Naturalism and Well-Being

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Introduction

Conceptions of human flourishing vary, but there are requirements for well-being that nearly everyone would endorse: meeting basic physical and emotional needs, having opportunities for learning, mastery and self-expression, being a valued member of a secure community, and finding one's place in the ultimate scheme of things. These domains of well-being reflect the complexity and variety of human motivations, not all of which, unfortunately, find fulfillment in every life.

Because it speaks to all these domains - material, psychological, social, and existential - a worldview can inform the full range of human flourishing. Naturalism is a science-based worldview which situates us in an impersonal cosmos, with no god in charge and no apparent purpose. Although this austere vision of the human condition might seem bereft of resources for well-being, this chapter will argue the opposite: naturalism is a rich, rewarding, and importantly, *true* understanding of reality that offers ethical and spiritual wisdom, psychological stability, and practical guidance.

This chapter does not aim to justify naturalism as a worldview, although some remarks in its defense will be forthcoming, and it will be contrasted favorably with other worldviews. Rather, the aim is to show how naturalism can contribute to a conception of human flourishing that is widely, although not universally, accepted. Naturalism has ethically positive and politically progressive implications in its support for human rights for all human beings, whatever their gender, race, sexual orientation, or religious persuasion. It has humanitarian implications for criminal and social justice policies, and for our understanding of addiction and behavioral health. It affords greater latitude for personal self-expression and autonomy than do many faith-based worldviews, while providing a satisfying perspective on the existential questions of meaning and purpose in life.

However, it should be emphasized that naturalism is not the only route to such goods. Adherents of supernaturalist religions, as well as naturalistic variants of Buddhism (and those who hold no worldview at all) may reach roughly similar conclusions about human flourishing, albeit from different premises. Nevertheless, naturalism is unique in using the scientific understanding of ourselves and our place in the cosmos to address the many-faceted question of how to find fulfillment in life.

Worldview naturalism obviously goes beyond atheism (the denial that gods exist) or agnosticism (having no definite view about gods' existence), by presenting a comprehensive picture of reality and the human condition which can serve as a guide to living a meaningful life. Although it has close affinities with secular humanism, which takes naturalism as its metaphysics (secular humanists usually have no truck with the supernatural), naturalism is perhaps less parochial in its orientation. It draws greater attention to the global impersonal picture – the natural cosmos and its causal laws – that sets the stage for, and ultimately shapes the human drama. Human beings

are but one among trillions of natural phenomena. And naturalism shouldn't be confused with the transcendentalism of Emerson (1836) and Thoreau (1854), which asserts that communion with untrammeled nature (think forests and glades) affords us access to a higher, true reality. Worldview naturalism sets up no deep dichotomy between human culture and commerce and the natural world from which they spring; nor does it suppose that experiences, however transcendent, necessarily reveal truths about the world.

The Quest for Flourishing

The personal quest for flourishing comes naturally to us. From birth onwards we seek out rewarding activities and states of affairs and avoid pain and discomfort, whether physical or emotional. Therefore, it's safe to say that whatever your projects and interests might be, from the mundane to the spiritual, their pursuit participates in your quest for flourishing. Of course, we don't always make the achievement of personal well-being our top priority, since we're also concerned with the well-being of our family, friends, community, nation and, sometimes, even the planet. But still, we engage in larger spheres of ethical concern because it matters to us as particular individuals. To want a safe, secure and rewarding social environment is part of our selfish motivational endowment, which usually makes the quest for human flourishing a communal project.

Dimensions of well being

The dimensions of personal well-being range from the satisfaction of basic material and emotional needs – food, shelter, security – to exploring the possibilities of our physical, aesthetic, and intellectual potential. Some satisfactions are consummatory, driven by biological appetites, others a matter of companionship, learning, mastery, long-range achievement, and the quest for the deepest meanings in life. Maslow's "hierarchy of needs" is an oft-cited guide to these dimensions, a central point being that unless basic needs are met first, other sorts of well-being may be unobtainable (Maslow 1943). The multiplicity of dimensions of well-being means that the human animal has huge, diverse potential for flourishing, and therefore for the denial of such flourishing. We are bequeathed, like it or not, with a life, and also with the desire to make the most of it. Often we are thwarted in this quest.

Requirements for well-being

To flourish anywhere near our potential, we must bring a host of resources to bear: material sustenance, education, social and technical skills, the physical and social infrastructure of communities, and ideally a set of goals and purposes that endow our lives with meanings beyond the pursuit of momentary satisfactions. Because the dimensions of human well-being encompass all that we creatures are - material, psychological, social, and existential –a coherent worldview that addresses these dimensions can help us live a fulfilling, meaningful life. Naturalism is such a worldview (naturalism.org, Clark 2007a).

Worldview Naturalism

A worldview, simply put, is how we take ourselves to be situated in the widest possible context, the context of existence itself, of all that there is. Necessarily, we take our worldview to be at least an approximation to the truth of our global situation, including the truth about what sorts of creatures we fundamentally are.

Traditional supernaturalism

The dominant worldviews these days are religious in the traditional supernatural, dualistic sense: there exists a god (Christianity, Islam, Judaism) or gods (Hinduism) with powers of creation and control that transcend our ordinary earthly powers. Nature is real enough, but there is also a supernatural, perhaps immaterial realm that exists beyond it, which supplies us with morality, meaning, and life everlasting. As much as some traditional religions may affirm the importance of our material lives on earth, they nevertheless divide reality into the natural and supernatural, and posit that we have two natures, body and soul (Moreland 2009).

The naturalist alternative

Naturalism begs to differ with traditional religious dualism. Taking science as the most trustworthy route to knowledge, naturalists see no good evidence for the claim that either we or existence as a whole are of two categorically different natures. What science reveals instead is a vast, interconnected, multi-layered, diversely populated and yet single realm in which all phenomena partake of the same basic constituents. This realm we call, simply, nature. There seems no reason to suppose, given scientific observations thus far, that there exists another, supernatural realm that operates according to different laws or that contains radically different phenomena (Ritchie 2008). Applied to ourselves, naturalism holds that we too are of a single, physical nature. We are naturally evolved, material creatures whose remarkable capacities for thought, feeling, cooperation, and ethical concern derive from our materially-based endowments (Richards 2000).

Appearance vs. Reality: Putting Epistemology First

We can apply the tenets of worldview naturalism - its understanding of how we can best know (science), and how things ultimately are (a single natural world) – to the project of human well-being in the domains mentioned above: practical, ethical, and existential. To start, well-being arguably requires a reasonably good grasp of how things are, as opposed to how they might seem, or how we might want them to be. Worldview naturalism gets its initial grip on us by respecting the crucial distinction between appearance and reality.

Cognitive fallibility

As creatures wanting to survive and prosper in a complex world, we need a reasonably accurate picture of our environment to guide successful behavior. We have sensory and cognitive

capacities with which to construct perceptual and conceptual models of world, which we then use to make predictions. But often enough, we don't get things exactly right, and sometimes we're drastically off the mark. We are often deceived about reality, given our cognitive limitations and motivational biases. Thus arises the commonsense distinction between how things appear to us versus how they actually are. The project of knowing, of epistemology, is to make our models more accurate.

The rise of science

In the twenty-first century we are the beneficiaries of great progress in the epistemological project, that afforded by the scientific method, gradually refined over the last four hundred years. The basic idea is simple enough: in deciding what's likely to be true about the world, don't trust authority, revelation, sacred books or traditional wisdom, but look to the world itself. Neither trust your intuitions, hopes, or fears; instead, look to the publicly available evidence for and against a claim, for instance the probability of a tornado tomorrow, or the best cure for cancer.

This method for deciding what's true, naturalists say, applies to all factual questions about the world, from the mundane to the cosmological. Since nature is of a piece, including ourselves and our cultures, there isn't another way of knowing that works better in certain domains. This puts naturalism directly at odds with traditional religious claims that certain questions, such as our true nature and the origins of life and the universe, find more truthful answers in faith and scripture (Coyne 2015). The conflict between science and religion is on full display in *Inherit the Wind*, a dramatic recounting of the 1925 Scopes "Monkey Trial" on teaching evolution in Tennessee (science loses, but religion is taken down a peg).

The rational requirement for evidence

The scientific, empirical method has been extraordinarily successful in giving us useful knowledge. A primary contribution science-based naturalism makes to well-being is to insist that we track the truth of our situation, whatever the scale of our inquiry. The advisory is straightforward: whether it's your personal health, or the health of the planet, stick to publicly available evidence as a guide to action. Your hopes, fears, prejudices, personality quirks, politics, and commercial interests are not good reflections of the facts; they are, more probably, biases (Shermer 1997). You may not like what the evidence shows (say you're diagnosed with cancer), but the chances are you will like the outcomes of evidence-based action (chemotherapy) better than faith-based alternatives (prayer). To stick with the best objective evidence in forming beliefs – empiricism – is simply to be maximally rational in acting on your own and others' behalf.

Cognitive humility and responsibility

The rational allegiance to empiricism not only makes us more effective agents, it keeps us from getting too cocksure and inflexible in our opinions. The naturalist's commitment to public evidence leads to cognitive humility and openness to correction. As it might be put, the naturalist

always maintains the right to be wrong, should the facts turn against her. This has great psychological advantages: one's identity is less wrapped up in being right – an enervating and unattractive use of personal resources – and more in being true to the best method of deciding what's true. The commitment to evidence means that revising one's long-held view of, say, climate change or genetically modified organisms, can be seen as a virtue and a strength, not a defeat or admission of weakness. Moreover, as interdependent social beings, it is arguably our cognitive responsibility to model reality as accurately as we can. To flout the demand for good evidence can put us individually and collectively at risk: we may well be acting on the basis of ignorance and wishful thinking, not facts (Clifford 1877). But being a good empiricist isn't easy. In the film *Contact*, a scientist is forced to admit that she doesn't have sufficient evidence to prove that she's encountered an advanced species elsewhere in the Milky Way, even though she's convinced that the encounter took place.

Resilience

Naturalists imagine, with some justification, that their commitment to empiricism makes them less susceptible to delusion and wishful thinking. This, in turn, inoculates them against the disappointments that would otherwise follow when cherished beliefs are debunked. To be reality-based in one's convictions leaves one less vulnerable to cognitive disruption, and more emotionally stable should the facts require changing one's mind. By being less factually wrong in the first place, and more open to correction when proven wrong, naturalists can access a non-defensive psychological resilience and flexibility unavailable to those wedded to beliefs that must be defended, no matter what the cost.

Human Nature: Who Are We, Essentially?

The science-based, empirical conclusion about human nature is that we are entirely natural, physical beings, the product of unguided evolution. This has profound implications for our conceptions of self and personhood, challenging traditional notions of soul, agency, and free will. But understood correctly, the naturalistic revolution in our self-concept gives us many advantages in the quest for human flourishing.

Physicalism

As natural beings, we are entirely physical beings. Despite how it might feel, there's no empirical evidence for anything categorically non-physical about us, such as an immaterial soul. Our capacities for thought and consciousness are materially based in the brain and body, our stable personalities likewise functions of complex patterns of neural connections that persist over a lifetime. The brain, linked via sensory and perceptual systems to the body and outside world, gives rise to our conscious experience and controls behavior effectively, putting the soul out of a job (Flanagan 2002, Metzinger 2010). So the natural world isn't merely physical, it's astonishingly, fantastically physical in what it manages to accomplish in the human form (Crick 1995). However, this is not to say that the so called "hard problem" of consciousness – how

certain brain processes bring about subjective experience – has been definitively solved (Chalmers 1995). Indeed, sentience might not need a biological brain as its physical substrate, an unsettling possibility explored in the films *Her* and *Ex Machina*.

Causation and human agency

The science-driven project of naturalizing ourselves is rapidly picking up steam, and in the process some long-standing beliefs about human agency are coming under pressure. In particular, the naturalist's challenge to the soul calls into question the widespread belief that human beings are causal exceptions to nature, that we have a contra-causal free will (often called libertarian free will) that transcends natural laws (Wegner 2002, Oerton 2012). This denial is a radical departure from the dualist view of ourselves that's held sway for millennia. That we are fully caused creatures, as science strongly suggests, and in no sense ultimately self-caused, are among the most profound and far-reaching tenets of worldview naturalism.

In proceeding through this chapter, keep in mind that any randomness or indeterminism that might play a role in explaining behavior can't add to human powers of origination and control. Random, uncaused or undetermined events, by definition, aren't produced by our desires or intentions, so we can't take credit or blame for them. Nor can anyone be their own cause: one would have to first exist to bring oneself into being, a logical impossibility.

Connection, Compassion and Control

Before delving into the details of how naturalism can inform human well-being, an overview is in order. Although naturalism defeats pretensions of our being little gods, situated above nature, it has definite compensations that fall into three basic categories that speak to universal human needs.

Connection

First, under naturalism we find ourselves completely at home on the planet, in the solar system, and in the cosmos, alienated in no respect from what has given rise to us. Our intensely personal projects participate in something vastly larger, whose origins, scope and ultimate destiny may forever elude our understanding. Even though it puts us in our natural place, so to speak, this realization can add dimensions of significance and wonder to life that rival, and, perhaps, surpass standard religious reassurances of salvation and the life hereafter. Naturalism affords us, in all aspects of our being, a deep connection to all that exists.

We are also causally connected: to the past, to our current situation, and to the future, as our lives play out. These connections conform to deterministic and probabilistic natural laws described by science, whether at the physical, chemical, biological or behavioral level. Each of us is an unfolding natural process, a moment-to-moment expression of all the conditions that constitute

us and surround us. Nothing about us escapes causal connection to the world, nor, equally, is the world insulated from our individual causal contributions to the unfolding of events.

Compassion

Since a person's character, thoughts and actions don't transcend the cause and effect laws that science reveals, we're all equally products of our genetic endowments and our environments. Since you didn't ultimately create yourself in any respect, you can't take ultimate credit (or blame) for who you are, as some supernatural notions of human nature would have it. There are no privileged souls or spirits that are somehow more deserving than others. But for the luck of the draw in your genes and upbringing, you would be the criminal, the homeless person, or the billionaire. This insight leads us to become more accepting, compassionate and sympathetic toward ourselves and others, and less likely to harbor feelings of resentment, anger, envy, or contempt. As Baruch Spinoza said about causal determinism: "This doctrine …teaches us to hate no one, to disesteem no one, to mock no one, to be angry at no one, and to envy no one…" (Spinoza [1677] 1996, p. 68).

Control

By understanding that you are fully caused, and the ways in which you are caused, you gain control and power over yourself. We are not passive puppets of determinism, since human beings have causal powers just as much as the conditions that shaped them, often more. However, instead of supposing you can simply choose to be other than you are, you understand that self-change and effective action flow from concrete causal factors. Create the right conditions, then self-change and self-efficacy will follow, whether your project is losing weight or becoming a Fortune 500 CEO.

Naturalism also makes us wiser in creating conditions which foster cooperation and social harmony. Since attitudes and actions always result from causes, not from a mysterious uncontrollable free will, we can learn to control those causes in service to our collective well-being. Understanding causation in behavior translates into becoming more effective at work, in family and social situations, and especially in efforts on behalf of planetary sustainability, which may well require significant behavioral change on all our parts. So to connection and compassion, we can add increased control as a benefit of adopting a worldview that locates us entirely within the natural causal nexus.

The Moral Psychology of Naturalism

Having covered in general terms some advantages naturalism affords in the quest for well-being, there are many specific benefits in domains of ethics, social policy, personal autonomy, and existential concerns. In arriving at these benefits, the route often traveled is to address worries that arise in taking a completely causal view of ourselves, then to point out the advantages of embracing it.

Morality survives

Primary among these concerns is a worry about morality and responsibility: if (any randomness aside) human beings are fully determined in who they become and what they do, how can we justly credit and blame them for their actions? If indeed no one could have done other than what they did in an actual situation (as opposed to hypothetical situations), then is everything forgiven, excused, or permitted?

Not at all. Our basic sense of right and wrong is a natural endowment given to us by evolution, so even in the absence of a divine law giver, most of us are strongly motivated to observe and maintain ethical norms (Greene 2013). As described by ethologist Franz de Waal (2013), human morality has clear precursors among primates such as bonobos and chimpanzees. Humans of course enjoy more complex social arrangements, with greater opportunities for cooperation and cheating, so have correspondingly more nuanced moral intuitions. But there's little doubt that that our moral sense is genetically encoded, even though there is considerable cultural variability in its expression (Pinker 2008).

Moral rules, rewards and sanctions are necessary in order to guide behavior to the good, so there is no "get-out-of-jail-free" card that follows from causal determinism. Just because we've behaved badly in the past doesn't mean we will in the future: we can be caused – determined – to behave better (Clark 2006). Nor are we required to automatically forgive or excuse transgressions against us, something psychologically impossible and perhaps dangerous if the transgressor remains unrepentant and likely to re-offend (McCullough 2008).

Blame and admiration: the mitigation response

These reassurances in hand, there are distinct moral and practical advantages to the naturalistic realization that we are not first causes, that character and behavior are entirely the result of circumstances that ultimately we did not choose. First, we become more reality-based in our expectations of ourselves and others. We can't any longer suppose that, as a situation played out, someone could have done otherwise, even though we might wish they had. Nor can we suppose people are fundamentally to blame for their character: individuals are fully caused to become good or bad. Unsurprisingly, this realization reduces recrimination, resentment, unproductive anger, and blame - emotions that are incited and amplified by seeing others as first causes (Waller 2011).

Likewise, we're much less likely to stand in worshipful awe of the very talented and successful. As much as we admire their achievements, we can see they were, finally, lucky in their genetic and environmental circumstances. Since the psychological effect of putting human agents in a causal context is to mitigate or dampen reactive attitudes, such as resentment and hero-worship, this could be called the mitigation response. Appreciating the fact that there's a full causal story behind each and every human being, and their choices and actions (even if we can't know all the details), can help maintain equanimity and poise in a world that supplies us with endless

emotional provocations. This counts as a substantial contribution to our well-being, one proposed by none other than the Buddha, who taught the thesis of dependent origination (what we think of as cause and effect). His insight, the basis for Buddhist principles of compassion and acceptance, is now reinforced by naturalism (Clark 2007a pp. 24-5).

Self-compassion and acceptance

The mitigation response can also serve us well by modulating our self-directed attitudes and emotions. Since we can't suppose that we could have done otherwise as a situation played itself out, this helps to limit unproductive self-blame, recrimination, and feelings of worthlessness. This isn't to say that emotions such as regret, guilt, and shame are never appropriate, since they prompt us to make amends and strengthen our resolve to do better next time. Without them we'd all be heartless and shameless psychopaths. But the mitigation response prevents these emotions from overtaking and incapacitating us; self-compassion can replace self-recrimination.

Likewise for pride and self-aggrandizement: we can't, under naturalism, suppose that our successes are the expression of a self-made will, talent, or capacity for hard work. All of these qualities have been given to us, ultimately, even though we might experience making sustained effort as purely self-originated. Still, we can celebrate our accomplishments, but without the smugness or superiority generated by supposing we were anything but lucky in our circumstances. The gratitude and humility generated by taking a causal, naturalistic view of one's good fortune is a more attractive and more secure basis for one's identity than self-centered pride.

Science and Solidarity: The Case for Universal Human Rights

The foundation for compassion afforded by naturalism has far-reaching implications for human rights. Since there are no superior, especially deserving souls (there are no souls, period), no one can claim a special privilege or worth that justifies special treatment. There is no empirical justification for supposing any class of individuals deserves greater rights or opportunities for well-being than other classes.

No scientific basis for discrimination

Discriminatory policies, such as withholding equal rights to women in patriarchal societies, often find justification in non-empirical beliefs, for instance in the natural inferiority and subservience of females to males. Science, in contrast, cannot justify special privileges supposedly owed those ranked higher in a social hierarchy, or belonging to particular groups, whether of gender, race, sexual orientation, ethnicity, nationality, religious affiliation, or other denomination. Progress in human rights has been driven by dismantling ideological and religious justifications for discrimination by showing them to have no factual basis. There is no evidence to support the claim that whites deserve greater opportunity or success than blacks or Latinos, or that men have a greater claim to self-actualization than women, even though such claims have historically been

rather common and are still made in some cultures. Further, any departure from science in deciding what's true about human relations has the potential to lend support to social discrimination. Faith, scripture, intuition, and revelation, when untethered to evidence, can provide fertile ground for the belief that we are not equally deserving of a good life.

As scientific empiricism – the basis for naturalism – gains popularity as a guide to reality, the discriminatory social practices built on non-empirical beliefs will be deprived of their rationales, making the presumption of equal and universal rights more and more the norm (Shermer 2015). Whatever biological and cultural differences exist between genders, races, and nationalities, there are no scientific grounds for supposing members of out-groups, or low status members of in-groups, deserve not to have their human needs met, or not to develop their full potential by according them the same rights as others. To the extent that these rights depend on being free from religious or ideological dictates, the acceptance of naturalism works to support their affirmation.

An equal opportunity worldview

The upshot is that science-based naturalism accords greater numerical opportunity for human flourishing than do some non-naturalistic worldviews, since it extends the basic rights necessary for such flourishing across the board. There are no chosen people, as there are under some versions of traditional religions, racist ideologies such as Nazism or white supremacy, and Social Darwinism (the pseudo-scientific supposition that economic winners deserve to win, and losers lose). Under naturalism there is no reason that you – whatever your race, class, or religion – don't deserve a full measure of well-being, so long as you respect the same rights to well-being for those of other groups. Naturalism, therefore, is an equal opportunity worldview, supporting the ideal of universal human flourishing.

Criminal Justice

Having seen its global egalitarian implications, we can next consider benefits conferred by adopting social policies consistent with naturalism. Two policy domains stand out as especially relevant: criminal and social justice. Taking a thoroughly cause and effect view of human agents cuts against certain justifications for punishment and social inequality, helping to produce a less punitive, more equitable society, one that increases opportunities for personal and collective flourishing (Clark 2004).

Against retribution

How might our attitudes toward criminal offenders change were we to take on the science-based view that they couldn't have acted otherwise, given their genetics, upbringing, and the situation in which they committed a crime? Arguably, we would see that they were, ultimately, unlucky in their biological, environmental, and situational circumstances; but for our good luck, we too might be standing in the dock. Given his circumstances, a murderer could not have been or acted

otherwise, in which case causal responsibility for the crime is distributed to factors outside (but still including) the individual. This realization helps to undercut a primary motivation for punishment: that the offender deserves to suffer because he could have acted otherwise, but simply chose not to.

This retributive rationale for punishment – that suffering is deserved, and so should be inflicted whether or not it produces any benefit to the offender or society – is deprived of its main psychological support once we realize that the offender is in no sense self-created, but rather the outcome of a largely deterministic causal chain. We can't any longer single out the agent as ultimately blameworthy and thus deserving of suffering; rather he's only the most proximate cause of the offense. This in turn triggers the mitigation response: our retributive emotions are attenuated by seeing that the offender could not have done otherwise; rather, a host of historical and situational factors determined the criminal, and the crime.

Forgiveness and reconciliation

Our retributive inclinations are natural enough, but we need not give them pride of place in our emotional economy. Indeed, the benefits of giving up retribution are potentially far-reaching. Having appreciated the causal factors that explain the offender, we are more likely to rise above the desire for revenge, a desire that diminishes us by its narrow, aggressive drive for vindication and its need for another's suffering. Having let go of this desire, when we see signs that the offender truly regrets the harm he's done, we are in a far better position to forgive. Forgiveness then opens up the possibility for reconciliation and reintegration of the offender into the community, as well as the opportunity for victims to recover their equanimity, compassion and self-control in service to ends more productive than retaliation (McCullough 2008).

Criminal justice reform

Questioning retribution can also play a central role in criminal justice reform. Prison conditions, especially in the US, are often designed to maximize degradation and deprivation, on the grounds that offenders are simply getting what they deserve, for instance when raped, beaten or held in solitary confinement. But when punishment is shorn of its retributive rationale, its aims are limited to deterrence, rehabilitation, restitution, public safety and moral reform. If so, the infliction of harms, deprivation and death on wrong-doers can only be justified by whether it serves these aims. And often it does not: harsh prison conditions are far more likely to further damage inmates than impart any moral or social improvement. Nor are they effective in deterring those with little to lose (every crime committed constitutes a failure of deterrence), but are more likely to foster criminality and legitimize aggression. Renouncing the punitive excesses justified by retribution, and reforming the criminal justice system to focus on rehabilitation, reform, and community restoration, not meting out just deserts, will benefit both the offender and the community to which he will likely return (Gilligan 2001, Clark 2005). However, such reforms must always respect the autonomy and basic human rights of wrong-doers, lest the cure of

rehabilitation prove worse than the disease of crime – a point vividly made in Stanley Kubrick's film *A Clockwork Orange*.

Getting smart on crime

A third benefit of accepting that wrong-doers are fully caused in their character and behavior is that we become smarter on crime, seeking to prevent it by addressing criminogenic conditions. There is no essential mystery about why criminal and moral offenses occur, only a deficit of knowledge and attention to their causes, a deficit encouraged by the myth that human beings somehow transcend causation in their character and choices. Give up that myth, then wrong-doing becomes a failure, not of an individual's uncaused will, but of our (caused) collective will to investigate and remediate the determinants of crime. And indeed, we can be caused to become more pro-active in crime prevention by promoting the science-based insight that behavior and will themselves are fully caused. Seeing that individuals are completely a function of biological and environmental conditions will allow us to move beyond retribution and access the economic and social benefits of taking a public health, prevention-oriented approach to crime, as opposed to the punitive, after-the-fact approach currently in place.

Social Inequality

The naturalistic insight that there are no privileged or special persons, only the luck of the draw in our determinants, can also help to shape attitudes and policies related to social justice and inequality. Exposing the myth of the ultimately self-made self draws attention to the actual causes of success and failure in life.

The causes of success

On a deterministic understanding of behavior, we can see that the economically successful achieved what they did as a function of fortunate genetic endowment, upbringing, education, and connections. This is not to discount the importance of capacities for hard work and self-discipline in reaching one's goals, only to say that such capacities too are ultimately bequeathed us by our biological and environmental circumstances; they are not self-created virtues. Nor does this insight diminish the social value of an individual's success or our appreciation of someone's talent, genius, and originality; it simply places them in the broader context in which they originated. Admiration remains, but conditioned by the knowledge that the talented and successful are, ultimately, lucky in their endowments and advantages. As strange as it might sound, they don't ultimately deserve their riches or success, even though they certainly deserved, like the rest of us, the opportunity to succeed.

Poverty and the American dream

Similarly, we can understand the failure to get ahead not as a failure of an ultimately self-chosen self, but as the outcome of a host of formative and situational causes. There is no deep puzzle

about poverty; rather, there are a host of socio-economic conditions, that were they addressed, would increase social mobility and grant the opportunity to flourish to many more individuals. In many cases we don't know the full causal story, of course, but admitting there is such a story challenges the presumption that somehow the poor deserve to be poor, that they could and should have succeeded given the disadvantaged conditions they faced.

The myth of the so-called American dream is exactly this presumption: that everyone has an equal shot at success; if you don't make it you've got no one but yourself to blame, whatever your situation. This ethos of ultimate personal responsibility diverts attention from the myriad causes that shape a person and their prospects, and drives the conclusion that individuals deeply merit their economic status. Unsurprisingly, this helps to justify laissez-faire social policies which take inequality to reflect the just outcomes of self-willed choices. Challenge the myth of self-creation and the justification for inequality as deserved collapses, clearing the way for policies which support community development, education, job training, and other requirements for individual advancement. Ironically, the American dream will be more likely to be realized if the self-made self is called into question.

Naturalism and progressive policy

It will not have escaped the reader's notice that naturalism as presented here lends support to what many might consider liberal, progressive policies in criminal and social justice (this partisanship continues below in other policy domains). This is because liberals, more than conservatives, are by nature more likely to be receptive to evidence that contradicts beliefs which restrict rights and opportunities to supposedly privileged, "deserving" groups. Liberals, as characterized by the "Big Five" scale of personality dimensions, a well-validated psychometric instrument (Goldberg 1992), exhibit more "openness to experience" than do conservatives, so are more exploratory and less resistant to change than conservatives. Conservatives, on the other hand, exhibit more "conscientiousness," a trait associated with a need for structure, order and stability (Carney et al. 2008).

Conservative social policies are often (not always) grounded in traditional beliefs about human nature and social hierarchies that have little or no empirical basis, for instance belief in the ultimately self-made self that deeply deserves its economic lot in life. Those who are more evidence-based in their worldview – those more open to what science has to say - will tend to reject such beliefs and the policies they help justify, ending up on the liberal side of the political spectrum (Mooney 2012). It is no coincidence, therefore, that according to a 2009 Pew Research Center poll, only 6% of scientists identified themselves as Republicans (Pew Research Center 2009, p. 5), and that institutions of higher learning, friendly to fact-based research, lean liberal in their politics.

This is not to say that all naturalists are liberals; laissez-faire libertarians, not infrequently found among atheist and skeptic groups, usually make no appeal to the supernatural in arguing for

shrinking the social safety net. This suggests that one needs an inclination toward empathy, as well as openness to empiricism, to end up a liberal.

Maximizing Autonomy

Because it challenges the restrictions on the freedoms of conscience and belief often associated with supernatural religions and non-empirical ideologies, naturalism liberates reason to explore the world, constrained only by the demand for evidence. By discounting traditional religious justifications for prohibitions on certain behaviors, it expands the available options when facing momentous choices in life: who to partner with, whether to reproduce, when and how to die, and, beyond the personal, what sorts of creatures we might want to become, and in what sort of world. Naturalism can therefore help maximize personal and collective autonomy.

Challenging authority

Science mounts a powerful challenge to the argument from authority in justifying beliefs: nothing is true simply because a religious leader or text claims it to be so, but only because the collective enterprise of fact-finding and theory building makes it the most plausible conclusion. This immediately frees us from any requirement to believe what's been handed to us - by a church, political party, or other presumptive authority - as a supposedly incontrovertible take on reality. We can, and should, be skeptical of pronouncements about the existence of souls, gods, miracles, contra-causal free will, the paranormal, divine laws and purposes, and life after death. As a song in the Gershwin musical *Porgy and Bess* memorably puts it, "The things that you're liable, to read in the Bible, it ain't necessarily so." When the supernatural and the laws and injunctions based on non-empirical beliefs about the world are discounted, restrictions on behavior associated with such beliefs are no longer tenable.

Sex, marriage, birth, and death

Freedom from non-empirical claims about what's true and morally permissible benefits us by widening the available choices for personal fulfillment. Although some traditional religions still hold that homosexuality is sinful and "unnatural," there is no naturalistic justification for discrimination against gays or transsexuals. Marriage and other rights are thus extended to those of all sexual orientations, a dramatic expansion of personal liberties for a significant proportion of humanity. By discounting religious prohibitions on contraception and abortion, but taking any secular, evidence-based arguments against them seriously (Wenz 1992, Clark 2007b), we are freer to choose if and when to bring a child into being, to correct or prevent birth defects as technology allows, and to end unwanted pregnancies before a person comes into existence. Since under naturalism there is no divinely ordained requirement for us to suffer in pain or irreversible dementia (such as caused by Alzheimer's) until death finally comes, we gain in autonomy at the end of life, more able to choose the time and manner of our passing.

Transhumanism

Because there is no inviolable soul or immaterial essence that defines a human being, and because as a species we are the result of natural selection, not God's plan, there is no supernaturally derived prohibition against taking control of our biological destiny. We are free to decide, collectively, whether or not to re-engineer our bodies, perhaps melding with machines to suit our desires and ambitions (More and Vita-More 2013). Of course, there is equally no requirement that we must undertake any such Promethean transhumanist transformation. But since the option is there, this too adds to our freedom. Such freedom is perhaps not an unmixed blessing, given that we can't foresee all the consequences of embarking on our redesign; but, the naturalist insists, it's better to grapple with tough questions than to take refuge in illusory limitations. Taking responsibility for our own nature is among the most daunting challenges presented by naturalism, and it adds a dimension of interest to life missing from some traditional worldviews.

Naturalism and the pluralist state

Because naturalism makes no appeal to otherworldly or sectarian justifications for policies concerning what we can or cannot do, it is broadly consistent with the requirement, characteristic of liberal democracies such as the United States, that there be secular, this-world justifications for such policies. This means that naturalism is by nature friendly to pluralist societies that permit holding a wide range of worldviews, unlike some of its theistic and non-empirical rivals in the marketplace of belief. And indeed, the rise of the pluralist state is closely linked to science's challenge to the ideological justifications for authoritarian regimes which prohibit freedom of religion (Dacey 2008). If you value the separation of church and state, diversity of belief, the right to self-government, the due process of secular – not religious or sectarian – law, and equal protection under that law, you have an ally in naturalism. But of course the pluralist state, properly conceived, will not make naturalism itself a required belief, since that would limit the freedom of conscience prized by so many naturalists and supernaturalists alike.

Addiction and Behavioral Health

Human beings are vulnerable creatures, subject to a myriad of diseases and disorders that compromise well-being. Behavioral disorders such as addiction and obesity, and mental illnesses such as depression, schizophrenia, and obsessive compulsive disorder (OCD), are often stigmatized as personal failures of will and self-control. If we suppose choices and actions aren't fully determined, we can (and often will) hold the victims of such disorders as ultimately responsible for their plight, affording them little sympathy or support. We'll also tend to ignore the actual genesis of addiction and mental illness, which lies in a person's history, biology and environment; such ignorance slows the pace of discovering effective cures and interventions.

The physical basis of addiction

On a fully naturalistic view of ourselves, there is a physical, brain- and behavior-based explanation of how someone becomes addicted to alcohol, tobacco, cocaine, heroin, marijuana or any other psychoactive substance. There is no non-physical component of the human animal that somehow escapes being at the effect of the conditions in which addiction takes hold, even in making the first voluntary choice to use a drug (Heyman 2009). This means that if you had more or less the same bio-chemical vulnerability to addiction as the alcoholic next door, and had been in more or less his circumstances (a family culture of drinking, let's say), you too might be obsessed with finding your next beer. This realization necessarily undermines the supposition that addicts could simply have chosen not to become addicted, given their circumstances, and so morally deserve their suffering and stigmatization. Since under naturalism they deserve no such thing, the proper, and natural, response is compassion: there but for chance and causality go you. Compassion, in turn, opens the motivational door to effective action on behalf of those unlucky enough to have fallen prey to addiction.

Prevention and cure

The physicalist understanding of behavioral disorders, although by no means complete, holds great promise for their prevention and cure. Obesity, for example, is now at epidemic levels in the United States and rising in many parts of the world, but research on its environmental and biological determinants is gradually giving us the tools to combat it. What's become clear is that levels of eating and exercise are fully a function of a person's learned behavior, their immediate environment, and any inherited predispositions. Will power too is a factor here, so long as we don't suppose the will is independent of its own determinants, physical and situational (Baumeister & Tierney 2011). We can strengthen the will to lose weight more effectively once we accept that it has sufficient causes. The key to physical fitness, therefore, is to first understand the mechanics of food- and exercise-related behavior, then modify home, school, work, and community environments to produce the healthy behavior we want. Human beings can become very smart behavioral self-modifiers once it's acknowledged that all behavior, and all motivation, have their causes.

Designing freedom

A reassurance is in order here: the intentional design of environments to produce healthy behavior, whether with respect to fitness, food, drugs, gambling, sex or other potential causes of disordered behavior, is in no sense a limitation of our freedom, so long as the design process is responsive to input from those affected. Individuals, in the long run, are far freer when they're not burdened (literally) by excess weight or (figuratively) by gambling debts, even though some public policies - regulations, taxes, cash incentives, zoning - might intentionally limit or "nudge" their behavioral choices in certain (healthy) directions (Thaler and Sunstein 2008). The smart design of environments, in light of accepting that behavior is fully caused, is simply to

assert our real, natural autonomy and self-control (Waller 1998) in service to better public health, a necessary condition for increased freedom and well-being.

The Fate of the Planet

In the second decade of the 21st century, we face looming threats, mostly of our own making, to the stability of global civilization and thus the well-being of billions of human beings alive and yet to be born, not to mention the very survival of other species. These include the environmental threats of climate change and resource depletion, and the threat of ideologically motivated conflict, all of which could result in mass dislocation and destruction (and already have to some extent). How might worldview naturalism contribute to the long-term sustainability of our planet, and the peaceful resolution of disputes between worldviews themselves?

Planetary responsibility

Concerning the environment, naturalism heightens our concern for planetary well-being since it holds that this world is all we have: there is no supernatural realm that awaits us in the hereafter. Moreover, there is no divinity looking out for us, so the fate of the planet and its life forms depends primarily on us. Humans are thus charged with the responsibility for securing their own well-being – a daunting but highly motivating challenge, one that can generate global solidarity by giving us a trans-national common cause. Because naturalists hew to science, not faith, in deciding what's true, they are also much more likely to accept the empirically-based consensus about over-population, the scarcity of resources such as food and water, the reality of climate change, and the contribution of humans to global warming. Attuned to the scientific evidence, naturalists are in a good position to appreciate the actual risks to the planet and, with the help of science-based technologies, take effective action to sustain resources and mitigate the impact of rising seas and temperatures.

Genetic modification

In the debate about genetically modified organisms (GMOs) and their potential to contribute to food supplies, naturalists have no reason to think there is anything untoward about the intentional manipulation of genes in designing more productive, pest-resistant crops, so long as any environmental risks are researched and minimized. There is no scientific justification for rejecting GMOs as unnatural or intrinsically inferior to conventionally produced hybrids. What matters, again, is the evidence: for their safety, productivity, resource efficiency, transportability, nutritive value, and palatability. If these tests are passed, then the potential of GMOs such as golden rice to contribute to human well-being, at a very fundamental, necessary level, should be tapped (goldenrice.org, Silver 2006).

Ideological conflict

Unlike climate change, there is little disagreement about the reality of regional and global conflict driven by ideological - often religious - differences. Humans are by nature tribal creatures, prone to discriminate against out-groups competing for territory and resources, and only relatively recently has the rise of science and the secular state, along with increases in economic security, managed in some cases to overcome sectarian strife and forge a pluralist détente (Greene 2013).

One prescription for reducing sectarianism over the long haul, and thus the prospects for a more peaceful, flourishing global culture, is to promote science and naturalism itself. As seen above, a naturalistic worldview is maximally inclusive and anti-tribalistic since it understands human differences as simply variations on a common theme. Since there are no chosen people or tribes that science can discern, the naturalist can't suppose she merits a special place on the planet. Since there are no gods for the naturalist, there is no religiously-driven mandate to marginalize, enslave, or perhaps even kill non-believers. Were we, impossibly, all to become naturalists, there would still exist other sources of potential conflict – political, territorial, and economic – but not the sometimes deadly conviction that non-believers deserve to suffer for their disbelief.

Non-demonization

The naturalist can also see that, but for lucky circumstances of birth and upbringing, she herself might subscribe to a faith, a superstition, or a pseudo-scientific justification for discrimination. She is thus not in a position to demonize anti-naturalists as self-created, willful deniers of empirical truths, but understands that they are, at least for the time being, psychologically unable to simply drop their delusions and falsehoods. This understanding constrains the methods by which naturalists will seek to change hearts and minds: not by propaganda or decree, but by education, improving economic security, and establishing secular, inclusive institutions of government and trade that can compete with sectarian regimes for popular support. These means are consistent with human flourishing as the naturalist (and those of many other persuasions) see it: creating a culture which minimizes conflict, maximizes opportunities for growth, autonomy and self-expression for all individuals, and secures a sustainable world on behalf of generations yet to come, not just ourselves.

Meaning and Purpose

In considering the resources of naturalism for well-being, this chapter has addressed the personal, interpersonal, social, and planetary contexts. There remains, finally, the cosmic perspective, the ultimate context in which humans might flourish. Naturalism is by no means hostile to consideration of the existential questions of life's meaning and purpose - the traditional concerns of religion and spirituality - but it does frame them rather differently.

Naturalistic spirituality and religious naturalism

It's a commonplace that atheists are at a disadvantage to theists when it comes to the question of life's meaning, since on atheists' view there exists no meaning-giver (God or gods), just the purposeless play of physical phenomena. Evolution just happened to give rise to human beings, creatures that often want there to be a guiding goal to life, something that could redeem the suffering we endure and take the sting from the finality of death. Given these desires, it would be good if we could reconcile ourselves to the human condition as seen by science, to accept and perhaps even enjoy the truth that there is no God, no creator, and that the cosmos exists for no apparent reason, with no end in mind.

Naturalism can respond to the existential concerns sparked by science, offering what could be called a naturalistic spirituality (Clark 2002). Although there are no spirits or otherworldly phenomena involved, it counts as a spirituality since it addresses the same questions and emotions as do traditional supernatural religions, questions evoked by confronting the rather strange and startling fact that we exist at all, and only contingently, apparently. Likewise, religious naturalism is not the oxymoron it might seem, but an increasingly available option for those who confront the mystery of existence from a scientific orientation (Murry 2006, Goodenough 2000, religious-naturalist-association.org).

Naturalistic re-enchantment

As mentioned at the outset, naturalism situates us firmly in the cosmos as fully natural phenomena, albeit of a rather curious sort: motivated, intelligent, self-aware and sentient agents. We are, in effect, nature become cognizant of itself, a bit of minded, person-constituting physicality cooked up by impersonal evolution. Looked at this way, we can appreciate ourselves as a rather amazing natural contrivances, privileged to have the capacity for understanding and perspective-taking, even though this very capacity burdens us with difficult existential questions. Just as we can marvel at the sheer scale of the cosmos depicted by science, we can marvel at what mere atoms and molecules, left to their own devices over billions of years, have produced in us. This perspective helps to re-enchant the physical world, while remaining true to science: atoms and molecules aren't so "mere" after all (Raymo 1998, Goodenough 2000).

The epic story of the universe, and our place in it, is perhaps best told in the classic PBS television series *Cosmos*, hosted by Carl Sagan, and reprised by Neil deGrasse Tyson for the Fox Network (haydenplanetarium.org/tyson/). The art film *The Tree of Life* includes an extended, visually spectacular sequence that captures the grand sweep of both cosmic and terrestrial evolution.

Existential astonishment

We of course didn't ask for any of this - we simply find ourselves present in the cosmos, which according to naturalism exists precisely for no discernable reason. Therefore, we exist,

ultimately, for no discernable reason. But strangely enough, the naturalistic subtraction of ultimate meaning and purpose can generate a genuinely spiritual response to the human condition. Although it takes a little getting used to, appreciating the sheer unguided facticity of the cosmos can be the gateway to existential wonder and amazement. It isn't as if existence as a whole is meaningless – that's to project our parochial demand for meaning onto it, and find it rebuffed – rather, it altogether escapes the meaningful-meaningless distinction: it just is. Seeing that we can't expect nature to have a meaning, we are left, finally, existentially astonished - to be alive and aware, participants in a grand mystery that necessarily transcends any ascription of purpose (Clark 2002, Comte-Sponville 2007).

Local meaning

But as meaning-seeking creatures we can't live day-to-day on a diet of existential astonishment. Naturalists, like everyone else, are bequeathed the normal complement of human needs, which predominate most of the time in driving behavior. And it's the satisfaction of these needs, including needs for community, exploration, mastery, and understanding, that actually solves the problem of local (as opposed to ultimate) meaning. We don't, as a matter of fact, need an ultimate purpose to make life worth living, so long as we have opportunities to flourish in all (or at least many) of the dimensions of being human. Arguably, it's the very diversity of our desires, of possible projects, and their possible – not certain – fulfillment, that makes life such an interesting, if sometimes frustrating, prospect.

Existential freedom and control

Because it challenges any supernaturally or ideologically derived mandate for how we must live, naturalism maximizes our freedom to pursue these needs and projects, perhaps even to the point of modifying our motives themselves (Stanovich 2004). Are there some desires we'd be better off not having? Naturalists can raise this question, while many supernaturalists are barred from even contemplating such a possibility, given scriptural constraints. Not that everything is permitted, of course, since there's nearly universal agreement on moral maxims derived from the golden rule, a rule that naturalists too accept. But within these ethical constraints, naturalism offers a latitude of action unavailable to those bound by traditional religious or ideological worldviews (Kitcher 2014). As citizens of an unsupervised cosmos, the range of exploration open to us is limited only by our foresight and technological prowess.

Naturalist community

Just as adherents of traditional religions form communities of belief within which to find companionship and express their philosophy of life, so too can naturalists. Secular alternatives to church, such as Sunday Assembly (sundayassembly.com) and Ethical Culture (nysec.org), offer rituals, observances, inspirational talks and music, all without any reference to the supernatural. Not everyone wants or needs this sort of community, of course, but for those who do there are increasing opportunities to join with like-minded naturalists (humanist, free-thought and atheist

groups are usually friendly to naturalism) to explore and celebrate what it means to be a citizen of the cosmos. For those who've lost their faith and their religious network, naturalist groups and congregations can help replace the personal connections so important to human well-being (De Botton 2013).

Facing death

When facing the personal extinction of death, perhaps the toughest existential challenge, naturalists can't look forward to a life everlasting, but they can be reassured that they don't face the onset of eternal nothingness or blackness either. Consciousness can't witness its own extinction, so as the philosopher Epicurus observed long ago, non-existence can't be a subjective fact. In which case, what should one anticipate at death? The particular individual ends, but it's fair to say that experience won't, given that other sentient beings exist and will come into being. So one should, perhaps, anticipate the continuation of experience, just not in the context of being the person that dies. Naturalists can therefore understand death as the ultimate adventure in the transformation of consciousness: the radical refreshment of subjectivity (Clark 1994). As in other aspects of naturalistic spirituality mentioned above, naturalism trades security, in this case the unattainable security of personal immortality, for open-ended excitement: of being a transitory participant in, and witness to, the natural order (Watts 1968).

Summary

This chapter has argued that worldview naturalism has considerable resources to offer in the quest for human flourishing. But of course the vision of flourishing articulated here is to some extent influenced by naturalism itself and its central commitments. Most central is the naturalist's commitment to cognitive responsibility and openness, to being guided by observational evidence when deciding what's true: empiricism. Science is the most formal expression of empiricism, but one need not be a scientist to be a naturalist, only adhere to the proposition that all factual claims require sufficient evidence. Naturalists aspire more to truth than security.

Adherence to empiricism, applied consistently, leads to the denial of the supernatural, leaving only the natural world as our home. This is the central factual claim of naturalism. As natural creatures, we discover ourselves fully within the causal nexus of natural laws described by science, at the physical, chemical, biological and psychological levels. While seeing our complete connection to nature challenges some long-standing notions of human agency, it offers us increased control over our circumstances, while providing a basis for compassion, self-acceptance, equanimity, and resilience. Naturalism also challenges claims that certain classes of human beings deserve to flourish more than others, and so supports the goal of universal well-being.

The connection, compassion and control offered by naturalism are directly applicable to those domains - material, psychological, social, and existential - which encompass the multiplicity of

human needs driving the quest for a fulfilled life. While naturalism is by no means the only worldview that can contribute to the quest, its firm commitment to science as a guide to reality distinguishes it from traditional religions and non-empirical philosophies and ideologies. While it cannot satisfy desires for personal immortality, ultimate purpose, or a benign divinity, naturalism can serve us well as we seek to flourish in the lives given us by nature, here in the cosmos.

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