limited within the creation and cannot go beyond it nor beyond their dependency on God. They are always depen-

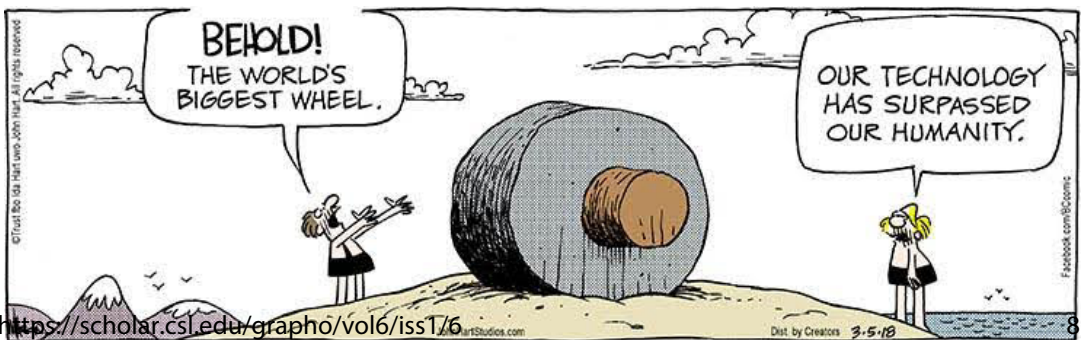


dent on Him even in VR.

### 2.3 Information

At the foundation of computer-science, one must deal with the concept of information. Paul Davies suggests that instead of viewing laws of nature as the most basic level of description for physical reality, we should use information instead.<sup>31</sup> So then, the explanatory scheme of physical reality should have the hierarchy of information, then laws of nature, then matter. Thus, the material world is based on mass, energy, and information.<sup>32</sup> Furthermore, Keith Ward argues that God is the supreme informational principle of the universe.<sup>33</sup> If God is the source of all reality, then He is also the source of all information. In this way, creation is not merely material but also informational. Even if VR were not real in the material sense, it can be real in the informational sense. Therefore, there is a distinction between physical reality and informational reality. VR relies on physical reality for its existence, but it delves into informational reality in its explorations. In this sense, the term “virtual reality” may be misleading to a certain extent as it tends to have us think that something is not real to begin with. Perhaps “digital worlds” captures the sense of exploring new environments which are governed more by coding and information.

If information is part of creation, then VR or any kind of digital world is also part of creation. So then, VR is indeed part of creation and God rules over creation. Therefore, God also rules over VR and every kind of digital world we might model or construct. God orders and rules over creation with His law, so God’s law is relevant even in the digital worlds. Commands like “Thou shalt not murder” should still apply even in our interactions in VR. If VR is viewed as an alternative reality, then it is tempting to rewrite the rules. In physical reality, we can’t fly, but in VR, we can act like birds or angels or whatever flying creature we want. In the digital worlds, we can extend our abilities. What becomes problematic is that we want to also rewrite morality. Murder is wrong in physical reality, but in VR, why not? What’s so bad about shooting up a bunch of people in VR? However, if VR is viewed as an extension of reality as opposed to an alternative, then no matter what digital world we inhabit, we are still accountable to God, who is the Creator. We cannot rewrite God’s law even in VR. In all our interactions in VR, we should continually ask ourselves, “Is this act in VR in line with God’s will?” There is no escaping God’s will. God is the Creator, and VR is within the creation. We remain accountable to Him there.



### 3 Care of Creation

Many Christians have been concerned about VR or the metaverse when it comes to worship.<sup>34</sup> That debate is still ongoing. However, what relevance does VR have for the care of creation? If we know how humans are embedded into creation, then we can know how humans are to act responsibly for creation. If VR is part of creation, then it can be part of humanity's task for the caring of creation.

One long-running question in creational theology is this: How are humans related to nature? Are they separated or connected to nature? There is a theological framework which helps to know the various answers to these questions. Consider the following possibilities.<sup>35</sup>

1. Humankind Set Apart from Nature

- (a) Humankind above Nature
- (b) Humankind over Nature
- (c) Humankind against Nature

2. Humankind as Part of Nature

- (a) Humankind with Nature
- (b) Humankind into Nature
- (c) Humankind within Nature

Being apart from nature implies a certain kind of dichotomy or dualism, and being part of nature implies some kind of integration. The first is mechanistic and atomistic, and the second is holistic and organic. The first approach tends to be utilitarian while the second approach tends to hold nature to have its own intrinsic value.

Where does VR fit in all this? Do we apply terms of dualism or of integration when it comes to VR? Why do we use VR in the first place? Zuckerberg demonstrated how AI could be part of VR, saying, "You'll be able to create worlds with just your voice."<sup>36</sup> So then, he envisions using VR to modify and reshape creation to our will with godlike creativity, exemplifying the model of Humankind over Nature. Marc Andreessen, internet-mogul and board-member of Zuckerberg's company, says the following in response to doubts against the metaverse:

The Reality Privileged, of course, call this conclusion dystopian, and demand that we prioritize improvements in reality over improvements in virtuality. To which I say: reality has had 5,000 years to get good, and is clearly still woefully lacking for most people; I don't think we should wait another 5,000 years to see if it eventually closes the gap. We should build—and we are building—online worlds that make life and work and love won-

derful for everyone, no matter what level of reality deprivation they find themselves in.<sup>37</sup>

In other words, the physical world has deprived us of certain realities, so we need to carve out and cultivate our own realities, creating our own paradise perhaps like in the model of Humans against Nature. These views of VR show themselves opposed to nature rather than being with or for nature. Instead of actually helping people to deal with their struggling realities, Zuckerberg and Andreessen are proposing to make alternative realities to distract people away from their problems. VR as alternative reality ends up denying reality itself by escaping this world and rewriting the rules so that the problems which we face are rewritten to not be problems at all. The real problem with this is that it is impossible to write off our problems. The attempt to escape from reality is a failed attempt. Our problems are still our problems whether we like it or not, and VR cannot change the rules of reality, which have been established by God the Creator. We cannot escape the Creator. Just as Adam and Eve tried to hide from their problems and kept passing the blame against their fellow creatures, VR as alternative reality is trying to hide from God and not care about the problems of others. If VR is above or against nature, then we will act in ways which are above and against our neighbor as well.

Need this necessarily be the case? No, it does not. If we have a self-interest in VR, then we will be against nature. If we forget our creaturely connections while in VR, then we forget who we are as human creatures, forget nature as creation, and forget God as Creator, which will end up in turning ourselves into gods and reshaping the digital worlds to our own whims. However, if we have creaturely humility, then we can use VR as a tool or skill for the sake of caring for nature. This is part of what Andy Crouch calls putting technology in its proper place.<sup>38</sup> Crouch believes that technology is in its proper place when it helps us to bond with real people whom we are given to love, to start great conversations, to take care of our fragile bodies, to acquire skill, to cultivate wonder and responsibility for God's creation, to engage in the world around us with all our senses, and to use it with intention and care.<sup>39</sup> VR can engage all our senses, and it can be used as a skill for modeling the world around us. According to Lanier, VR can model the world, we can sense the difference, we can have VR model the world better, we can sense the new and finer difference, and we can keep fine-tuning with the loop. We can actually study and model nature with VR in order to learn it better for what it really is. Hence, Lanier is contending that humans with VR are actually embedded within a larger system of nature, thus promoting a model like Humankind within Nature.

Furthermore, the models of VR themselves might be helpful in taking care of nature. How? Imagine this possibility. World-renowned biologist Edward Wilson (1929–2021) made a plea to Christians to join forces with science in order to save

biodiversity on earth despite disagreements on evolution.<sup>40</sup> Wilson believed that our best chance of preserving biodiversity is by preserving the environments corresponding to the different life forms. Toward this endeavor, he founded the Encyclopedia of Life, which is a database for cataloging every species and every environment on earth for the goal of predicting and handling our impact on them.<sup>41</sup> Perhaps, VR could be used to model ecosystems, being able to interact with the model in order to better understand the effects of our interactions with other creatures and their environments. If we had to make decisions about what to do with a particular environment or species, we could model it, simulate the interaction or intervention which we would place, and then see what the possible outcomes might be before we actually apply such interventions upon these ecosystems. This would not be an act of VR to escape from nature and create some kind of alternative world but rather an attempt to model the creation which we already have for the sake of taking care of it. The interactions within this kind of VR would be driving us back into the creation for its betterment. VR has been used in other scenarios such as training for military, training for surgery, rehabilitation for people with various disabilities, and more. The suggestion posed here is to show an example that VR could be a tool or skill which humans can use as part of their task of caring for creation.

#### **4 Conclusion**

VR is in and for the creation. VR is a form of technology, which makes it an extension and part of creation. It is a tool which extends our abilities in creation. It is a skill which helps us to learn more about the creation, giving us the potential to act for the benefit of creation. The rising popularity surrounding VR tends to lean toward VR as the sort of alternative reality that Zuckerberg and Andreessen promote. This ends up denying reality and going against creation, assisting people to fulfill their own desires rather than caring about their real situations. We must never forget that God is Creator and that we are creatures. Viewing VR as alternative reality eliminates God as Creator and leads us into creating our own realities like selfish little gods. Viewing VR as technology, as a tool or skill like Lanier and others promote, better grounds us as creatures and allows God to be in His proper place as Creator. We have dominion in VR just as much as the rest of creation, and we are just as accountable to God there as anywhere else. Once we care about God in VR, then we can more properly care about other creatures as well. We can use VR to model situations and scenarios for learning about the creation and for training to become better able to care for creation. VR can be used for the glory of God the Creator and for the benefit of our neighbor in creation.

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- 36 Charlotte Edwards, "WHAT THE ZUCK Inside Mark Zuckerberg's bizarre metaverse picnic as billionaire reveals plan to create new worlds with AI," *The U.S. Sun*, February 23, 2022, <https://www.the-sun.com/tech/4754481/mark-zuckerbergs-bizarre-metaverse-picnic/>.
- 37 Jim Geraghty, "Worst. Olympics. Ever.," *National Review*, February 18, 2022, <https://www.nationalreview.com/the-morning-jolt/worst-olympics-ever/>.
- 38 Andy Crouch, *The Tech-Wise Family: Everyday Steps for Putting Technology in Its Proper Place* (Grand Rapids, MI: Baker Books, 2017).
- 39 Crouch, *The Tech-Wise Family*, 20–21.
- 40 Edward O. Wilson, *The Creation: An Appeal to Save Life on Earth* (New York, NY: W. W. Norton & Company, 2006).
- 41 Wilson, 120–121.