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Evolution, Free Will, and Determinism

Nature Controls Our Morality.

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If you believe in free will, then you believe in god. The notion of humans being autonomous agents is deeply rooted in every aspect of our lives. The backbone of our society, based on which all our societal structures and forms aspire to achieve, is ethics: determination of right and wrong, virtue and vice, justice and crime. Ethics assumes that human beings can act on or not act upon their thoughts. Using this principle, we as a society determine what we ought to do or not to do. However, such a fundamentally important assumption may need to be revised. From an evolutionary perspective, the construct we conjured called 'ethics' may have derived from natural selection.

Evolution by natural selection is the cumulative change in the characteristics of a population over several generations, brought about by adaptation to selective pressure. The term 'adaptation' mentioned does not mean an organism, throughout its life, changes to better survive through a situation, like learning how to run faster, where to hide when predators are out, and where to look for food sources. Adapting to selective pressure does not involve an organism consciously learning about the environment at all. Picture a population of rabbits living in a forest. Due to variation in the gene pool (that is, the full variety of genes present in an interbreeding population), some are brown, some white, some

gray, and some black. Unfortunately, white rabbits stand out far more than their darker-fur counterparts, which can blend with the brown color of bark, making them highly susceptible to predators. The white-fur rabbits are frequently eaten and cannot mate with other rabbits. Thus the characteristic does not get passed down, and rabbits with darker fur can survive and reproduce, making the general population contain more dark-colored rabbits. Reverse the situation: a population of rabbits is living in the Arctic. White-fur rabbits can much more easily blend into their white, snowy surroundings, making them the more suited individuals to live in that environment. This concept is not unique to physical characteristics. Historically, sociable and empathetic humans who cared more for their relatives and partners likely had a higher chance of survival. Assuming that brain chemistry at birth partially determines behavior, selective pressures eliminated those less sociable or altruistic. Therefore they became less likely to breed and produce offspring to spread the undesirable gene. Thus, genes encoding for 'altruism' would have spread through our population, eventually developing towards a specific social structure. The influence of this gene traces further than just the early survival of humans: our intrinsic tendency to behave cooperatively and take care of relatives may well account for how we developed our society around a series of ethical principles for appropriate interpersonal interaction, reward,

or punishment. From this point of view, ethics is the deterministic result of human evolution rather than an intelligent, autonomous human choice. Our brains seem wired for morality, and our ability to tell what is "right" or "wrong" is due to the culmination of changes in the gene pool that lead to our current behavioral tendencies. Scientific research supports the existence of inherent morality. Babies are the subject of research in this specific area, as they have not been subject to much influence from the environment.

Psychological research on babies' development shows that babies tend to pay attention and respond to social stimuli (such as voices and faces) and begin forming social relationships early on in life. At only three months old, infants more frequently paid attention to puppets that acted 'nicely' rather than those that acted 'negatively.' While some studies focus on studying early human development to examine innate human morality, others do so by attempting to discover brain regions critical to human morality. Lesion studies are when scientists observe patients with specific brain lesions to see if they are associated with certain behavioral defects that the patients have. These studies helped to identify an area called the ventromedial prefrontal cortex, which is important for certain aspects of human morality. Damage to this region early on in life makes a person more susceptible to committing morally questionable acts like inflicting harm on others.

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More than an example of natural selection, however, human morality is analogous to an example of determinism. Determinism states that, given how things are at time t, subsequent events are fixed as a matter of natural law. The way things are at a specific time can be explained by a culmination of things that happened before. You 'chose' to buy ice cream instead of frozen yogurt last Sunday and thought you had a choice. In reality, you were running before this, and because of that, your brain wanted something rich in carbohydrates to satisfy your energy needs. On top of this, your brain was conditioned to like ice cream because the ice cream was the only affordable dessert option when you grew up in a small neighborhood. Your 'choice' is a result of several previous events, which were a result of events before that.

Similarly, the law resulted from ethics, which, tracing back a very distant time, may have resulted from random life-or-death scenarios humans faced. And so, the concept of choices, actions, on a grander scale, ethics, and free will, can be explained by determinism: all things have a previous natural cause independent of 'choice.' On a smaller scale, molecules bump into each other predictably, leading to other molecules bumping into each other. If this is true, why should the law exist? If humans did not have control over their own actions, should they not be punished? In reality, this is already a problem. People with certain mental health disorders are not charged with certain crimes, as it is difficult to blame them for predispositions that are out of their control. Bipolar personality disorder (BD) is a prominent example. People with BD experience

mood swings from mood elevation (mania) to depression. In severe manic episodes, they may experience psychotic symptoms, such as hearing voices, delusions, or hallucinations. Their attention, processing speed, verbal learning, and fluency are greatly affected. In these episodes, they may experience 'blackouts,' having difficulty remembering their manic episodes. Researchers have analyzed the genomics of people with BD to be compared to controls and were able to correlate 19 significant genes that may make a person more susceptible to BD. Thus, it is questionable to charge someone with bipolar disorder for murder when their 'normal' state is unaware of what they did when they were hyper-aggressive and stabbed their wife. It is also difficult to blame them for being born with a genetic predisposition that automatically makes them more prone to BD. Applying this to a broader spectrum, more than just neurological disorders, what if you cannot control your actions? We choose not to press charges against people with certain mental health disorders due to their inherent issues that can be traced physically. Then, having a particular set of personality traits and tendencies traced to the physical — due to inherent genetics and brain chemistry — absolves us of our actions.

Knowing the existence of such a possibility, I may not have control over writing this article; there may be no point in writing it. We may not have control over ourselves; it's all just a jumble of molecules. But there is much importance in the word 'may' — this article is by no means proof. Going back to the evolution of the morality line of reasoning, people who were more sociable and caring tended to live. That, however, does not automatically mean that our genetic predisposition determines the tendency toward morality - it is possible that, above the physical, the metaphysical allows for the existence of choice. All we can do is live as we are and act as if we have free will, whether we do or not.

