
Understanding Epigenetic Proaction

A Reply to Stephan Schleim

[Kathinka Evers](#)

Epigenetic proaction can be described as a way of steering evolution by influencing the cultural imprints stored in our brains. It is not to be confused with “human enhancement”. It is a process on the societal level that need not conflict with the notion of autonomy, nor suggest any “superhuman” ideal. Risks of misuse justify precaution, not abandonment of constructive scientific pursuits. Scientific knowledge can help us improve our life conditions in the long-term. A naturalistic responsibility is born out of science’s strong social relevance.

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1 Introduction

Epigenetic proaction can be described as a way of steering evolution by influencing the cultural imprints that are stored in our brains. The question analysed in my target article is what exactly this means and whether it is possible. Can we adapt our societies to constructively interact with the ever-developing neuronal architecture of our brains? The issue of whether such interaction is desirable is also raised but not discussed in depth.

In order to decide whether an action should be pursued it would be wise to first attempt to understand its nature and implications. Regrettably, in his commentary to my article, Stephan Schleim fails to acknowledge the main concern of my paper, namely the sci-

entific issue, moving instead to the normative question via some less relevant detours. The commentary therefore becomes misleading. Rather than engaging with the scientific points I make, Schleim takes as a starting point a flawed understanding of epigenetic proaction and tries to show how undesirable it would be. The arguments have little to do with the article on which he purports to comment.

2 Confusing epigenetic proaction with human enhancement

After making the assertion that “the actual means—whether neurobiological, psychological,

or social—do not matter very much” in his philosophical analysis of epigenetic proaction, [Schleim](#) proceeds to relate my position to the general debate on “human enhancement” ([this collection](#), p. 2). A long discussion follows about this debate that, although quite popular amongst some contemporary philosophers, is here out of context. In the target article, there is no mention of individual cognitive, moral, or performance enhancement, nor any mention of pharmaceutical “smart pills” and so on. The target article does not speak of epigenetic proaction as an individual opt-in/opt-out thing at all, nor does it speak of enhancement. And it certainly does not recommend, as [Schleim](#) suggests at the end of his commentary “the attempt to create superhuman beings” ([this collection](#), p. 15). The statement that my theory proposes methods for parents “aimed at rewiring the nervous system of their children for a social aim” ([Schleim this collection](#), p. 10) is a caricature. Perhaps the author has not read the target paper quite thoroughly enough. This would explain why the author does not specifically address any of the scientific issues raised in the paper.

3 Well-being and exaggerated virtues

In the commentary, the subsequent discussion is about who defines well-being and how. Whilst this in itself is an interesting question that deserves careful consideration from many perspectives, it is not directly relevant to the target article. The article raises the question of whether epigenetic proaction is possible, and presents scientific data and theories to explain what this means. On that basis, I suggest that they can be taken to support the view that it may indeed be possible. The questions of defining well-being or of specifying who should be in charge of defining well-being, whilst interesting, fall out of this scope.

In contrast, the question of “side-effects” can with some effort be considered at least somewhat relevant to the article under debate. Here, [Schleim](#) wonders: is it possible, e.g., to reduce aggression without making a person weak or meek? Can a less aggressive person defend

him- or herself against a more aggressive person? He seems to be doubtful, but my short reply is: obviously, yes. Much education, of children in particular and in human societies in general, includes attempts to check aggression—it does not thereby create either wimps or zombies. Even martial arts focus explicitly on checking aggression, whilst by definition aiming to make students excellent in combat. [Schleim](#) also wonders about the risky side-effects of increasing sympathy. He warns that increasing sympathy too much could perhaps lead to a “dysfunctional self–other distinction” that “may play a role in schizophrenia”. However, even if this were the case, this is not a necessary—or even very common—side-effect of increasing sympathy. Certainly, when we bring our children up to sympathise with others, we may increase their distress at the sight of suffering in others, but I do not believe that we thereby increase their risk of developing schizophrenia. Moreover, as a general principle, that an initially positive value can become negative if exaggerated does not entail that we should stop seeking it altogether. If that were the case, we would have little to strive for.

4 Epigenetic proaction: A process on the societal level

[Schleim](#) compares my theory to the famously misconceived social engineering projects of Skinner and Delgado, for whom, [Schleim](#) says, the goals blessed the means. He argues ([Schleim this collection](#), p. 9) that these “utopian proposals” stand “in obvious conflict with the notion of autonomy”, as understood by Immanuel Kant: no being must be treated only as a means to an end, but as an end in itself. I agree with Kant’s principle and see no conflict between it and the notion of epigenetic proaction. There is nothing in the idea of epigenetic proaction as I develop it in my article that suggests treating people as mere means to a social end, or of allowing them to “become mere instruments for the present system” ([Schleim this collection](#), p. 9). The idea in itself is neutral in this regard: of course the idea can be misused—all science can be misused—but it is no part of the theory to

have this negative consequence. In other words, there is no essential conflict between human autonomy and human epigenetic proaction properly understood.

As for the issue of informed consent that Schleim raises in that context, it does not directly arise through the topics I address in my article, but it would arise in the research that I recommend be pursued. Epigenetic proaction is a process on the societal level. When, for example, educational structures and methods are adopted in a functioning democratic society, people are invited to express their views through political elections, public debates, consensus conferences, etc.; but we do not ask each citizen for an individual informed consent. Nor do we ask for it when laws are passed. For example, in 1979, corporeal punishment of children became illegal in Sweden. The decision was preceded (and followed) by public debate and, as with most rules and regulations, some agreed with the ruling, while others did not—but the question of informed consent does not here arise. In contrast, if research in the natural and social sciences collaborate, e.g., to develop educational structures to assist and protect adolescents during that difficult phase of cerebral development, insofar as such research requires the use of human subjects individual informed consent will be needed. That this is the case is not a specific problem of the theory, but an ethical regulation (amongst many others) that all research must respect.

5 Opposing world-views

Concerning the human condition, surprisingly, Schleim criticises me for being overly concerned about the present states of poverty, war, and the many current violations of human rights around the world. He dismisses these worries as “rhetorical” (again comparing my arguments to those of Skinner and Delgado). Schleim seems to be at relative ease with the present state and future of humanity and, referencing Steven Pinker, draws the conclusion that there is hope that things will change for the better, so there is no need to be epigenetically proactive. Different world-views here confront one another.

Schleim concludes in what seems to me again a spirit of denial that people might be saddened by “focusing too much on their deficiencies” and ends his commentary by saying that “in the attempt to create superhuman beings a human catastrophe might also be provoked” (Schleim this collection, p. 12). True, no doubt—as, notably, Germany’s recent past illustrates. But this is not particularly relevant to my article: there is nothing in the theory of epigenetic proaction to suggest that we either should or could create “superhumans”.

6 Conclusion

Trying to understand and influence human norms in the light of what we today know about the brain is not an easy task. The scientific challenge is increased by the remarkable emotionality with which this whole area of research is permeated and which can apparently make it hard to see clearly what is actually being said. This emotionality is in part understandable: the notion of improving the human condition, including our biology, comes in some very sordid versions, as ideas of “racial purity” or “ethnic supremacy” serve to illustrate, and which remain present in various societies around the world. Historic awareness is indeed essential to safeguard constructive and hope-inspiring scientific ideas from being hijacked by nefarious ideologies (or, indeed, interpretations) and abused for unscientific purposes. However, the risk of misuse justifies precaution, not abandonment of constructive scientific pursuits.

Research collaborations between neuroscience, genetics and social science, notably, today provide rich and multifaceted knowledge about the human being and an increasingly integrated view of us as biological organisms interacting in complex natural and cultural environments in constant evolution. The resulting knowledge could further help us improve our life conditions, e.g., by assisting us in finding remedies for the developmental crises of adolescents, or excessive societal violence. What I call our “naturalistic responsibility” is born out of science’s strong social relevance. Whether or not in the future we shall use this knowledge

soundly remains to be seen. Which traits we decide to favour epigenetically, or what social structures we choose to develop, depends on who “we” are, and on the society in which we wish to live. We may hope that young scientists and philosophers shall rise well to that challenge, and develop the idea of epigenetic proactivity into a dynamic and socially responsible area of research.

References

- Schleim, S. (2015). Should we be epigenetically proactive? A commentary on Kathinka Evers. In T. Metzinger & J. M. Windt (Eds.) *Open MIND*. Frankfurt a. M., GER: MIND Group.