

[A Neurophilosophy of “Sustainable Neurochemical Gratification” and the Meaning of Existence](#)

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July 13, 2020



This is post seven in a short-term series by Prof. Nayef Al-Rodhan titled “Neurophilosophy of Governance, Power and Transformative Innovations.” This series provides neurophilosophical perspectives and multi-disciplinary analyses on topics related to power and political institutions, as well as on a series of contemporary transformative technologies and their disruptive nature. The goal is to inspire innovative intellectual reflections and to advance novel policy considerations.

Understanding the place of humanity in the cosmos has been a preoccupation of human beings since well before the advent of writing. Closely tied to questions of what we are and our relation to the world, there have always loomed questions about fulfillment, a sense of purpose, and the achievement of happiness. How do we get a sense of meaning to our lives and what pushes us to engage in, and repeat, certain actions (beneficial or not)? While some aspects of these considerations remain in the realms of highest abstraction and abstruse philosophy, other dimensions have been at least partially illuminated by recent advances in neuroscience and our greater understanding of neurochemistry. Beginning from a firmer foundation regarding our human nature and the mechanics of our gratification is a critical first step in coming to grips with the meaning of existence. In this article, I unpack these questions by focusing – and in line with the theme of this series – on a neurophilosophical perspective on the ‘meaning of existence’.

Eudaimonia

While roughly translating from the Ancient Greek as “attended by a good spirit,” eudaimonia came to signify—for Plato, Aristotle, and eventually for John Stuart Mill—a robust understanding of happiness (the concept has also been translated in other texts as “welfare” or “flourishing”). This conception implied both depth and permanence, or at least longevity.

For these philosophers, the profundity of happiness and its sustainability went hand in hand. According to Aristotle, the highest life is that of philosophical contemplation, which delivers both virtue and the greatest possible sense of satisfaction, but which is not achieved in a day (nor easily taken away once one is in possession of it).

In his utilitarian formulation, Mill argues that various forms of happiness can be ranked in terms of their worth, and further that those with appropriate experience were best positioned to judge this ranking. On the one hand, then, there are “greater goods” in terms of human happiness, as Mill pithily explains when he contends it is better to be Socrates dissatisfied than a pig satisfied. On the other hand, though for related reasons, the life of the mind is a value to be cultivated and pursued in preference to material wealth and social status, both of which can so easily be lost by fickle turns of fortune.

Indifference to material wealth and bodily comforts are also naturally central to Socrates, who cannot be cajoled into denigrating himself before the Athenian Assembly when on trial for his life. Socrates, particularly in his advanced age, values nothing above consistency in his philosophical attitudes—what we might loosely refer to as a commitment to his principles. Famously, when asked to propose his own punishment for ‘corrupting the youth of Athens,’ rather than humbling himself and penitently requesting something akin to community service he suggests the city pays him a retainer for his ‘gadfly’ function in service to his city.

Commentators who have focused upon the potential incoherence of Socrates’ criticism of fearing death because its nature is not fully known to us have missed or undervalued this political focus of his arguments. Such perspectives overemphasize the potentially frightening nature of the unknown, and, missing the point of Socrates’ argument, underemphasize the evil of abandoning one’s commitments under the threat of the unknown. The central argument is not that death might not be frightening, but rather that giving up on one’s principles and a loss of one’s best sense of self is a tragedy, and therefore more readily to be feared. One of the principle upshots of this argument is that Socrates has created conditions in which his satisfaction in acting virtuously cements his happiness—or at least equanimity—and makes it sustainable, despite the clear and present dangers he is surrounded by.

Utility and Meaning

The biography of J.S. Mill is perhaps equally fascinating and instructive. Although Mill condones the life of the mind and the conclusions of Socrates, his own life experience shaped his understanding of happiness. With the blessing of his father James Stuart Mill and the oversight of Jeremy Bentham, J.S. Mill was intensely educated as a small boy and revealed his prodigious capacities at a startlingly young age, only to have a mental breakdown in his early 20s. Whatever gratification Mill received from his tireless study, it was insufficient to secure his happiness or well-being in a sustainable way—indeed, in his case it proved detrimental. Mill’s ethical philosophy, with the injunction to maximize “happiness” or *eudaimonia* for the greatest number of people, bears the imprint of his individual suffering and a pragmatic concern for creating conditions where human beings could flourish as individuals.

The innovations of Mill are justly influential, yet – and understandably – lacking a concrete account that could only later be supplied by contemporary neurochemistry, and the unique insights into the human brain afforded by neuroscience. At the same time, that leaves aspects of Mill’s theory under-described, as I will elaborate upon below. One of utilitarianism’s great strengths relative to other systems of ethical thought is its focus on the level of law and policy. The argument for maximizing wellbeing (here used interchangeably with happiness) for the greatest number invites general considerations about the best design of society, from a liberal democratic arrangement of representation, to a thoughtful and comprehensive system of public education, to name a few. This great strength, however, also reveals one glaring weakness, as [critics](#) of utilitarianism have

observed. The critique comes in two stages: first, there is the concern with the sacrifice of individual rights in the name of realizing the greater good. There must emerge some cases, the argument goes, where riding rough-shod over the rights of the few will promote the greater happiness of the many. Confronted with this consequence of their theory, later utilitarians typically appeal to a version of rule-utilitarianism, arguing for example that a rule enshrining individual rights will deliver the desired maximization of human welfare.

At this point, critics have pointed out that any obligation to follow rules no longer looks utilitarian, given that there must in principle be occasions where the violation of the rule in question may be warranted. [Brad Hooker](#) responded that rule consequentialism (as opposed to utilitarianism) is not to be defended for maximizing the good, but because "... it does a better job than its rivals of matching and tying together our moral convictions, as well as offering us help with our moral disagreements and uncertainties." While this is a helpful turn, it leaves two significant tasks going forward. First, it invites an investigation into the origins of our "moral convictions." Second, because it abandons the objective of maximizing human welfare, it (quite deliberately) leaves the relation between these moral convictions and human happiness unexplored. These considerations, then, invite an explanation for the underlying causal factors of human gratification. Understanding these underlying conditions provides a clearer picture of how sustainable human happiness can be realized. What I mean by 'underlying' in this case refers to the suite of neurochemical and neuro-anatomical correspondents of our gratification, and which push us to repeat certain actions. This also includes the detrimental, addictive, and even destructive, behaviors prompted by specific neuronal pathways – which are developed and sustained through habitual and repetitive behaviors. I elaborate further on this below.

Neuro-chemistry and addictive behavior

As I have argued [elsewhere](#), the human brain is pre-programmed to feel good. This is 'encoded' in the neuronal reward systems of our brains, which seek to obtain – and maintain – a sense of well-being. I previously theorized there are five main drivers of human action through which that sense of well-being is sought and channeled. I called these the [Neuro P5](#): *power, profit, pleasure, pride* and *permanency*. Permanency refers to survival, and actions that increase longevity, but its scope is much wider. It also includes actions that enhance the prospects of one's life having an imprint or legacy beyond physical death – such as intellectual output, kin, philanthropic and humanitarian work, or even heroic acts that impact the lives of others and can be recorded in collective memory. (If we were to extend this [analogy to nations](#), we may say that achieving political and military prominence for nations may be a form of achieving 'permanency' in global political.)

This can be largely framed within the concept of "[sustainable neurochemical gratification principle](#)" (SNGP), which implies that when we engage in activities that activate the reward centers of the brain—delivering oxytocin and dopamine, among other important neurochemicals, to waiting neural receptors—we have an instinctual motivation to repeat these behaviors, regardless of how constructive or destructive they may be. This is also achieved, *inter alia*, through various forms of belonging and faith. Theological convictions provide a deep sense of meaning and purposeful existence to many people. In these cases, too, the underlying neurochemical mechanisms that sustain that sense of well-being are similar to other gratification experiences as the brain seeks to 'feel good', and that can have various manifestation in our lives and actions. In other words, we are all addicts of some sort,

some of us to constructive behaviors, while others to less useful, and even destructive behaviors to self and others.

There are two immediate upshots to this understanding which complement the above considerations of utility. The first is that the positive experience of gratification is far more motivating to continue and repeat particular behaviors than the negative experience of punishment is in deterring particular behaviors. The second is that, given our neuronal plasticity and consequent potential for a wide variability of socialization, what delivers this neuro-gratification can be somewhat influenced, both by others, and by existing institutional structures that set limits to the kind of behavior one can engage in.

With respect to the first point, there is a tendency for some to resist the suggestion that the realization of human happiness is reduceable to constructing circumstances where the right brain neurochemicals are produced. It is salutary, therefore, to observe how a theory like virtue ethics harmonizes with this account, as it is the virtuous life that is sought as opposed to the sense of fulfilment it delivers.

Put differently, existence for human beings tends to be more meaningful when their attachments and pursuits deliver feelings of gratification, but this gratification is a result of engagement in these activities, rather than solely an end in itself. Though controversial in some of its details, the scenario of the ‘happiness machine’ [described by Robert Nozick](#) captures this point. For many of us, either orchestrating an undeserved victory in a sporting event or virtually simulating the experience of such a victory (even if, in the moment, the virtual experience and real life seem indistinguishable) is not equivalent to the hard-earned feeling of victory with all its attendant processes. Acknowledging the place of the “sustainable neurochemical gratification principle” need not, in other words, cheapen or reduce human endeavor to seeking out neurochemical reward—the unfortunate mistake made by addicts, for example—but instead provides context for (understanding) satisfaction gleaned through meaningful human activity.

Regarding socialization, human beings in relatively stable social and political circumstances, whose [dignity needs](#) are sufficiently regarded, can pursue desirable forms of gratification sustainably. Gratification in the relatively untutored mind could be achieved through the experience of domination, for example, but this impulse quickly leads to the unsustainable condition of a Hobbesian state of nature. Indeed, in circumstances of rampant disregard for the [dignity needs](#) of entire groups, power has proven itself to be among the most addictive forms of human gratification. This is evident not only from the most familiar examples of—perhaps quite literal—madmen leading their countries toward genocide, but also in the more subtle and in some ways more insidious tendencies of power to excuse itself for its own promotion and continuation. Power is highly addictive and engages the same neuronal reward circuitry that is responsible for the feeling of pleasure and the attendant release of dopamine.

Conditions of unchecked power provide further leeway for leaders to do anything to accrue more power – and experience the ‘high’ that comes with unlimited power – a ‘high’ that is quite literally, neurochemically, comparable to other forms of addictions. Given its addictive nature, it is unrealistic to expect leaders in positions of power – and especially not those in positions of absolute power – to ‘responsibly’ create self-imposed limits on their power. It is only accountable institutions, term limits and systems of checks and balances that can set limits on power, and consequently, stave the

destructive search for more power. Political history is rife with ‘Emergencies’ and ‘states of exception’ being declared when illegitimate, irresponsible and incompetent leaders were near to losing their hold on [power](#), a pattern which both confirms its addictive nature and adds neuro-chemical backing to arguments for holding power in check, enforcing term limits, and protecting individual dignity needs.

Mind Overcoming Mind

The minimal evolutionary inheritance of human beings—[a suite of survival-oriented instincts](#) which is narrowly focused but also surprisingly elastic—is not in any obvious way geared to deeply meaningful existence. Natural selection pressures tend to press individuals to be *dissatisfied* with their circumstances. Instincts honed by evolution push us to want more and better resources, more progeny, and to exercise greater control and independence than we have.

Understanding these things, however, like understanding the neurochemical underpinnings of our sense of well-being, is empowering, because human beings have capacities to reflect and act dynamically. Reflection upon the sufficiency of what one has in relation to their needs can alter the calculus of gratification, for example.

To put this another way, a meaningful existence must necessarily respect what we are, in terms of our neurobiology and our neurochemical and hormone motivations, yet this leaves significant room for positive socialization and human reflection as well as a myriad of positive forms that neurochemical gratification may take.

It also cautions even the most disciplined, ethical and moral beings not to trust our [emotional amoral egoistic](#) nature too much, and to avoid circumstances of persuasions that may gratify us temporarily, but leave a lasting destructive longing that may not be good for our well being, our families, and our societies.

Humans may do many things once, but they will only repeat a behavior that gratifies them in a neurochemical way, and our free will and good moral and ethical judgment may not be enough to choose correctly at all times and in all circumstances.

This is not meant to restrict one’s life to the most safe and mundane activities, and is not meant to discourage initiative, daring or venturing into unknown or uncertain situations. It is meant only to caution that “*sustainable neurochemical gratification*”, and therefore addiction to undesirable forms of behaviors, may be a risk, even to the most responsible.

In these regards, though he lacked the biochemical explanation for his intuitions, J.S. Mill was surely right: anyone who has “experienced both sides” of a quick satisfaction easily won and a long-worked-for achievement will see the greater value in certain forms of gratification over others.

Therefore, the meaning of existence, is not a uniform prescription that applies to everyone in all geo-cultural domains, or across different epochs of human existence the same way. Each individual is responsible for making their own reality and aspirations in a way that gratifies them neurochemically in a sustainable way.

However, given the fragility of our nature, which can be neuro-philosophically described as *emotional, amoral* and *egoistic*, and the connectivity and interdependence of our globalized modern societies, the

most sustainable and gratifying forms of existence are likely to be ones that are: *constructive, responsible, symbiotic, lawful, productive, moral, ethical*, and which *aspire to guarantee the dignity of all others, at all times, and under all circumstances.*



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