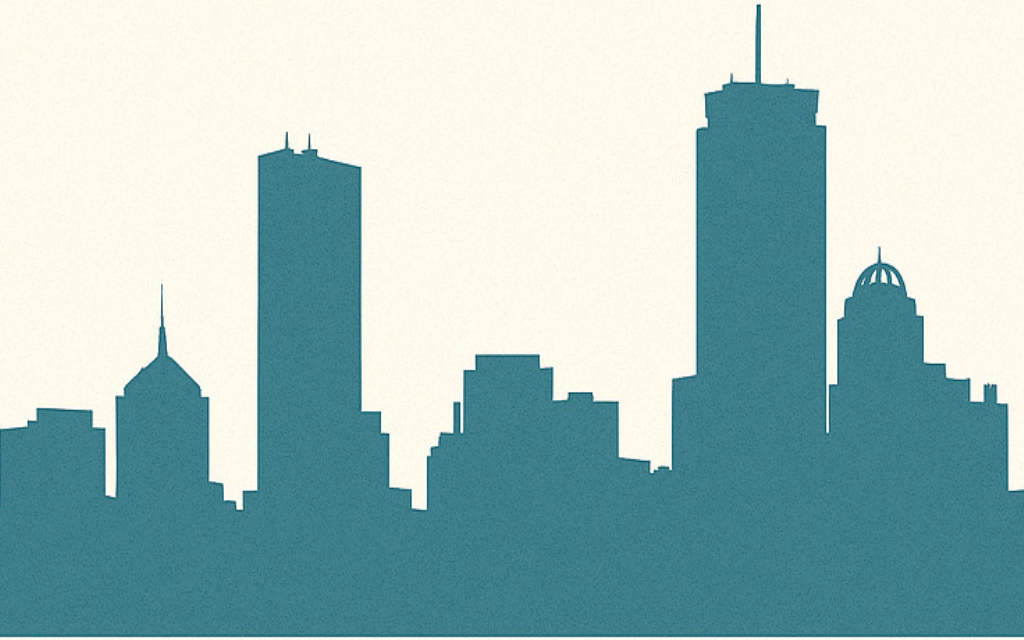

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Happy reading,

Constantino Themelis,
Editor-in-Chief, Arché

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SENECA'S MODEL OF MORAL REASONING

by Elian McCarron
University of Oxford

ABSTRACT

This essay attends to an underlying problem in ethics: how do we apply general ethical principles to particular situations? Seneca proposes his own model of moral reasoning using two epistemological tools to assist the moral agent in applying the general to particular: *decreta* and *praecepta*. I aim to show that the Senecan model is designed to improve upon early Stoic ethics by (*i*) allowing for the morally appropriate conduct of non-Sages, thus (*ii*) relaxing the restriction of Stoic ethics to the Sage alone, and also (*iii*) provides the means by which Sagehood may be attained using *praecepta*. Later, I identify the particular dispositional quality that makes equitable consideration of both the general and particular as *aequitas*. This identification allows for Seneca's distinctive and valuable contribution to Stoic ethics to be better appreciated and also sheds clarificatory light upon his puzzling treatise *De Clementia* – a text often considered to be incompatible with the Stoic philosophy.

UNDERSTANDING *DECRETA* AND *PRAECEPTA*

Seneca's term *decreta* is given as a translation for the Greek *dogmata* meaning 'tenets' or 'principles' of the most abstract or general kind, comparing the *decretum* of philosophy to that of geometry and astronomy.[1] For example, a *decretum* of astronomy in Sen-

1 Seneca, *Epistles*, 95.10.

eca's time was the geocentric model, which held that the sun, moon and planets orbited around the Earth. In the case of Stoic ethics, the *decreta* are constituted by ideas such as the tripartition of all things into good, bad and indifferent; the exclusive relation of good and bad to virtue and vice respectively, and the importance of the Sage as the exemplar of virtue.[2] The Sage is understood as a person who has attained wisdom; in doing so she also acquires perfect knowledge of the good and becomes virtuous.[3] Stoicism proposes a virtue ethics which holds that it is necessary for a moral agent to have this kind of virtuous disposition in order to reason perfectly and without error, and only the Sage is virtuous in this way. I return to the particular dispositional quality Seneca has in mind later in this essay.

Praecepta is often translated as 'precepts', understood as a 'rule intended to regulate behaviour or thought'.[4] This naturally lends itself to the interpretation of *praecepta* as 'rules', a view strongly supported by Mitsis.[5] For Mitsis, Stoic ethics is decidedly rule-based, and he claims that the *decreta* are general rules due to their universal applicability in moral reasoning, whereas *praecepta* are specific rules because they operate as situational prescriptions and prohibitions.[6] Thus, Mitsis proposes that Seneca's *decreta* and *praecepta* are rules of general and specific kinds. However, Mitsis' view of *praecepta* as specific 'rules' or 'advice' seems incompatible with Stoic epistemology – why would a Sage require or use specific rules, given she is already perfect in her reasoning and cannot err when it comes to making the correct decision? This point was reportedly raised earlier by Ariston (contemporary and critic of Zeno, the founder of Stoicism), who claimed that *decreta* alone are sufficient for moral reasoning since the Sage 'can frame for himself a *praeceptum* directing what is to be done in a given case'[7] and thus 'the giving of *praecepta* is superfluous'.[8] It is this particular claim by Ariston that Seneca responds to in his 94th and 95th letters.

To reason according to *decreta* alone is problematic for Stoic ethics because its principles are so general that they cannot be sufficiently informative for the moral agent. Whilst it is conceivable that a moral agent can know with absolute certainty that the correct decision according to Stoic ethics is one which is virtuous, this *decretum* taken

2 Diogenes Laertius (=DL), 7.102-107.
3 For a comprehensive analysis of the Sage's acquisition of the good and virtue, see Katja Vogt, 'The Good is Benefit: On the Stoic Definition of the Good' in *Proceedings of the Boston Area Colloquium* in Ancient Philosophy (2008), 23(1), pp. 155-186.
4 'Precept'. Entry in *Oxford English Dictionary* (Oxford: Oxford University Press, 2022).
5 'This debate was first raised in Inwood, 'Goal and Target in Stoicism', pp. 547-556 in *The Journal of Philosophy*, 83(10), (New York, NY: Journal of Philosophy, Inc., 1986) with reply from Phillip Mitsis, 'Moral Rules and the Aims of Stoic Ethics', pp. 556-557, ibid.
6 See also Phillip Mitsis, 'Natural Law and Natural Right in Post-Aristotelian Philosophy. The Stoics and Their Critics' in *Rise and Decline in the Roman World*, 36(7), (Berlin: De Gruyter, 1994), pp. 4812-4850.
7 Seneca, *Epistles*, 94.2-3.
8 *ibid*., 94.10.

on its own is simply too vague to be informative. Therefore Ariston must assume the moral agent has a perfect grasp of virtue, both in the epistemological sense of knowing what virtue means and in the dispositional sense of *being* virtuous. Yet in making this assumption, Ariston offers a highly exclusionary view of Stoic ethics special only to Sages, inoperable without an account of how one acquires such Sagehood.[9] I claim that Seneca attempts to remedy this by making *praecepta* and *decreta* jointly sufficient conditions of his model of moral reasoning. By doing so, Seneca's model (*i*) avoids the issue of vagueness and is informative for the moral agent and (*ii*) provides a means by which Sagehood may be acquired.

The interpretation of *praecepta* I favour is drawn from its etymological origins in the Latin verb praecipio, meaning 'to teach' or 'instruct'.[10] Understood in this sense, it is not the case that the Sage requires teaching or instruction, but rather that the facts of the circumstance she reasons within instruct her and draw her attention to those morally salient particulars which ought to feature in her reasoning. Simply put, others cannot instruct the Sage, it is the circumstances themselves that instruct her. *Praecepta* thus instruct and shape the Sage's process of *inductive* reasoning, whereas the *decreta* are the general principles that are relevant to the Sage's *deductive* reasoning. To reason properly, then, means drawing connections between the morally relevant particulars of her circumstances and the overarching framework of Stoic ethics.[11] Seneca articulates his model of moral reasoning by describing the relationship between *decreta* and *praecepta* like the branches and leaves of a tree; the *praecepta* being rootless without being structured by the *decreta*, the *decreta* being insufficiently specific to be informative without *praecepta*.[12] Thus, Seneca argues that both *praecepta* and *decreta* should be taken together as joint sufficient conditions for moral reasoning.[13]

This is not to say that *praecepta* cannot constitute stronger types of prescriptions, as Seneca states that when *praecepta* are given in the form of advice from a Sage to a *prokopton* 'moral progressor', *praecepta* have an ideational and constitutional role in the development of virtue and Sagehood.[14] Over time the *prokopton* acquires by ostension the general concepts or *decreta* of Stoic ethics through the provision *praecepta* in the form of Sagely advice. *Praecepta* are thus constructive and constitutive of *decreta*. This relates to Seneca's claim that *decreta* are actually *praecepta* of a general kind.[15] By using stronger prescriptions for the *prokopton*, Seneca outlines a path by which Sagehood and

9 For a detailed analysis of how a non-Sage might become a Sage, see Katja Vogt, 'The Good is Benefit: On the Stoic Definition of the Good,' *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, (Boston, MA: Brill, 2008), pp. 155-174.
10 'Praecipio'. Entry in *Oxford Latin Dictionary* (Oxford: Clarendon, 2012).
11 Seneca, *Epistles*, 94.21 and 94.25-26.
12 *ibid*., 95.12.
13 *ibid*., 94.29.
14 *ibid*., 94.36.
15 *ibid*., 94.31.

corresponding knowledge of *decreta* becomes attainable for the non-Sage.[16]

Seneca constructs, in my view, a dual-aspect model of moral reasoning, one which allows for a lower-order form of moral reasoning. Although this lower-order aspect is not *perfect* or Sagely, it is nonetheless *appropriate* and compatible with early Stoicism. This dual-aspect interpretation can be supported by the distinction the early Stoics made between *kathēkonta* 'appropriate actions' and *katorthōmata* 'morally perfect actions'.[17] To illustrate this distinction, consider the example of archers of varying skill: the expert (analogous to the Sage), the student (the *prokopton*) and the novice (the non-Sage, non-*prokopton*). In setting up the shot, the student is weak in his assent to opinion regarding the way in which he raises and pulls his bow; although he knows his technique is appropriate given the advice and instruction he has received regarding its operation, his belief about what he knows is unstable and uncertain. The novice is entirely unfamiliar with how the bow and arrow works and accordingly has no understanding whatsoever of what is appropriate. This is not the case for the expert archer: she is certain of the perfection of her technique, firm in her belief about the perfect appropriateness of her action. Thus, both the Sage and *prokopton*'s acts of reasoning are *kathēkon*: they may both reason in the *appropriate* way, but only the Sage can reason in the perfect or proper way.

In Seneca's terms, '*praecepta* will perhaps help you to do what should be done; but they will not help you to do it in the proper way'[18] to which he adds 'the credit lies, not in the actual deed, but in the way it is done'.[19] This is why a Senecan dual-aspect model of moral reasoning is still compatible with early Stoicism since it still holds that virtue special to the Sage (only she can reason in the proper way) whilst allowing for the *prokopton* to still do what ought to be done.

Thus, Seneca's model of moral reasoning improves upon Ariston's version in three ways: (*i*) *praecepta* allow the Sage to apply the *decreta* informatively and properly to the situation at hand; (*ii*) *praecepta* allow the *prokopton* to acquire knowledge of the *decreta* and attain Sagehood; and (*iii*), by following *praecepta*, the *prokopton* is able to do the right thing according to Stoic ethics without having a complete grasp of its content – improving upon the highly exclusionary version of Stoic ethics proposed by Ariston which inoperable to the non-Sage.

Consider Seneca's model functioning in three developmental stages. First, at the level of the non-Sage non-*prokopton* or novice agent, neither *praecepta* nor *decreta* have any informative role in his reasoning and so cannot be described as *moral* reasoning. Hence, all of the acts of reasoning by the novice agent are immoral and vicious – this view is entirely compatible with early Stoic ethics.[20]

16 *ibid*., 94.50.
17 Brad Inwood, *Reading Seneca: Stoic Philosophy At Rome* (Oxford: Clarendon Press, 2005).
18 Seneca, *Epistles*, 95.40.
19 *ibid*., 95.41.
20 Long and Sedley (=LS) 61G.

Second, at the level of the *prokopton*, only *praecepta* have an informative role in his reasoning, and his reasoning can be said to be only *morally appropriate*. As Seneca states, using *praecepta* means it is possible for 'man to act rightly without knowing he is acting rightly'[21] or, in other words, it is possible to reason in a morally appropriate way by using *praecepta* without knowledge of the *decreta*. Yet this kind of reasoning using *praecepta* can lead toward the acquisition of the *decreta* and the development of virtue.[22] What makes the *prokopton*'s acts of reasoning morally appropriate is guaranteed solely by their source: the Sage. This does not make the *prokopton* virtuous nor moral in his own right, but rather *appropriate* to that which is moral according to Stoic ethics, so long as the *prokopton* does not waver in following the Sage's advice.

Third, at the level of the Sage, both *praecepta* and *decreta* have jointly informative roles in her reasoning. Virtue, according to Seneca, 'is brought about by *praeceptis*, but not by *praeceptis* alone' – *decreta* is also required.[23] Thus, the proper or perfect function of Seneca's model of moral reasoning which utilises both *praecepta* and *decreta* is special to the Sage. By considering the general and the particular in a complete way, the Sage's reasoning is *morally* perfect and accordingly virtuous, in contrast with the *prokopton* whose reasoning is merely morally appropriate. Because Stoicism makes the virtuous disposition of the Sage central to the perfect or proper function of its ethics, I aim to identify *the particular kind of disposition* the Sage needs to reason using both *praecepta* and *decreta* according to Seneca's model.

Though various models of moral reasoning in Stoic ethics have been proposed already,[24] Seneca is not often discussed as having contributed a model of his own. Existing discussions regarding the role *decreta* and *praecepta* have in moral reasoning, conducted by Mitsis and Inwood, have narrowly focused on whether Seneca proposes a rule-based model of reasoning, and do not examine in detail the particular disposition of the Sage required to use this model. Mitsis makes no mention of the disposition required by a moral agent to see this connection between the general and the specific, nor does he identify whether his model is applicable only to Sages or to all kinds of moral agents. It appears his view holds that when it comes to a particular situation, the moral agent will simply just *know* which principles apply and how.

Inwood, on the other hand, does not consider Seneca's model to be rule-based but agrees with Mitsis that *praecepta* and *decreta* are necessary conditions of Seneca's model, but that it is relevant *only to the* Sage and identifies the disposition required to reason

21 Seneca, *Epistles*, 95.5.

22 I acknowledge that earliest or original Sage would not be able to attain Sagehood in the same way as the *prokopton*, given that there are no prior Sages to provide the *praecepta* for her development. This requires an ideal account of development, which is discussed in Stephen Menn, 'Commentary on Vogt' in *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, 23(1), (Boston, MA: Brill, 2008), pp. 175-184.

23 Seneca, *Epistles*, 95.6-7. See also 94.36.

24 For exploration of Stoic models of deliberation, see Brennan, *The Stoic Life*, pp. 182-232.

using the general and particular as being a craftsman-like expertise.[25] Inwood asserts that the Sage possesses an 'ineffable quality' in her reasoning which enables her to use the general and particular, but Inwood goes no further than this in his assessment and does not identify this dispositional quality in any further detail. I aim to move a step further from Inwood and propose that the dispositional quality that allows the Sage to induct from the particular using *praecepta* and deduct from the general using *decreta* is identifiable as *aequitas*: an equanimity or evenness of judgement that treats both *praecepta* and *decreta* as jointly sufficient conditions for perfect moral reasoning.

AEQUITAS IN SENECA'S WRITINGS

The Latin *aequitas* is typically translated as 'equity' in the sense of evenness or impartiality but is also given as 'justice' or 'fairness'.[26] The juridical notion of *aequitas* derives from its use in Roman law, as evidenced in the writings of Cicero and Seneca's father, Seneca the Elder. In his study of oration, Cicero describes the study of rhetoric as central to Roman education since it prepares students for public speaking and, more importantly, a career in legal advocacy.[27] Cicero draws attention to one of the popular rhetorical practices taught to students: those advocating on behalf of the prosecution were taught to appeal to the statutory penalties of the law, whilst those advocating for the defence were taught to appeal instead to a principle of *aequitas* in arguing against what the statutory law demanded.[28] Yet this principle is appealed to by advocates acting on behalf of both the prosecution and the defence, as evidenced in Justinian's *Digest*. In their cases to Praetorian Judges, one asks the judge to *uphold* the statutory penalty as it is *aequum* to so do (Julius Paulus); the other asks for an *exceptio in factum* (an exception from the statutory punishment) according to the same principle of *aequitas* (Alfenus Varus).[29] Praetorian Judges had the power to modify laws by declamation, the purpose of this discretionary power being to 'fill a gap in the existing law as revealed by the particular case'.[30] This reflects the same requirement in the Senecan model to reason using both the general *decreta* and the specific *praecepta*. In Seneca the Elder's anthology on declamation, this same appeal to *aequitas* is made in cases where there is an incompatibility between the generality of laws and legal principles, and the particularities of a given case.[31] Taking this social and historical context of this juridical use of *aequitas*, it is plausible that it influenced Seneca's notion of *aequitas* – evident most in his treatise *De Clementia*.

25 Inwood, 'Goal and Target in Stoicism' p. 554.
26 'Aequitas'. Entry in *Oxford Latin Dictionary* (Oxford: Clarendon, 2012).
27 Cicero, *De Oratore*, 1.
28 *ibid*., 1.244.
29 Alan Watson, *Law-Making in the Later Roman Republic*, (Oxford: Clarendon Press), 1974, pp. 172-175.
30 *ibid*., p. 173.
31 Seneca the Elder, *Controversiae* 2.5.16. See also 7.4.4 and 7.8.8.

Clementia, as a term in Seneca's writing, is understood in existing scholarship either as a form of 'restraint' or as a form of 'equity' in the juridical sense aforementioned, often translated as 'mercy' or simply 'clemency'.[32] The notions of *clementia* as 'restraint' or 'equity' are difficult to make compatible within Stoicism,[33] but I propose the proper understanding of *aequitas* as it relates to *clementia* will shed light upon this. I will return to this compatibility issue later in the essay. Because of the difficulty in capturing the precise meaning of *clementia* in English and the limited scope of this essay, I leave the term untranslated.

Seneca states that *clementia* 'forms its judgment not according to the letter of the law but according to what is right and good'.[34] This juridical notion of equity underlies Seneca's referencing of legal cases throughout *De Clementia*, providing Emperor Nero (to whom the treatise is addressed) with examples of Emperor Augustus' *clementia*. For example, he cites the cases of Lucius Cinna, where Augustus chose not to have Cinna executed for his plot to assassinate him, instead giving him a consular position,[35] and Lucius Tarius, where Augustus did not apply the statutory punishment of death for Tarius' son, who attempted patricide, instead choosing exiling him.[36] Seneca's use of the Cinna and Tarius cases as *praecepta* for Nero's development as a ruler reflects the principle of *aequitas* as shown in the socio-historical and legal context of Cicero and Seneca the Elder's writing. However, *clementia* is not limited only to *aequitas* in a juridical context, as Seneca makes clear that *clementia* is rather a *dispositional quality* based on *aequitas*. Seneca states that Augustus is the 'model' of a ruler's conduct[37] and that *clementia* is the 'most fitting attribute for a ruler to have'.[38] Thus, Seneca prescribes to *clementia* two notions of *aequitas*, as a juridical notion and as a dispositional quality. The dispositional sense of *aequitas* is strengthened by Seneca's connection of *aequitas* to Stoic cosmopolitanism, telling Nero that the proper ruler reasons by the principles of '*aequi* [...] which require that *clementia* should be shown even to captives and purchased slaves',[39] and that we treat others with *aequitas* since nature 'engendered in us mutual affection' and 'established fairness [*aequum*] and justice' among all people.[40] This is made explicit when Seneca specifies the dispositional sense of *clementia* as 'control of one's mind and of an all-inclusive love of humankind'.[41]

32 Braund's Commentary in Seneca: *De Clementia*, ed. by Sussana Braund (Oxford: Oxford University Press), pp. 30-40.
33 Katja Maria Vogt, 'Seneca, De Clementia' in *Ancient Philosophy*, 31(2), (Charlottesville, VA: Philosophy Documentation Center, 2011) pp. 453-459.
34 Seneca, *De Clementia*, 2.7.3.
35 *ibid*., 1.9.1-11.
36 *ibid*., 1.151-7.
37 *ibid*., 1.19.9.
38 ibid., 1.19.1.
39 ibid., 1.15-18.
40 Seneca, *Epistles* 95.52.
41 Seneca, *De Clementia*, 1.11.2

A similar *praeceptum* is offered by Seneca in his consolatory letter to Polybius, which shows Seneca endorsing *aequitas* as the dispositional quality of the model Emperor, but also goes a step further in explicitly linking *aequitas* as a dispositional quality with the Sage. Here, Seneca urges Polybius (secretary to Emperor Claudius) not to dwell on his sorrow but look instead to the model of conduct Claudius displays,[42] who has 'set before you the *praecepta* of all the Sages' and has 'already presented to you all the examples which could bring your mind to a state of equanimity [*aequitatem*]'.[43] This quote shows how *aequitas* is the deliberative quality necessary for Senecas model, which requires an impartial consideration of both the general and the particular, prioritising neither *decreta* nor *praecepta* in reasoning. It is the deliberative quality most appropriate to the proper conduct of both rulers and Sages in their judgements.

Aequitas as a dispositional quality is invoked elsewhere when Seneca praises his correspondent Lucilius' reason as having a 'spirit of fairness [*aequitatem*] which abounds in all your discussions concerning men and things'[44] which is recalled later when Seneca asks him 'where that deftness in examining things is?', telling him to 'be sure to prescribe for your mind this sense of equity [*aequitas*]'.[45] Lastly, to make the connection between *aequitas* and reason explicit, Seneca states 'reason grants a hearing to both sides [...] reason wishes the decision that it gives to be *aequum*'.[46]

Taking all of this together, I propose that an analogy in regard to the disposition of a rational agent can be drawn between the Sage, the Praetorian Judge and the Emperor. To do so cannot be controversial, given that Chrysippus himself (the second founder of Stoicism) compares the authority of Sages to that of Monarchs.[47] My own view is that in all three cases, the dispositional quality of *aequitas* is required in order to draw the connection between the *decreta* (understood, for example, as the legal statutes and laws used by the Judge and the Emperor or the general principles of Stoic ethics for the Sage) and *praecepta* (understood as the particular requirements of the specific legal case under consideration by the Judge or Emperor or the particular demands of the ethical circumstance under consideration by the Sage). The Judge nor Emperor can reason according to the *decreta* of the existing laws alone; there will be exceptional cases which require further calibration and interpretation. By following the letter of the law in all instances, there may be unjust outcomes which seem to fail to uphold the spirit of fairness that the law was designed for in the first place. For example, when Roman jurist Gaius Cassius Longinus advocated for statutory punishment, he remarked that 'in implementing

42 Note in the quotes that follow the connection Seneca draws between the Emperor and the Sage.
43 Seneca, *De Consolatione ad Polybium*, 14.1-2.
44 Seneca, *Epistles*, 63.1.
45 *ibid*., 107.6.
46 Seneca, *De Ira*, 1.18.1.
47 DL 7.122. See also Stobaeus in SVF III.617.

the law, some innocent lives will be lost' and that 'there is something unfair [*aliquod ex iniquo*] in every great precedent'[48] – thus acknowledging the issue of calibration between the general and particular. The issue of calibration shows that both juridical and moral reasoning requires instruction and induction from particular circumstances as well as deduction from a general framework. In both cases, *praecepta* allows *decreta* to be calibrated properly and produce the ideal outcome; be it a just ruling in a legal case or the ethically proper decision taken from equitable moral reasoning. To bridge the gap between the general and particular – that is, to use both *decreta* and *praecepta* in one's reasoning – requires the dispositional quality of *aequitas*.

FURTHER UPSHOTS FROM *AEQUITAS*

Using *aequitas* and this analogy in mind, I aim to resolve the incompatibility of *clementia* with Stoic ethics touched upon earlier in the essay. There are good reasons why *clementia*, understood as 'restraint' or as 'equity', is difficult to make compatible with Stoic ethics. In the first case, 'restraint' implies that there is vicious content to the thoughts of the moral agent which must be withheld, and this is incompatible with the perfect and faultless reasoning mind of the Sage. Secondly, and most importantly, *clementia* as 'equity' is largely understood in the scholarship in the sense of '*epieikeia*' (the Greek term for equity) from Aristotle's *Nicomachean Ethics*. Aristotle attributes to epieikeia the same juridical sense that I have attributed to *aequitas*, arguing that epieikeia is required to resolve the tension between the generality and rigidity of written law with the particulars of a given case.[49] *Epieikeia-clementia* is seen as untenable with Stoic ethics because doxographical texts on Stoicism state, for example, that Sages 'never relax the penalties fixed by the law' and 'pity and even equitable consideration [*epieikeia*] are marks of a weak mind'.[50] Interpreting this doxography, Braund points toward Seneca's association of *clementia* with Stoic cosmopolitanism as a possible strategy he has for making *clementia* compatible with Stoicism, though she does not make this connection explicit and goes no further in her analysis.[51] Vogt adds her own suggestion that Seneca must have a different notion of equity than *epieikeia* in mind, arguing that *clementia* can be compatible with Stoicism since his notion of *clementia* seems to be in agreement with a central Stoic idea that 'the perfectly reasonable person judges a case by considering everything relevant to it'.[52] However, Vogt never identifies the particular notion of equity Seneca is utilising, adding only that the issue 'deserves further discussion'.[53]

48 Stephen Humphreys, "Equity before 'Equity'" in *The Modern Law Review* (London: Wiley, 2022), p. 5.
49 Aristotle, *Nichomachean Ethics*, 5.10.
50 DL 7.123.
51 Braund, *De Clementia*, p. 68.
52 Vogt, 'Seneca, De Clementia', p. 458.
53 *ibid*., p. 459.

I believe that *epieikeia* is taken to be incompatible with Stoicism because equitable reasoning could have been considered by the early Stoa to be too ungrounded and susceptible to error, perhaps giving too much weight to the erroneous beliefs and opinions of others, when in fact such considerations ought to be excluded. But that the Sage employs *aequitas* in her reasoning does not mean she considers *all information*, both relevant and irrelevant. As I see it, the Sage will not, for example, consider trivial facts such as the colour of her clothes when reasoning, nor necessarily the opinions and beliefs of others, though all of this information is available to her when she reasons morally. Suggestibility of this kind is to be expected in the *prokopton* who assents to advice and is insecure in the fixity of his belief given his lack of expertise, but this cannot be the deliberative quality of the Sage who is infallible in her judgement and perfectly assured of her belief. Additionally, Seneca adds a distinction between *pardon* as the 'remission of a penalty that is due' versus *clementia* which will instead 'deliver the desired consequence of pardon by a more honourable route' by forming 'its judgements not according to the letter of the law but according to what is right'.[54] In the analogy between the Sage, the Praetorian judge and the Emperor, it is not that the Sage simply 'relaxes the penalties of the law' but rather, as a result of an equitable consideration of the general with the particular, arrives at the right decision based on what is *aequum* and *bonum*, much in the same way the Praetorian Judge and the Emperor declaims a new law based on these principles when the general statutes do not fit fairly upon a particular case. In short, the Sage's judgement is ultimately authoritative: if it looks as though penalties are being relaxed by the Sage, then those penalties did not apply in the first place.

CONCLUSION

Seneca posits a dual-aspect model of moral reasoning that improves upon the restricted view of Stoic ethics offered by Ariston. Through the provision of *praecepta*, moral reasoning is made possible for the non-Sage *prokopton* and also allows for the attainment of Sagehood, given that *praecepta* are constitutive of *decreta*. By drawing upon Roman historical context and Seneca's other texts, I identify the 'ineffable quality' which allows the Sage to reason utilising both *praecepta* and *decreta* as *aequitas*. Understanding the particular concept of equity in Seneca's writing as *aequitas* makes sense of his model of moral reasoning as distinctive and valuable in its own right. It may also identify a genuinely Stoic concept of equity which allows *clementia* to be compatible with Stoic ethics and relieve some of the tensions of *De Clementia* with Stoic philosophy.

54 Seneca, *De Clementia*, 2.7.2-3.

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NIETZSCHE, METAPHYSICS, AND THE AFFIRMATION OF LIFE

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ABSTRACT

This paper argues that, contrary to scholarly tendencies to dismiss Nietzsche's metaphysics, attending to his metaphysical thought provides an essential foundation for understanding his core philosophical stances, specifically his atheism and affirmation of life. To do this, I first examine Schopenhauer's writings to identify his ontological requirement "existence *iff* unrest." Similarly, I examine Nietzsche's writings to extract his own ontological requirement "existence *iff* becoming." I then argue that these are equivalent, and synthesize them into a shared ontological requirement "existence *iff* change." I proceed to show that this requirement metaphysically grounds both the authors' atheism by ontologically rejecting any supposedly unchanging being, such as God, traditionally understood. I then turn to explain the evaluative divergence contrasting the two philosophers regarding their attitudes towards existence on the basis of their shared ontological requirement. I argue that Schopenhauer ultimately violates his own ontological requirement by positing a static, noumenal absolute—a form of being that condemns the phenomenal world of becoming, thus metaphysically grounding his pessimist evaluative stance. In contrast, I argue that Nietzsche thoroughly upholds the ontology, radically accepting becoming as the only reality. By erasing the fiction of static being, Nietzsche eliminates any external standard by which existence could be condemned, thus grounding his affirmative evaluative stance towards life and existence.

INTRODUCTION

Nietzsche's relationship to metaphysics is controversial. Passages such as BGE 12[1] understandably suggest that he proposes a thorough rejection of metaphysical inquiry for the sake of other, more tangible matters. This has driven scholars away from attending to Nietzsche's ideas on metaphysics, instead focusing on the most transparent aspects of his philosophy, such as his remarks on ethics and morality.[2] As Clark and Dudrick put it, "Nietzsche's reputation continues to grow among serious philosophers, but always in spite of the doctrine of the will to power, never because of it."[3] Some scholars have gone even further to affirm that his metaphysical doctrine should be willingly disregarded, referring to it as "crackpot metaphysics."[4] The result of these movements, admittedly caused by the *quasi*-unintelligibility of Nietzsche's metaphysical claims, has hindered the widespread understanding of this crucial aspect of his philosophy. It had consequently seemed to justify only a more restrictive reading of his work, emboldening claims such as "Nietzsche's chief philosophical concern was ethics."[5]

However understandable their motivation, such responses are in my view misguided. What is more, I believe that this abdication from investigating Nietzsche's metaphysical thought produces an impoverished account of many of his fundamental ideas and their rationale. To take a salient example, there currently seems to be no reason not to suppose that his atheism is arbitrary or simply the product of secular disillusionment. So, too, his loudly professed commitment to life-affirmation figures more as a presupposition of his overall philosophy rather than a product of it. Without awareness of a deeper justification, a reader of Nietzsche might rightly be worried: "Just *why* should we affirm existence? *Why* should the fact that nihilism negates existence be an objection to nihilism? Do we have any reason to take the side of existence?" A purely ethical reading of Nietzsche does little to provide a satisfying answer to these questions. I argue that taking into account his metaphysical ideas, whether or not we endorse them, can provide a justification for at least a significant extent of his other stances.

1 One must… declare war, relentless war unto death, against the 'atomistic need' which still leads a dangerous afterlife in places where no one suspects it, just like the more celebrated 'metaphysical need'." This paper uses the standard abbreviation of Nietzsche's works. See footnote 16 for more on BGE 12.

2 Grayling, "Nietzsche," 320: "The ideas for which Nietzsche is best known–the immoralist, the Superman, the contrast between master and slave moralities, going 'beyond good and evil', 'the revaluation of all values', 'philosophizing with a hammer'…—have been studied and sometimes appropriated and adapted by thinkers in both Analytic and Continental philosophy in the century after his time."

3 Clark *et al, The Soul of Nietzsche's Beyond Good and Evil*, 5. I understand "the doctrine of the will to power" here as the spearhead of Nietzschean metaphysics. Because understanding the particular aspects of the will to power is unnecessary for the purposes of this paper, I will refrain from elaborating further on its character.

4 Leiter, "Nietzsche's Naturalism Reconsidered," 594. He continues: "Those of us reading him more than a century later should concentrate on his fruitful ideas, not the silly ones, especially when they are not central to his important work in moral psychology."

5 Grayling, "Nietzsche," 317.

An inquiry into Nietzschean metaphysics and how it serves as a foundation for some of his other beliefs is therefore warranted. In part because of the limitations of the present medium, I will not attempt to discuss the whole of his metaphysical doctrine,[6] but instead only one of its core ideas: its ontological requirement. Focusing on this simple but central notion of Nietzsche's thought will suffice to demonstrate the explanatory power of his metaphysical beliefs in regards to his other, more famous ideas. Thus I will not be speaking at length of the will to power,[7] as it may bring into question several nuances which are beyond the scope and purposes of this paper.

To this end, then, I will extract from Nietzsche's writings what I call his "ontology." I will identify a narrower set of beliefs relative to a whole metaphysical doctrine which are nonetheless central to the constitution of the latter. By "ontological requirement" I mean what is, analytically speaking, the necessary and sufficient condition for anything to be granted the status of "existing." We will also see how the resulting ontological biconditional is not only comparable but equivalent to what was posited by Nietzsche's predecessor, Schopenhauer, and how it similarly serves to give a metaphysical foundation for some of the latter's beliefs. One interesting case, on which the two philosophers agreed, is their belief in the nonexistence of God. For illuminating contrast, we will also look at their most remarkable disagreement: that of the value of existence. With our new ontological understanding, we will see what compels one philosopher to a pessimistic and the other to an affirmative valuation, thus illustrating how some of their general beliefs can be shown to have a foundation in each of their metaphysical doctrines.

It must be made clear that we do not seek here to provide a Nietzschean (or Schopenhauerian) account for the meaning of Being, as per the Heideggerian project.[8] In fact it would be difficult to do so, since Nietzsche himself has been accused of neglecting the question.[9] But this should not concern us here, as we are only seeking an account of what can and cannot be granted *being*, and not what Being itself is. By "*being*" we mean the traditional senses of "actuality" or "existence," and can therefore, at least at present, leave the question of Being in suspension for our discussion of Nietzschean metaphysics.

It should finally be noted that I will not presently attempt to defend the soundness of each of these authors' positions in metaphysics. I aim only to show (a) what their ontological requirements are, (b) how they are equivalent to one another, and

6 For extensive attempts at this see Doyle, *Nietzsche's Metaphysics of the Will to Power*, and Deleuze, *Nietzsche and Philosophy*, and for a more compact one see Reginster, "The Will to Power." I would also like to thank Doyle for presenting the Leiter and Clark *et al* excerpts alluded to above.

7 In spite of the will to power being the principal concept in Nietzschean metaphysics. See BGE 36 and WTP 1067 for affirmations of its importance.

8 See Dahlstrom, "Being, Beyng (*Sein, Seyn*)," 43-50.

9 Dahlstrom, "Nietzsche," 311-13. Curiously, too, Heidegger recognized the prominence of metaphysics in Nietzsche's thought, but, contrary to one of our current claims, believed nihilism is a consequence of Nietzschean metaphysics. His critique, however, will not be addressed presently.

(c) how they can serve as a foundation for some of the authors' other positions. After presenting each of their ontologies as significant *leitmotivs*[10] in their philosophies and establishing their relative equivalence, I will show how this simple notion can explain their common rejection of God, as well as their diverging evaluations of existence. We will see how the latter disagreement turns on Schopenhauer's failing to fully realize his own ontological commitment while Nietzsche thoroughly upholds it, which is the reason I claim their ontologies stand in a relationship of equivalence and not of identity.

SCHOPENHAUERIAN ONTOLOGY

Even though our principal subject of concern here is Nietzsche, a brief analysis of Schopenhauer's ontology[11] will prove extremely useful for our main examination. A comparison of both authors' ontological requirements will serve to clearly illustrate the core commitment shared by their ontologies, as well as expose where their general metaphysics diverge. Both of these points will later be crucial for explaining their evaluative disagreement about existence, which will ultimately convey how consequential it is to take metaphysics into account when trying to understand Nietzsche and, as a byproduct of our analysis, Schopenhauer.

I seek, here, to express Schopenhauer's ontological requirements in the form of a biconditional "X *iff* existence." In this way, to a reader minimally familiar with the conventions of logic, we can have a succinct presentation of his ontology while communicating all that is needed for our purposes. I take it that one direction of this biconditional will quickly be granted: for whatever meets a given condition must therefore exist, otherwise it would not meet said condition. Thus we may say that meeting any condition is sufficient for "existing." It is now left for us to determine what Schopenhauer believes the necessary condition for "existing" is.

One undeniable merit of Schopenhauer is his ability to succinctly capture matters of great philosophical importance in a few words. "Unrest is the mark of existence,"[12] as he puts it in clear terms, and in this the requirement of his ontology is revealed to us. A safe interpretation of this assertion is that it states that everything in existence has this particular feature of restlessness. That is, unrest, or recurrent move-

10 Our method is, in part, inspired by Simmel, *Schopenhauer and Nietzsche*, liv: "I presuppose that the very few *leitmotivs* at the innermost cores of the doctrines of Schopenhauer and Nietzsche are the most objectively valuable parts of these doctrines and the parts that will endure. By presenting only the ultimate core of a web of thoughts, the sensational paradoxes that characterize both philosophers (even if time and acquiescence integrate them in the case of the older one) disappear."

11 By "ontology" I generally mean the analysis of necessary and sufficient conditions for existence espoused by a given philosopher. I use "metaphysics" to refer to the overall set of metaphysical theses a given philosopher upholds, such that "X's metaphysics" should signify the general positioning of X regarding the questions characteristic of the study of metaphysic

12 Schopenhauer, "On the Vanity of Existence," 35.

ment, is a necessary condition of anything that exists, such that any existing thing must be in motion, ever transient, never static. This suggests that, by the nature of existence, an existing thing is not and cannot be at rest. But repeating these words might not do more in favor of comprehension than merely waiving hands, so some distinctions must be made before misconceptions begin to hinder our reasoning.

What is meant here by "unrest" should not be read as simply some state of physical activity as opposed to being inert. It has a broader meaning. The words originally preceding the aforementioned maxim may aid our understanding:

> The whole foundation on which our existence rests is the present—the ever-fleeting present. It lies, then, in the very nature of our existence to take the form of constant motion, and to offer no possibility of our ever attaining the rest for which we are always striving.[13]

We witness here a temporal explanation of the way in which, within existence, everything is subject to impermanence. That is, every existing thing is in a state of constant flux that forbids any staticity or any rest from this transience. For example, the I who writes this sentence is not the same as the I who reads it a second after, since the latter is one who has already written the sentence. And similar things can be said of a rock which has ever so slightly eroded since yesterday, or of a planet which moves in its orbit in a continuous manner, finding itself in a new position at every instant. The necessity that anything in time is now not the same as what it was a moment ago, and will never in the future be the exact same as it is now, is what compels Schopenhauer to posit impermanence as a general condition of existence.[14] If we grant his claim that every existing thing is in this condition of unrest (which we are, for our exegetical purposes, presently assuming), then we may claim that restlessness is a necessary condition of existence.

Hence we come to the conclusion that, regarding a Schopenhauerian ontology, we may express it thus: unrest *iff* existence. We have seen that anything at unrest must also exist (otherwise it could not be at unrest), which is to say that restlessness is a sufficient condition of existence. More significantly, we have extracted from Schopenhauer's concise maxim the notion that every existing thing is itself in a state of restlessness, which then authorizes our claim that, in his view, unrest is a necessary condition of existence as well. We have therefore established the biconditional we sought as the succinct expres-

13 Schopenhauer, "On the Vanity of Existence," 35.

14 Simmel, *Schopenhauer and Nietzsche*, 32–4 efficaciously expresses the understanding of "unrest" as a condition of existence in general and not simply restricted to human or living beings: "Schopenhauer concludes that we must attribute the same innermost, absolute, and intrinsic essence to all existences that are identical to us as phenomena. He proceeds to make his cosmic principle not only… a way of elucidating man's position, but the condition of being in general… if we only adjust our eyes, we lucidly see the vestiges of the same basic being in the rest of nature… [although h]e does not transfer a fact of psychological experience to a transcendent real separated by definition from all experience."

sion of a Schopenhauerian ontology.

NIETZSCHEAN ONTOLOGY

In a method similar to what we used in Schopenhauer's case above, I also seek to express the Nietzschean ontology in the form of a biconditional "X *iff* existence." Here, too, we grant that any condition met is sufficient for existence, and need only determine what Nietzsche considers the necessary condition of existence. Because of the prominent misunderstandings around Nietzsche's relationship to metaphysics, my exegetical claims here will admittedly be more subject to contention, as they might seem inconsistent with what is commonly interpreted of some of his famous passages (again, BGE 12 serves as an example). But this should not seriously concern us, as we will see that our proposed interpretation will have the power to dispel the naive meaning attributed to said passages, thus dismissing their "sensational paradoxes."

We must, however, also contend with the fact that Nietzsche himself did not do much to protect the unassuming reader from such hermeneutical pitfalls. Nietzsche simply never expressed his ontological requirement as concisely as Schopenhauer did,[15] which poses a significant challenge to extracting it from his writings. But since part of my aim in this paper is to give the reader a way to unearth Nietzschean metaphysics from the hole it has been left in, a closer examination of his writings is warranted. I will, therefore, reference several passages from Nietzsche's writings which I believe instantiate his ontological *leitmotif*, although I will restrict my analysis to only a few. The remaining passages will serve as an invitation to the reader to attempt this ontological inquiry at their discretion, or as possible starting points for future work on Nietzschean metaphysics.

The easiest way to begin understanding the Nietzschean ontology is negatively—we first look at what it forbids a claim to being. It rejects, vigorously, the conception of a doer, a subject, behind the motion of things. This is best exposed in the following, rather long-winded excerpt:

> ...there is no "being" behind doing, effecting, becoming; "the doer" is merely a fiction added to the deed—the deed is everything... Scientists do no better when they say "force moves," "force causes," and the like—all its coolness, its freedom from emotion notwithstanding, our entire science still lies under the misleading influence of language and has not disposed of that little changeling, the "subject" (the atom, for example, is such a changeling, as is the Kantian "thing-in-itself").[16]

15 As Simmel, *Schopenhauer and Nietzsche*, liii, puts it perfectly: "Whereas Schopenhauer is already too precise to allow for a simple presentation of the content of his philosophy, Nietzsche is not precise enough for such an approach."

16 GM I 13. I will ask for the reader's forgiveness for this and the next unconventionally long quotations, though I will partly blame it on Nietzsche for not finding words as succinct as Schopenhauer's. Nonetheless, this excerpt is significantly expositive of its author's account of ontology, even if by taking up more space on the page, and so remains desirable to use.

What exactly is the target of Nietzsche's ontological rejection? As the above passage suggests, though not in a particularly clear or intuitive manner, what is emphatically denied *being* is anything in a supposed state of static being. By "being," in this way, we mean any supposed thing (a doer) which can enact change (a deed) without itself being changed, anything that is not itself coming-to-be. That is, Nietzsche forbids participation in the realm of existing things to anything which could stand immune to the uninterrupted process of becoming, which could remain identical to itself throughout time. In his own words, "[t]here are no durable ultimate units, no atoms, no monads: here, too, 'beings' are only introduced by us (from perspective grounds of practicality and utility)."[17] He recognizes *why* we have come to posit such entities,[18] but denies that such figments of reason should have any say in proper metaphysics. Here, one hopes the proper sense of passages such as BGE 12 starts to become clearer.[19]

With the above considerations, we have laid the groundwork for a positive assertion of Nietzsche's ontological requirement. It is, in short, this: all that exists is becoming. This means not only that nothing which remains the same is granted the status of "existing" by this ontology, as we have just seen, but that everything that is granted this status must be in constant change, ever *becoming*. One of the clearest iterations of this requirement by Nietzsche is the following:

> It is simply a matter of experience that change never ceases: we have not the slightest inherent reason for assuming that one change must follow upon another. On the contrary: a condition once achieved would seem to be obliged to preserve itself if there were not in it a capacity for desiring not to preserve itself—Spinoza's law of 'self-preservation' ought really to put a stop to change: but this law is false, the opposite is true. It can be shown most clearly that every living thing does everything it can not to preserve itself, but to become *more*—[20]

17 WTP 715. For more on the rejection of the doer, see WTP 488, 531, 567, 631, 632, and 765.

18 *I.e.* in order to make things intelligible, we come to (wrongly) presuppose entities behind deeds, like a thing-in-itself that lies causing our phenomenal experience, or a transcendental self capable of doing or not doing a given deed purely at its own discretion, each without being reciprocally affected by the phenomena they initiate. For, indeed, this traditional and even intuitive understanding championed by figures like Kant cannot make sense of the existence of an effect (say, an appearance), without presupposing a cause for it (the thing-in-itself, strictly noumenal). For more on this and the grammatical error, see Deleuze, *Nietzsche and Philosophy*, 123 *et passim*.

19 Nietzsche combats the "[s]enselessness of all metaphysics *as the derivation of the conditioned from the unconditioned*" (WTP 574, my italics). The "metaphysical need" he criticizes, then, must not be understood as the drive that motivates metaphysical inquiry, but as the habit of the inquirers of legitimizing the being-positing errors of reasoning as a requirement for intelligibility in metaphysics (the age-old question of the unconditioned condition, for example, should not be considered metaphysically appropriate). See also WTP 570.

20 WTP 688. This excerpt by itself is, unfortunately, not completely satisfying for our exposition, not explicit or expressive enough. For this reason I am including references to several other passages where I believe Nietzsche's ontology is at least significantly expressed, hoping that the voluminous character of this nonexhaustive collection and their various forms of expressing the same thing will suffice as forceful evidence that Nietzsche upheld this ontological requirement. For more, see TI "Reason in Philosophy" 1-6, UM III.5, GS

In this and other instances, we see expressed the key Nietzschean ontological notion: everything that *is* is becoming. Accordingly, no existing things are ever in a condition in which they are not changing, not becoming something else (however similar it may be to what it once was). Again, a temporal understanding is useful. As time progresses, no one thing remains exactly the same as it was in a preceding moment, for it is now the thing of the next moment. I believe, if we are trying to hint at a possible interpretation of this rationale, that the Leibnizian principle of the indiscernibility of identicals[21] can be tacitly appealed to here: for if something is to be the exact same as it was in a previous moment, then it can only have been *in that moment* and not a second after, otherwise it would not be the exact same thing—and to say something is not the exact same as it once was is to say that it has become different.[22] But regardless of how we interpret the logistics of this dynamic, the fact remains that Nietzsche here expresses that to be is to become—that is, "becoming" as a necessary condition of existence: "*the deed is everything*."

Two further clarifications must be made about this passage. First, that the ontological requirement it expresses is not strictly limited to living beings, but encompasses all existing things as long as they are existing things.[23] That is, the requirement is ontological rather than strictly biological. Second, that such a generalizing metaphysical claim is consistent with Nietzsche's perspectivism. The beginning of this passage is clear: Nietzsche believes that our seeing that incessant change is "simply a matter of experience"; yet, that this experience proves itself again and again an invariable part of existence. As Anderson argues, the Nietzschean doctrine of the will to power "retains its pretensions to offer highly general theoretical claims, but it remains an empirical hypothesis, albeit one of an unusual sort," and functions as a "comprehensive philosophical theory even while remaining a defeasible, empirically constrained interpretation of the world."[24] Thus Nietzsche is indeed able to make a generalizing ontological claim

54, WTP 4, 12A, 51, 378, 490, 507, 517, 552, 562, 568, 580, 584 ("... the properties that constitute its [the world's] reality: change, becoming, multiplicity, opposition, contradiction, war..."), 616, 623, 632, 1058, 1062, 1064, 1066, and 1067 + 685.

21 Essentially: if X is identical to Y, then X and Y are indistinguishable. Contraposed: If X and Y are distinguishable, then X and Y are not identical. Logically: $(x = y) \rightarrow \forall F(Fx \leftrightarrow Fy)$.

22 I only allude to this possible justification to help consolidate our understanding of a Nietzschean ontology. Again, I do not wish for the moment to defend any aspect of his metaphysics, only to present it. Therefore, I will bracket any contentions that might arise regarding the Leibnizian principle, such as the suggestion that the relational character of time renders the supposed nonidentity of a thing and itself at an immediately succeeding moment meaningless.

23 Besides the testimony of our collection of passages, consider WTP 689: "The will to accumulate force is special to the phenomena of life, to nourishment, procreation, inheritance—to society, state, custom, authority. Should we not be permitted to assume this will as a motive cause in chemistry, too?—and in the cosmic order?... Not merely conservation of energy, but maximal economy in use, so the only reality is the will to grow stronger of every center of force—not self-preservation, but the will to appropriate, dominate, increase, grow stronger... Life as a special case (hypothesis based upon it applied to the total character of being—)..."

24 See Anderson, "Nietzsche's Will to Power as a Doctrine of the Unity of Science," and "The

while remaining true to perspectivism, insofar as he does not aim to ground it *a priori*. What is more, in a fortuitously ironic turn, we see not only that his claim is compatible with his perspectivism, but that it is coherent with itself—for it recognizes that it *itself* may be subject to change.

Finally, let us note that the "becoming" characteristic of Nietzsche's ontology has not gone by unnoticed. Reginster, for example, paints a good picture of how the doctrine of the will to power poses instability as its essential feature, so that its pursuit "necessarily assumes the form of an indefinite, perpetually renewed striving."[25] But the most powerful secondary assertion of the Nietzschean ontological requirement, which comes in expressive Schopenhauerian fashion, is given by Deleuze in his statement that, for Nietzsche, "becoming has *being* and only becoming has *being*. That which is opposed to becoming, the same or the identical, strictly speaking *is* not."[26] In other words, and this is what we now take as established as our sought expression of the Nietzschean ontology: existence *iff* becoming.

THEIR ONTOLOGICAL EQUIVALENCE

The reader may have begun to see what I aim to establish with this section. That our descriptions of "unrest" and "becoming" seem to denote similar phenomena should be, intuitively, clear enough. But to craft the analytical tool we seek, we must show how, beyond just similar, these Schopenhauerian and Nietzschean notions are equivalent. Specifically, we will see how they both communicate the same notion of incessant *change*.

In both ontological accounts what is expressed is that, for all existing things, change is a necessary condition. Everything existing must be in a constant state of change,[27] and something which is supposedly static (remaining absolutely identical to itself throughout some period of time) cannot count among the ranks of existence at all. This is evident from our examination of their ontological requirements. To exceed on the side of clarity, let us reaffirm both of their positions. For Schopenhauer, "[m]obility... was not only an essential property of the world, but was the world's substance, and he went so far as to deny even an ideal point of rest for the world by negating any final

Will to Power in Science and Philosophy, 55-72.

25 Reginster, "The Will to Power," 138. See this chapter also for some clarifications about the will to power.

26 Deleuze, *Nietzsche and Philosophy*, xi-xii. My italics, to keep our notation consistent. "The same or the identical" here is understood as referring to static being.

27 One example: the lamp one my desk is moving through time; its atoms assuming ever-so-slightly different positions; its temperature almost insignificantly varying; the light it produces imperceptibly flickering. I do not attribute this example or its specifications to Nietzsche or Schopenhauer, although I hope it provides some illustration of part of the impermanent character of things.

goal for mobility."[28] For Nietzsche, similarly, existence is something to which "'Change' belongs to the essence" (WTP 1064). It should now be exceedingly clear that, for both authors, change is a necessary condition of existence.

It is, admittedly, difficult to convey how incessant change can be a general condition of existence.[29] So, for an attempt to unify Nietzsche's and Schopenhauer's ontologies not only logically but pictorially, we may relate this central notion to the "*Panta Rhei*" maxim. Commonly translated as "everything flows," this Heraclitean idea[30] can help us paint our ontological picture. An awareness of the incessantly-changing state of things, contrasted with their appearance of continuity—like the apparent permanence of a river in spite of the continuous replacement of its waters—conveys an ontology that rejects any possibility of something existing in real *stasis*; although we may still rely, if only pragmatically, on the notion of staticity with thought and language.

But regardless of any linguistic or pictoric difficulties, the fact remains that such an ontology was upheld by both Nietzsche and Schopenhauer. Simply, they asserted, and this I hope has become evident, that everything to which we may grant the status of "existing" must be itself continuously changing (or becoming, or restless—here, these are all synonyms). That is, logically, to say that change is a necessary condition of existence. Furthermore, with the apodictic understanding that for something to be changing it must necessarily exist, we may also say that change is a sufficient condition of existence. Thus, in a formula synthesized of the two ontologies we presented, and which represents their equivalence: existence *iff* change.

THE CONTRAPOSITIVE, OR HOW TO KILL GOD

Arguably, the most famous part of Nietzsche's philosophy, even if not always directly credited to him, is the dramatic announcement of the death of God.[31] Though, as his legacy has proven, and he himself would be quick to admit, Nietzsche is not the author of this death, but only a declarer; albeit one of the first to truly understand its meaning. He thus dedicates books like *The Gay Science* to spelling out the consequences of this passing—how the divine carcass will rot, and what will grow on its remains. But he could, metaphysically speaking, very well have been the executor of this deicide. That is to say that the inexistence of God can be substantiated in Nietzsche's metaphysical

28 Simmel, *Schopenhauer and Nietzsche*, 73. "Mobility" here signifies the coming-to-be characteristic essential to "change."

29 Nietzsche himself recognized this: "Linguistic means of expression are useless for expressing 'becoming'; it accords with our inevitable need to preserve ourselves to posit a crude world of stability, of 'things', etc." (WTP 715)

30 Jowett, *Cratylus*, 402a: "Heracleitus is supposed to say that all things are in motion and nothing at rest; he compares them to the stream of a river, and says that you cannot go into the same water twice." See also Cohen *et al*, "Heraclitus of Ephesus," B6, B49a, and B89a for other expressive iterations.

31 For the most theatrical iteration, see GS 125.

thought. Specifically, by only taking into account his ontological requirement (which we have already determined), we see that God, as we philosophically understand it, is rejected by Nietzsche *ontologically*. The same, too, can be shown of Schopenhauer. An awareness of how these authors' ontologies reject God's existence will then help us understand their respective valuations of our own.

To begin with a definition, let us state how we take God to be philosophically understood. The traditional Abrahamic interpretations of God, which I believe are what Nietzsche was mainly concerned with and therefore the ones I will focus on, is that God is a simple, perfect being. That is, God is partless, identical to every part of itself because God is the only part of itself. This is so spatially, temporally, mereologically, etc. In other words, God is eternally the same: by being definitionally always identical to itself, it therefore does not and cannot change into something else unless it ceases to be what we call "God." *God is that it is.*[32] Furthermore, what we traditionally mean by "God" is something perfect. But a perfect thing, properly understood, is *not* a changing thing—it does not come nor cease to be perfect, it simply, eternally is. God, therefore, must be understood as something *unchanging*.

It is thus not difficult to see how the Nietzschean and Schopenhauerian ontological rejection of the divine is supposed to take place. If their ontological requirements can both be equivalently expressed by the biconditional "existence *iff* change," as we established, then it must be true that their respective ontologies do not grant existence to anything which does not change. Thus, God, as we have understood it, by being an unchanging thing, must accordingly not be a thing at all. Alternatively, if we consider the contrapositive of our ontological expression, namely "inexistence *iff* unchanging," we clearly see that since what we understand by "God" meets the latter condition, it therefore must also meet the former. All of this is to say that, in the accounts we have presented here as representative of both Nietzsche and Schopenhauer's ontologies, God is not granted the status of "existing." Amusingly, God cannot be pronounced dead, as, in these ontologies, he never was in the first place.

We may now see, then, how we can derive Nietzsche's atheism from his ontology. For the existence of a being like God, as we have understood it, is inconsistent with the metaphysical system and ontology adopted by Nietzsche. That such a derivation is possible, *i.e.*, that his atheism *can* be grounded in his metaphysics, is a significant fact.[33] This significance, if not a testament of the value of Nietzsche's thought to a secular metaphysics, is at least an encouragement to attend to his metaphysical ideas when studying other parts of his philosophy. For, as mentioned above, without a proper awareness of Nietzs-

32 Exod. 3:14.

33 It must be made exceedingly clear that I do not claim that Nietzsche explicitly derives from his ontology an argument for the nonexistence of God. But that such a derivation is *possible* supports my point about the importance of attending to his metaphysics when examining other aspects of his thought.

chean metaphysics, we are left with no choice but to consider some of his beliefs, such as his atheism, as arbitrary. With such an awareness, however, the meaning of passages like "Concept of the perfect creature as an antithesis to the real creature; more clearly, as the contradiction of life…" (WTP 584) becomes more easily understood.

Also significantly, the understanding we demonstrate here with our application of the ontological biconditional to God can be extended to anything that purports to perform a similar function in a metaphysical picture of existence. For all the concepts equivalent to God in that they can remain the same while disjoined from the continuum of change—that is, all that has being as opposed to becoming—will equally fail our ontological scrutiny. In Nietzsche's own words, "all the highest concepts, that which has being, the unconditional, the good, the true, the perfect—all these cannot have become and must therefore be *causa sui*. All these, moreover, cannot be unlike each other or in contradiction to each other. Thus they arrive at their stupendous concept, 'God'."[34] Accordingly, we can also ground in his metaphysics Nietzsche's rejection of things like the noumenal absolute, the *in-itself*, the ideal, the spiritual, etc., for all these are iterations of unchanging things.

With the above considerations in mind, the reader should more clearly see what exactly it is that Nietzsche rejects in metaphysics. What he actually criticizes is really a metaphysical inversion,[35] and what is erroneously thought of as his attacks on metaphysics are really his attempts to revert the primacy of *being* to becoming. I take, and this is what I aim to show in the following section, that a corresponding evaluative reversion ensues from the metaphysical one he undertakes, which is what serves as the basis for Nietzsche's life-affirming commitment and for his denunciation of all inverted moralities.

THEIR EVALUATIVE DIVERGENCE

Our parallel analysis of Schopenhauer's ontology proves most useful in this section. For, since each author adopts similar ontological requirements and yet radically differs in their evaluation of existence, the differential element causing this evaluative divergence will become more evident. That is, we will discover precisely what in Nietzsche's metaphysics can serve as a foundation for his affirmation of existence. In short, it is the fact that Nietzsche applies their shared ontological requirement radically, while Schopenhauer limits it to a specific kind of existence—a phenomenal one—that grounds their evaluative divergence.

34 TI, "Reason in Philosophy" 4. See also WTP 567: "…there is no 'other', no 'true', no essential being — for this would be the expression of a world *without* action and reaction [that is, without becoming]…"

35 See TI, "*Reason in Philosophy*" 1: "Whatever has being does not become; whatever becomes does not have being. Now they all believe, desperately even, in what has being." Recall the being/*being* distinction.

That the divergence of their evaluations stems from a similar foundation has been suggested before.[36] Nietzsche himself appears to recognize this, as well as the fact that Schopenhauer seems to detract from his own philosophical principles. But in order to truly understand their departure, we must locate precisely where Schopenhauer trips and where Nietzsche continues to walk. Our new understanding of their ontologies becomes instrumental to finding this locus, as well as the cause of Schopenhauer's fall. The result is an illuminating account of the evaluative disagreement we observe between these otherwise kindred thinkers.

We must, first, understand precisely what Schopenhauer's error was. Nietzsche seems to point in the right direction when he accuses his predecessor of "tear[ing] asunder of the bond that unites him with his ideal" (UM III.3): at one point Schopenhauer abandoned his key philosophical discernment—that unrest is the mark of *existence*—and resigned himself to the traditional metaphysical dogma of being. As we examined above, Schopenhauer indeed recognizes change as a necessary and sufficient condition of existence. And, per the previous section, this understanding denies existence to anything which does not change. Yet, in his metaphysical doctrine, Schopenhauer posits that behind our phenomenal existence lies a latent reality, one which he refers to as the "absolute" or the "will."[37] However, in a puzzling move, the latter one gains the designation of *true being*, despite its not meeting the ontological requirement Schopenhauer holds. He is thus left with a metaphysical contradiction. For, as we have seen, the absolute cannot be granted *being* since it is unchanging, and yet Schopenhauer attributes to it the character of true reality. In simpler words, he violates his own ontological requirement by positing a noumenal reality of being which does not become.

Without our new understanding of Schopenhauer's ontological requirement, his belief in this latent absolute reality could pass by unnoticed as consistent with his ontology. But with this new awareness, we may see how Nietzsche is right in accusing Schopenhauer of retaining the metaphysical dogma.[38] For this is what he does when he posits a *being* behind becoming, one which takes the form of being. But this latent "*being*" cannot pass the ontological test *qua* being, for if it purports to remain the same, as unitary and absolute, then it may not be granted existence. The ontological equivalence, at least in Nietzsche's view, of God, being, absolute, etc., and our considerations thus far, bear witness against the *being* of Schopenhauer's noumenal world. If he is to remain consistent with his ontology, then no such thing must be posited.

36 See Reginster, "The Will to Power," 107; and Simmel, *Schopenhauer and Nietzsche, 9 et passim*.

37 Simmel, *Schopenhauer and Nietzsche*, 19-26: "Schopenhauer's conclusion, which he deduced from Kant's phenomenality of the world, comes to the opposing result that the world is unreal and that true reality must be sought beyond it... [he] senses reality as the opposition of experience." See also Deleuze, *Nietzsche and Philosophy*, 82-4.

38 For a Nietzschean account of how this came to happen, see WTP 17 and GS 357.

This is, I think, the key realization Nietzsche has in regards to their shared ontology. As the relentless wielder of the hammer, Nietzsche did not retire his ontological requirement when faced with the temptation to posit a being behind becoming, a noumenal behind phenomena—he upheld his ontology thoroughly. Nietzsche recognized that "existence" must be understood radically: its sufficient and necessary condition doesn't limit only *our* sort of existence, which is phenomenal, but existence *per se*. Accordingly, he did not grant existence, in its strictest sense, to any supposed latent reality behind our own. Consequently, existence as we know it ceases to be a lesser reality and instead occupies exhaustively the stage of *being*. That is to say that becoming is recognized as the only sort of *being*, that to be is to become and to *be* is not to be.

This shift regarding the anchor of reality from being-*in-itself* to the flux of becoming might be the most significant movement taken in Nietzsche's philosophy, and lies at its very core.[39] In fact, once this movement is made, talk of a "metaphysical shift" starts to become senseless, as any other supposed positions that could compete for the seat of true *being* are eliminated.[40] And—here lies the differential element—it is *this* realization that grounds Nietzsche's ability to deviate from Schopenhauer's evaluation of existence. For the supposed existence of absolute being is exactly what solicits a rejection of becoming. Nietzsche asserts:

> Logical world-denial and nihilation follow from the fact that we have to oppose non-being with being and that the concept 'becoming' is denied...;[41] Once the concept of 'nature' had been invented as the opposite of 'God', 'natural' had to become a synonym of 'reprehensible': this whole world of fiction is rooted in hatred of the natural (of reality!); it is the expression of a profound vexation at the sign of reality... *But this explains everything*.[42]

That is to say that, for Nietzsche, the positing of being implies a condemnation of becoming. Thus, if being is posited metaphysically, then a rejection of becoming must follow evaluatively. And if all within existence is becoming, then existence itself must be rejected—or so goes the nihilistic rationale. For the values of being, "absolute values" or "ends in themselves," cannot be realized within becoming, and consequently becoming is condemnable.[43]

39 WTP 1058: "The two greatest philosophical points of view (devised by Germans): a) that of *becoming*, of development. b) that according to the *value of existence* (but the wretched form of German pessimism must first be overcome!)—both brought together my me in a *decisive* way." [*sic*]

40 See Deleuze, *Nietzsche and Philosophy*, 175: "In place of a depreciated life we have life which is affirmed—and the expression 'in place of' is still incorrect. It is the place itself which changes, there is no longer any place for another world."

41 WTP 580. See also WTP 583 and 708, and Deleuze, *Nietzsche and Philosophy*, 7-12.

42 AC 15. See Deleuze, *Nietzsche and Philosophy*, 147-8 and Simmel, *Schopenhauer and Nietzsche*, 45.

43 See WTP 12A: "underneath all becoming there is no grand unity in which the individual could immerse himself completely as in an element of supreme value... an escape remains: to pass sentence on this whole world of becoming as a deception and to invent a world beyond it, a *true* world"; also WTP 585A and 685. For a Nietzschean account of how nihilistic

But to condemn becoming by positing being is, for Nietzsche, absurd. The latter, as we have seen, is understood in his ontology to have no existence. Consequently, the condemnation of becoming originating from this position is not valid for Nietzsche—there is nothing which substantiates it but a fiction. As we have established, the positing of being is what causes Schopenhauer to condemn becoming, which is seen as the sort of existence we are limited to; yet, the positing of being is inconsistent with the ontological requirement demonstrably adopted by both authors. But only Nietzsche properly realizes this requirement. Accordingly, he asserts "that there is no 'totality'; that no evaluation of human existence, of human aims, can be made in regard to something that does not exist…" (WTP 711). That is to say that no condemnation of becoming may be done in the name of being, as the latter has no *being*. Thus we are able to see how Nietzsche's fulfillment of the ontological requirement, and the consequent elimination of the metaphysical dogma upheld contradictorily by Schopenhauer, account for the these authors' evaluative divergence despite their equivalent ontologies.

However, Nietzsche's realization goes yet further. Beyond the dismissal of the dogmatic position and its reprimanding of becoming, he holds that the problem of the value of existence itself becomes trivial. For if there is nothing outside of becoming, then the task of evaluating existence loses its meaning. "To appraise *being* itself!," Nietzsche complains, "But this appraisal itself is still this *being*!—and if we say no, we still do what we *are*… One must comprehend the absurdity of this posture of judging existence, and then try to understand what is really involved in it. It is symptomatic."[44] That is, the concern with a value for existence, the need for it to be justified, is itself a product of the "metaphysical need," of the dogma of being. If we consider that the being of becoming is opposed by nothing, then "value" itself in this case becomes meaningless, and the imperative to give an evaluation disappears.[45]

With the metaphysical realization that existence as becoming is all there *is*, Nietzsche is able to rid himself of the *need* to justify existence. In other words, with his metaphysics, Nietzsche concludes that existence justifies existence, becoming justifies becoming.[46] As a consequence of the metaphysical elimination of being, becoming affirms itself fully as *being*, and in this way becomes a new standard of value. That is to say that, with our realization, existence as it is becomes the ideal, not in the sense of the metaphysically abstract and unattainable, but of an aspiration that is ever-presently

valuations developed, see WTP 303, 411, 417, 419 430, 581; and GM *et passim*.

44 WTP 675. The first two italics are mine, per our notation. The third is original, but fortuitous.

45 See WTP 708 and TI, '*Reason in Philosophy*' 5.

46 I believe this is what Deleuze means when he writes that, for Nietzsche, "[b]eing comes from becoming, it is affirmed of becoming itself… the only *being* is that of becoming" in *Nietzsche and Philosophy*, 188 (my italics, to keep with notation). I also take it to be in line with Hussain when he asserts that "Nietzsche does have a fundamental standard: it is the standard of life" in "The Role of Life in the Genealogy," 156.

actualized.

CONCLUSION

We have sought to establish how Nietzsche's metaphysics can give us a better understanding of his general philosophical ideas. We have analyzed the writings of Nietzsche and Schopenhauer, with the support of secondary commentators, to extract from each of them what we have called their "ontological requirements." This gave us a concise understanding of which condition each author considers necessary and sufficient to grant something the metaphysical status of "existing." In further analysis, we have established how these requirements upheld by each philosopher are equivalent, and then showed how they can metaphysically ground their atheism. This was the initial fruit of our general enterprise.

We subsequently proceeded to metaphysically ground a major Nietzschean idea, that of the affirmation of life, and explain his and Schopenhauer's evaluative divergence. This was done by examining how the latter posited in his metaphysical system the *being* of the absolute, which did not consist with his ontology. In contrast, we established how Nietzsche thoroughly upheld his ontological requirement, and consequently rejected the existence of anything with static being, including the Schopenhauerian absolute. This turned out to be the differential element that produced an affirmative valuation of existence in Nietzsche and constricted Schopenhauer to nihilism. We saw that, as a further consequence, the obligation to provide a value for existence vanished, as existence became itself an affirmation of existence. Existing beings are thus left with no choice but to affirm their *being*; to exist is to say 'Yes!' to existence.

With our general enterprise we tacitly recounted the Nietzschean story of how we came to despise and then affirm existence: after our ceasing to believe in the old values of being, which necessarily condemned becoming, existence began to seem worthless; yet, with this development, we come to create new values, namely *the values of becoming*. What is most significant is that, after our analysis, we are able to demonstrate a metaphysical parallel to these evaluative movements. That is, we now have an account of how the revaluation of values can be grounded upon a different metaphysical foundation, one which takes *change* to be the essential character of existence instead of continued self-identity. As it often is the case that things are better expressed by Nietzsche, I will allow him the final word encapsulating this paper's takeaway:

> Against the value of that which remains eternally the same (vide Spinoza's naiveté; Descartes' also), the values of the briefest and most transient, the seductive flash of gold on the belly of the serpent vita— (WTP 577)

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IN VITRO CREATIONS: APPLIED BIOETHICS OF DE-EXTINCTION TECHNOLOGIES

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ABSTRACT

De-extinction is an emerging synthetic biology and genetic engineering conservation initiative that creates proxy organisms. This paper provides an overview of the history of de-extinction, presents an ethical analysis of technologies such as CRISPR, RNAi, and iSCNT, and argues for their application within an individualist framework. I argue that people have special moral obligations to proxy organisms precisely because these organisms are designed by human beings. The analysis ultimately addresses concepts about the implications of emerging technologies for the epistemology of biological systems, individuality, and moral responsibility that humanity shares for the well-being of non-human beings and the world.

I. INTRODUCTION

Imagine traveling to present-day Alaska and seeing a herd of Woolly Mammoths grazing in the meadows. The historic species of *Elephantidae* went extinct 10,000 years ago, so the possibility seems preposterous. However, modern-day genetics is about to change that through a process known as de-extinction. De-extinction has recently captured the attention of both scientists and the public, gaining momentum in the early 2010s; however, its roots date back to the early 1800s. The practice is often mistakenly

understood as either reviving extinct species or cloning. De-extinction is more accurately defined as the creation of *proxy organisms*, organisms that share similar genetic and phenotypic traits with extinct species, through natural or artificial methods, to restore lost ecological roles.[1] I define a proxy organism as an organism created through genetic engineering, using modified DNA from an extinct species, such as a Woolly Mammoth (*Mammuthus Primigenius*), mixed with DNA from its closest living relative, the Asian Elephant (*Elephas Maximus*). Private companies, such as Colossal Biosciences, are spearheading mammalian-based projects to create proxy organisms for the Woolly Mammoth and the Tasmanian Tiger (*Thylacinus cynocephalus*), utilizing advanced genetic engineering technologies to create entities that could fill the ecological roles of extinct species. [2]

While humans have bred animals such as chickens and cows to meet various needs, those animals are still products of natural reproduction, existing within the defined Darwinian evolutionary processes that guide all life. In contrast, proxy organisms are developed at the cellular level, with humans directly manipulating their genes through genetic engineering, making their very creation synthetic rather than natural. In this paper, I will argue that organisms created through de-extinction and human intervention hold a distinct moral status shaped by their creation, which gives humanity a special moral responsibility to these organisms, viewed through a framework that evaluates each being individually rather than by species. In **Section II**, I will provide a brief historical overview of de-extinction efforts and examine the concept of species boundaries. In **Section III**, I will explore the technological processes used in mammalian de-extinction, focusing on CRISPR and its potential ethical benefits. **Section IV** will address the ethical challenges posed by other technologies, such as RNAi and iSCNT, where concerns about their application in de-extinction raise significant ethical issues. **Section V** will discuss the ethical value of these proxy organisms and how humans ought to value them through individualist frameworks. Finally, in **Section VI**, I will provide concluding remarks.

II. HISTORY, TAXONOMY & BASIC DEFINITIONS

Before current de-extinction initiatives, scientists experimented with various methods to address species loss in ecosystems. One early approach, translocation, was introduced in the 1830s and involved moving an existing species to a location where a similar locally extinct species once thrived.[3] For example, if a regional species of Grizzly Bear, *Ursus Arctos Horribilis*, went extinct, biologists might introduce a different population of Grizzly Bears from elsewhere to fill the gap.[4]

As science began to advance, cloning started as a method for artificially replicating

1 Ben Jacob Novak, "De-Extinction," *Genes* 9, no. 11 (2018): 548
2 "Mammoth." *Colossal*, 11 June 2023
3 Ben Jacob Novak, "De-Extinction," *Genes* 9, no. 11 (2018): 548
4 *ibid*.

organisms. Early forms of cloning occurred in plants, with techniques like vegetative propagation, which allowed new plants to grow by cutting specific parts of them and placing them in controlled environments to facilitate growth, leading to the discovery of cellular *totipotency*, where a single cell could grow into a complete organism.[5] Animal cloning followed, with German embryologist Hans Spemann proposing in 1938 that a nucleus from an unfertilized egg could be replaced with a nucleus from a somatic cell to create a cloned organism.[6] This concept led to the successful cloning of Dolly the Sheep in 1996 through somatic cell nuclear transfer (SCNT), a breakthrough in embryological science.[7] Cloning introduced significant ethical concerns, particularly about the poor quality of life genetically engineered organisms endured.

The concept of species further complicates the discussion of de-extinction. A species, in its most pragmatic sense, is a grouping of organisms. Defining what constitutes a species has long been debated, with definitions varying between reproductive compatibility, morphology, genetic similarity, and phylogenetics. For instance, domestic dogs as phenotypically different as the Chihuahua and the Great Dane are classified under the same species, *Canis Lupus Familiaris*, due to their shared genetic lineage and reproductive capability.[8] Yet equids like Zebras, despite their morphological similarities, are divided into multiple species and subspecies, such as the Grevy's, Mountain, and Plains zebras, further showing taxonomic inconsistencies. Finally, hybrids like Ligers, a cross between a lion (*Panthera Leo Leo*) and a tiger (*Panthera Tigris*), lack clear species classification, as they do not fit neatly into either parent species' category. This analysis is meant to showcase a clear lack of species boundaries because the groupings can be manipulated to classify organisms according to the research.

Finally, it is important to understand the fundamental components of genetic material. DNA (deoxyribonucleic acid) carries the genetic blueprint for all living organisms, encoding the instructions for growth, development, and reproduction. RNA (ribonucleic acid) plays a key role in translating this genetic information into proteins, which carry out essential cellular functions.[9] In modern de-extinction, emerging technologies can manipulate DNA and RNA to modify the genomes of extinct species, making it possible to engineer proxy organisms based on their extinct relatives. As developments in genetics advance, they set the stage for genetic-engineering tools now defining modern de-extinction efforts.

5 Abraham D. Krikorian, "Frederick Campion Steward (1904–1993)," *Biographical Memoirs of Fellows of the Royal Society* (1995).

6 E. M. De Robertis, "Spemann's Organizer and the Self-Regulation of Embryonic Fields," *Mechanisms of Development* 126, nos. 11–12 (2009): 925–941.

7 Harry D. Griffin, *DOLLY: The Science Behind the World's Most Famous Sheep* (1999).

8 Ben Jacob Novak, "De-Extinction," *Genes* 9, no. 11 (2018): 548.

9 Nicole Martinez-Martin and David Magnus, "Privacy and Ethical Challenges in Next-Generation Sequencing," *Expert Review of Precision Medicine and Drug Development* 4, no. 2 (2019): 95–104.

III. PROMISE & PROGRESS IN DE-EXTINCTION TECHNOLOGIES

The historical background presented in **Section II** has led to modern de-extinction initiatives. While the foundational work and research for modern de-extinction are contemporaneously occurring, the aforementioned researchers have developed roadmaps with the steps necessary to create viable proxy organisms. The process I will convey has been established by a company leading modern-day de-extinction initiatives, Colossal Biosciences, most notably by individuals George Church and Beth Shapiro for their crucial contributions to genomic editing and ecological innovation.[10]

Researchers have to create viable cell lines and induced pluripotent stem cells (iPSCs) from the closest living relative. Cell lines are groups of cells derived from a single original cell that can continuously grow in an artificial environment and are used to perform repeated experiments without needing new samples. iPSCs are specialized, mature cells like skin or blood cells that are reprogrammed back into a stem-cell-like state. This is done by introducing specific genes into the mature cells, which "reset" them to a state where they can develop into almost any type of cell in the organism, similar to how stem cells function in embryos.[11] While iPSCs aren't fully totipotent, they aid in engineering cells capable of expressing desired traits of the extinct species.[12] As novel stem cells and cell lines are developed *in vitro*, they serve as the foundation for further genetic modifications necessary to recreate the desired traits of extinct species with CRISPR.

Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) is a powerful tool used in gene editing that has recently exploded in popularity. It allows scientists to make precise alterations to the DNA of an organism. CRISPR was made to target specific genetic sequences in any organism's genome, allowing scientists to add, delete, or modify genes with a certain degree of accuracy. This is achieved through the guidance of RNA molecules, which direct the enzyme Cas9 protein to the exact location in the DNA where editing is needed. Once the DNA is cut, natural repair mechanisms within the cell can introduce new genetic material or disable a gene entirely. One key study by Chen *et al*. involved the mathematical modeling of biological systems, which offered insights into how the technology could be used efficiently in genome editing.[13] The model demonstrated how calculations can be made to improve the accuracy of gene targeting while accounting for unknowns such as off-target effects and editing efficiency. However, the paper also pointed out the unknowns of the technology, as the team attempted to take a stochastic process and make it deterministic, which left more areas of exploration.

10 "Mammoth," *Colossal,* June 11, 2023

11 David B. Thompson et al., "The Future of Multiplexed Eukaryotic Genome Engineering," *ACS Chemical Biology* 13, no. 2 (2018): 313–325

12 *ibid*.

13 T. Chen et al., "Modeling Gene Expression with Differential Equations," *Pacific Symposium on Biocomputing* (1999): 29–40.

I have outlined CRISPR's technical promise, yet it is essential to confront the ethical concerns that arise with these capabilities, especially around species boundaries and animal welfare. As referenced in **Section II**, species boundaries can be thought of as the genetic, reproductive, morphological, or ecological distinctions that separate one species from another. When species boundaries are "crossed," critics refer to the purposeful act of introducing genetic material from one species to another. It is unclear what the threshold or boundary itself is. Crossing species boundaries is frowned upon because it is viewed as unnatural and therefore immoral by critics.[14] The objection stems from the fear that CRISPR may homogenize genetic variation in populations, thereby contributing to the loss of distinct species. Genuine concerns from some address a broader anxiety about humanity's growing influence on the natural world and a fear that humans can eliminate species to engineer new organisms. The counterargument I would make towards this concern is that something unnatural does not equate to something bad. For example, through genetic engineering, scientists have developed treatments for diseases and improved agricultural initiatives to reduce crop loss.[15] Perhaps the critic is talking about the degree to which CRISPR is being used to make genetic modifications. Woolly Mammoth and Asian Elephant DNA modified to create a proxy Mammoth organism differs from developing an organism with African Lion and Bald Eagle (*Haliaeetus Leucocephalus*) DNA to create the mythological Hippogriff. While an extreme example, I aim to show the difference in the modifications occurring across radically crossed species boundaries. Scientists proved through the Enviropig, a genetically modified organism containing targeted gene insertions from the common domesticated pig (*Sus Scrofa Domesticus*), common Mouse (*Mus Musculus*), and the E. Coli bacterium, which produces 65% less phosphorus in its waste, that there can be benefits to the practice.[16] These modified pigs have a better impact on the environment and live functionally similar lives to unmodified pigs. This shows that genetic modification across extreme species boundaries in itself is not inherently an immoral practice, as it can produce healthy hybrids that are net positives to the environment.

Another point to note is that the current framework of de-extinction does not technically cross species boundaries because the technologies require genetic information to create an exogenous template from the extinct species and *its* closest living relatives. For the de-extinction of a proxy Woolly Mammoth *Mammuthus Primigenius*, scientists would engineer the organism using genetic material from the Mammoth and the Asian Elephant *Elephas Maximus*. Due to differences in when both organisms existed, along

14 Marcus Schultz-Bergin, "Is CRISPR an Ethical Game Changer?" *Journal of Agricultural and Environmental Ethics* 31, no. 2 (2018): 219–238.

15 Abraham D. Krikorian, "Frederick Campion Steward (1904–1993)," *Biographical Memoirs of Fellows of the Royal Society* (1995).

16 Anne Minard, "Gene-Altered 'Enviropig' to Reduce Dead Zones?" *National Geographic,* March 30, 2010.

with where they existed geographically, these organisms would not breed naturally. Yet their respective DNAs indicate that they are closely related genetically.[17] Naturally, organisms across different species that are genetically similar have been documented to breed, such as Wolves (*Canis Lupus*) and Coyotes (*Canis Latrans*), and CRISPR recreates this phenomenon in a laboratory. I would claim that species boundaries are not morally significant as they can be crossed naturally, so the current process would not violate the concerns of unnaturalness. Unless there is a structured and rigid approach to taxonomic classification, species boundaries have always been fluid due to natural processes like hybridization and humans' approach to grouping organisms. Evolutionary biologist Jody Hey presents in his article that manipulating species boundaries is relatively common due to the wide variation in species definitions tailored to different research objectives.[18] Decades of experimentation revealed that extreme genetic modifications across species can harm an organism's quality of life, prompting significant animal welfare concerns.

The second concern of animal welfare in CRISPR applications will play a large role in de-extinction. I will reflect on animal welfare as the overall well-being and prevention of harm to the organism from a physical and mental health standpoint. Genetic editing is still a relatively new science, and despite the advancements made with CRISPR, there are many aspects of the genome we still need to understand fully. Some genes affect multiple traits through pleiotropy, while others are activated or suppressed by chemical signals outside the genome, by the epigenome.[19] Even known elements or processes that have been documented cannot be modeled or accounted for, such as time delays in translation and transcription, which involve different RNA molecules performing functions to develop proteins for gene expression.[20] This is because these processes involve stochastic interactions that current algorithms cannot fully capture. Without being able to account for these factors, the likelihood of an unintended consequence of genetic modification is high, which ultimately affects the quality of life of the organism.

In nature, non-human animals live according to unpredictable evolutionary processes and ecological dynamics, and their individual lives occur independently of conscious manipulation by other beings. Humans ought to care about this because when they intervene in this process, they step into a role that presupposes a hierarchical authority. This places them as arbiters over the well-being or suffering of other beings by playing the role of a creator or God. But why should that matter? De-extinction requires nature to break from the natural process of development by constructing synthetic life

17 Roya Adavoudi and Małgorzata Pilot, "Consequences of Hybridization in Mammals: A Systematic Review," *Genes* 13, no. 1 (2021): 50

18 Jody Hey, "The Mind of the Species Problem," *Trends in Ecology & Evolution* 16, no. 7 (2001): 326–329.

19 Marcus Schultz-Bergin, "Is CRISPR an Ethical Game Changer?" *Journal of Agricultural and Environmental Ethics* 31, no. 2 (2018): 219–238.

20 T. Chen et al., "Modeling Gene Expression with Differential Equations," *Pacific Symposium on Biocomputing* (1999): 29–40.

forms subject to humans' incomplete understanding of genetics, consequently leading to unintended consequences with the potential of pain and death. This is an important moral divergence from natural suffering, which is not orchestrated by conscious intent but arises from uncontrollable ecological interactions. The suffering humans cause in this case is relevant because they can not only directly influence it but, more importantly, can understand or control it as moral agents. Nature lacks this moral capacity and causes the suffering of non-human beings without discrimination.

In assuming the power to edit life through genetic engineering, humans implicitly claim they can predict how targeted genetic alterations might translate into physiological outcomes. This presumption risks almost commodifying life itself, as humans would impose conditions that these organisms cannot adapt to on their own, due to a lack of evolutionary lineages. The concern with humanity having the power to commodify life comes especially from poor farming standards, which breed livestock for mass production. Although de-extinction is still in early stages of application, early successes raise concerns that proxy organisms could eventually be produced for commercial or entertainment purposes, like Michael Crichton's *Jurassic Park*. Yet the assumption that these organisms would behave like their extinct counterparts is speculative, since these phenotypic traits and behavioral instincts would be shaped by their developmental environment rather than ancestral genotype alone. Because these organisms have no control over their synthetic in-vitro development, any suffering they experience would arise from human choices rather than natural evolutionary processes, making it ethically distinct.

If CRISPR affects the incorrect genes, humans are ultimately responsible for the consequences that occur in the later part of the organism's life. This is a difficult issue to combat, as studying the genes and their effects on one another is a monumental task. Steps are being taken to make accurate multiplex edits for eukaryotic organisms. Base technologies that are being built on top of CRISPR are a significant improvement. They work by using special proteins called deaminase enzymes to convert DNA bases (adenine to guanine and cytosine to thymine) without breaking the strands of DNA, which allows for more precise targeting of genetic modifications.[21] While the alteration of genetic material and concerns about animal welfare through CRISPR are valid, I would argue that the risks do not morally outweigh the potential benefits of CRISPR enough to stop the use of the technology.

Even acknowledging the risks, CRISPR still offers benefits that alternative technologies cannot. By using CRISPR to create extinct-species proxies, humans have the potential to restore genetic diversity lost through human activity. If these proxy organisms were to interbreed with close extant relatives, they could reintroduce variation that supports population resilience. Since many extinctions were accelerated by human

21 David B. Thompson et al., "The Future of Multiplexed Eukaryotic Genome Engineering," *ACS Chemical Biology* 13, no. 2 (2018): 313–325.

activity, reintroducing lost genetic variation offers a unique opportunity to mitigate those long-term ecological effects. Finally, the knowledge gained from CRISPR will be invaluable as multiplex editing allows researchers to better understand the roles of specific genes. While the net positives of CRISPR in de-extinction demonstrate its value, traditional bioethical arguments suggest that a related technology, RNAi, introduces a different set of ethical challenges in de-extinction efforts.

IV. RISKS & MORAL COMPLEXITIES WITH DE-EXTINCTION TECHNOLOGIES

Unlike CRISPR, which alters DNA sequences, this technology raises unique ethical questions because it modifies gene expression rather than the genome itself. RNAi is a natural biological process that regulates how genes are expressed within cells. It works by "silencing" certain genes, either preventing them from being activated or reducing their activity during cellular processes like transcription, post-transcription, or translation.[22] When analyzing the framework for ethical RNAi, the four principles of bioethics developed by American bioethicists James Childress & Tom Beauchamp, which are autonomy, beneficence, nonmaleficence, and justice, are utilized.[23] Three of the concepts are relevant to this discussion of de-extinction. In the context of applying RNAi technologies, I will leave out autonomy as this factor entails the truthful disclosure of the procedures of RNA and allows one to "foster adequate decision making," which does not apply to non-human animals since they lack rationale.[24] The claim with beneficence is on "one ought to do and promote good," where the focus appears to be utilitarian, accompanied by "prevent harm, remove harm, and promote good."[25] The next concept, nonmaleficence, extends the duty to prevent harm by defining harm as "thwarting, defeating, or setting back some party's interests."[26] The permissibility of RNAi is hard to justify for de-extinction.

RNAi can sometimes silence unintended genes due to the way RNA molecules interact with endogenous or foreign material, which can lead to harming the organism. This can occur because RNAi uses a similar process as CRISPR when it comes to taking a protein complex and "cutting" a specific messenger RNA (mRNA), which would silence a gene.[27] Some genes are sequenced in similar ways, so the wrong gene could be targeted. Assuming that humans have a responsibility to "remove evil or harm," can they justify running multiple *in vitro* experiments and hope that the right genes become silenced for the correct interpretation of a proxy organism? The intentional silencing of certain

22 Mette Ebbesen et al., "Ethical Perspectives on RNA Interference Therapeutics," *International Journal of Medical Sciences* 5, no. 3 (2008): 159–168.
23 *ibid*., 164.
24 *ibid*., 166-167.
25 *ibid*.
26 *ibid*.
27 *ibid*.

genes with RNAi suggests that humans have a special level of responsibility due to the deliberate manipulation of the organism.

There is a component of justice that can be applied to non-human animals, which can be dissected. The area I'd like to focus on is, "If these treatments turn out to be medically and economically efficient, there is no doubt that they should be included in the health services accessible to all."[28] With RNAi for non-human entities, there are two ways that the technology can be applied in an ethical way that constitutes justice for de-extinction practices.

> (1) The RNAi resources being given to de-extinction initiatives should not be taken at the cost of resources used for currently endangered species. They should be shared equally.
> (2) The RNAi procedures should aim to create genetically similar populations to the species killed by humans, while diverse enough to avoid inbreeding depression.

It would be unethical and inequitable to take the resources used for current conservation projects and put all or a majority of them towards developing proxy organisms. Conservation comes first compared to de-extinction, as we have not reached a point yet where de-extinction is the only option to stabilize vulnerable ecosystems. RNAi has beneficial applications for extant organisms as well, as certain genes that produce diseases can be silenced. Conserving endangered species by silencing genes that harm their populations would be a more productive exercise in stabilizing genetic lineage for certain species as well as contributing a higher level of good towards the environment. A risk could arise if humans silence many genes and leave populations with genetically similar profiles, leading to a genetic bottleneck. If these populations were to be released in the wild and procreate, it would cause the biological fitness of the offspring to decrease because of inbreeding.[29]

Beauchamp & Childress introduce the concept of *risk-benefit analysis* as a way to evaluate the balance between the potential harms and benefits of a particular action. In the described framework, risks are defined as the possibility of future harm, while benefits refer to positive outcomes such as improved health or life preservation.[30] Additionally, the principle of nonmaleficence is given greater weight than beneficence, which shows that prevention is valued over the promotion of goodness.[31] When evaluated for de-extinction, RNAi holds the potential to positively influence genetic traits and mitigate harmful diseases. However, the risk of unintended genetic consequences cannot be overlooked, as off-target effects on genes beyond what was intended would set back

28 *ibid.*
29 *ibid.*
30 *ibid.*
31 *ibid.*

the well-being of the organism. According to the framework, the potential to harm the organism outweighs the potential to eliminate harmful mutations or diseases from occurring. Additionally, unintended gene edits from RNAi might not surface until later in the proxy organism's life. Genetic engineering is inductive by nature, so mapping out the effects that genes carry and understanding their interconnections will help researchers make more informed decisions about targeting specific areas of the genome. If RNAi is implemented, it ought to be done in a way that allows for justice for its recipients.

To implement RNAi in a way that upholds justice, the approach would involve several specific procedures to prevent harm. First, researchers should employ trials that begin with *in vitro* testing, followed by closely monitored *in vivo* trials in less complex organisms before moving on to target species. This phased approach allows for the early detection of potential off-target effects or unintended gene silencing, which reduces the likelihood of harm to more sentient animals. Additionally, RNAi should be used selectively, targeting only those genes whose functions are well-mapped and have been digitally modeled not to produce cascading effects that could harm the animal. Justice for the recipient animals would thus involve proactive steps to prioritize their well-being by making sure the risks are thoroughly evaluated before full-scale application. Post RNAi editing, the next key technology, interspecies somatic cell nuclear transfer (iSCNT), presents separate but equally consequential ethical questions.

iSCNT takes the nucleus from a hybrid cell and inserts it into the closest living relative's egg cell. Using the hybrid stem cells, scientists will utilize the pluripotency of those cells to become somatic skin cells, which hold the genetic material of the extinct and extant species. A cell line would be maintained. On the other hand, oocytes, which are immature egg cells, would be extracted from a healthy female close living relative. The nucleus would then be removed from the oocyte, leaving it as an enucleated sex cell. The nucleus from the hybrid somatic cell would be removed as well, leading to its insertion into the enucleated oocyte, making it now uninucleated. The nuclear transformation is now complete. Using specific electrostimulation techniques, the cell would begin dividing through mitosis. Due to the cell having started cell division, the cell is considered fertilized, and a zygote has been formed. The cell will undergo more divisions and will form a morula, which is a solid clump of cells. The morula will turn into the blastocyst. The blastocyst consists of the inner cells, the epiblast, turning into the embryo, while the outer cells, called the trophoblast, form into the placenta.[32]

Characterized by the development of the embryo, iSCNT has major effects on the development of the organism; however, there are moral aspects to consider. A lot of the same issues as earlier are presented, yet they are different in degree. In the case of an embryo developing incorrectly or not expressing the genotypical/phenotypical traits

32 José Rafael Blesa et al., "Ethical Aspects of Nuclear and Mitochondrial DNA Transfer," *The Linacre Quarterly* 83, no. 2 (2016): 179–191

that are desired, the experiment would be considered a failure, therefore leading to the destruction of the embryo. There's an additional level of immorality present as the living entity expands from a cell to multiple cells, and then to a full-fledged organism. As discussed by Blesa, José Rafael *et al.*:

> *one cannot justify, in any case, resorting to illicit means such as…elimination of human embryos…by using cell lines obtained from them…to assuming any cost in scientific experimentation so long as satisfactory results are obtained.*[33]

This type of practice instrumentalizes the embryo, and I would go a step further to remove the term human from Blesa, José Rafael *et al.*'s claim. Instrumentalization occurs when living organisms are used solely for the benefit of others, without regard to their own inherent worth or value. Value discussions will further occur in **Section IV**. The biggest concern is the degree to which the practice could be utilized. It treats the embryo as a means to an end rather than as an entity with intrinsic value. The intentional abortion questions how far in an organism's development humans are willing to destroy their creation. Embryos in themselves have gone past a clump of cells and begin to resemble the parental organisms involved in their development. Without having a clear boundary of when the intentional aborting of a developing organism is permissible, I would argue that this point in development is morally significant enough to stop intentional destruction.

The immorality of purposefully aborting mammalian embryos stems from the recognition that an embryo represents a critical stage of development of the living being. This view supports the idea that abortion as an action is deontologically immoral, as argued by philosopher Don Marquis, who actively engages with the idea that the immorality of abortion is that of the removal of potential life, as the entity may have a "future like ours" argument.[34] The argument follows that abortion removes the "experiences, activities, projects, and enjoyments" an entity might have in the future, which can be applied to non-human entities in de-extinction.[35] The aspect to focus on is if the embryo begins to display features that might not align with the expected outcome, yet is still healthy, it ought to be given a chance for life. The embryo has the potential to have experiences and opportunities that its parents, extinct or not, have had. The issue with iSCNT is not the practice itself but the approach taken with the outcome of the practice. While Marquis's view was meant for humans, I wanted to highlight the idea of the potential that a proxy organism may have but is denied due to certain characteristics not being met during development. I emphasize this stage of de-extinction as an embryo represents a more

33 ibid., 185.
34 Don Marquis, "Why Abortion Is Immoral," *The Journal of Philosophy* 86, no. 4 (1989): 183–202.
35 *ibid.*, 189–190.

advanced developed state than an undifferentiated cluster of cells, making it ethically distinct in both moral consideration and organismal development.

A critic may argue that if researchers can foresee that a proxy organism will grow with severe morphological or developmental abnormalities leading to a life of suffering, they ought to prevent such harm through the purposeful elimination of the embryo. A classic example where this went wrong was with Dolly the Sheep, as she didn't suffer until *after* she was born. Dolly's pain in life could have been prevented if the actions leading to the health issues had been accounted for earlier. In this instance, the purposeful elimination of the embryo aligns with the bioethical principle of nonmaleficence, which emphasizes the obligation to avoid causing harm.[36] Allowing an embryo to develop into an organism doomed to endure significant pain would be ethically irresponsible. By terminating the embryo, humans can prevent the actualization of harm, thereby respecting the potential life. If humans are to undertake the role of creators through de-extinction, there ought to be measures taken to align with modern bioethical principles. While it does remove the potential for life, the action prioritizes the prevention of suffering that would be full of pain and dysfunction. I would argue that the purposeful elimination of the embryo in this situation is morally justifiable as it aligns with the ethical duty to prevent harm and upholds the highest quality of life for the entity.

Surrogacy and gestation are two major components of the development process that occur before the organism's birth. A healthy blastocyst will be chosen to be implanted into a surrogate uterus, where it will continue to develop during the gestation period, which can be described as the time between fertilization and birth.[37] Assuming no genetic diseases and thorough postnatal care, the proxy organism is brought into the world as a healthy biological entity. The moral considerations of testing these various technologies and the surrogate mother's involvement in this process are out of the scope of this paper. I will now discuss the moral considerations of proxy organisms through value analysis.

V. THE HUMAN RESPONSIBILITY TOWARD PROXY ORGANISMS

Having examined de-extinction technologies themselves, it is necessary to ask how we ought to evaluate the organisms they bring into existence. Novel proxy organisms created through *in vitro* methods are distinct because they would not exist without intentional human intervention at the cellular level. A new taxonomic category should then be created to address these entities because they are designed to be a certain way. Unlike organisms conceived through processes like IVF, which still follow natural biological

36 Mette Ebbesen et al., "Ethical Perspectives on RNA Interference Therapeutics," *International Journal of Medical Sciences* 5, no. 3 (2008): 164.

37 David B. Thompson et al., "The Future of Multiplexed Eukaryotic Genome Engineering," *ACS Chemical Biology* 13, no. 2 (2018): 313–325.

pathways, these proxy organisms are engineered with specific traits through genetic modification. This level of human control over their creation imposes a unique moral responsibility. While their origins alone don't necessarily grant them a different moral status, the *degree of manipulation* from humans makes them responsible for ensuring their well-being in a way. The value of proxy organisms is fundamentally different from organisms that result from natural reproduction, so the human responsibility required stems from the early planning in their development.

Ronald Sandler's *The Ethics of Species* discusses the value of organisms that constitute a species with different forms of value. The two broadest value categories discussed are instrumental and final value, where instrumental refers to something that is valued for its usefulness or as a means to achieve something else, while final refers to something that is valued for itself as it is.[38] For this discussion, Sandler distinguishes between two subsets of final value, objective and subjective final value, which are independent or dependent, respectively, on another's "evaluative state" towards something.[39] Due to the synthetic engineering of new proxy organisms, there becomes a gray line of the value they possess, and it is easy to categorize them as having only instrumental value. Yet, when applied to de-extinction, the new organisms created contain both instrumental and final value based on the definitions by Sandler. To prove this, I will briefly discuss what gives something a final value.

Sandler approaches the answer with something "possesses final value if it has value in itself: that is, its value as a means to ends is not exhaustive of its value."[40] This concept demonstrates a superior value that, regardless of whether the source of its value is intrinsic or extrinsic, ought to be considered more carefully than something with instrumental value. Sandler adds that, in theory, humans are considered to have final value because they are not used as tools for others. Even if actions such as human trafficking or prostitution that violate this principle are ignored, basic social concepts, such as creating a child with a partner to have a family, can be logically argued as actions that are achieved through the direct use of another human being. It follows then that even species such as *Homo Sapiens* cannot be fully considered to have purely final value. Domesticated animals are selectively bred or modified by humans to serve specific purposes, yet the key difference with proxy organisms lies in the direct manipulation of DNA at the cellular level. Despite that, existing organisms and hybrids are considered to have final value by the same logic.[41] With these concepts, proxy organisms, however, would not have final

38 Ronald L. Sandler, *The Ethics of Species: An Introduction* (Cambridge: Cambridge University Press, 2012).

39 Ronald L. Sandler, "The Ethics of Reviving Long Extinct Species," *Conservation Biology* 28, no. 2 (2014): 354–360

40 Ronald L. Sandler, *The Ethics of Species: An Introduction* (Cambridge: Cambridge University Press, 2012).

41 *ibid*., 21.

value because they would be developed for a purpose. Their creation, regardless of the objective, is to serve a mission, therefore having instrumental value. There is something wrong with this conclusion, however. The fact that proxy organisms are developed for a goal ignores the value of the organism itself. If the organism itself is alive and has capacities similar to existing organisms and hybrids, irrespective of the way it was conceived, it should also have final value. Human interference is what has caused the value dilemma, so value assignment itself cannot be a lens to assign moral consideration. Determining moral standing requires shifting from species-based evaluation to individual capacities. I will now turn the attention to moral individualism and its effect on special moral consideration and final value.

Moral individualism is the view that an entity's moral standing depends on the capabilities of individuals rather than their species group. I discussed in **Section II** that even existing hybrids presently do not have their species classification, despite there being multiple organisms that do exist. Many organisms that are synthetically engineered will also run into this issue, so every organism will need to be examined on a case-by-case basis with the same level of importance. Regardless of how synthetic an organism is through its engineering, the basic materials from which it will develop have an existing history or have been extracted using genomic material that has previously existed naturally. If every proxy organism created has naturally historic genetic material input, the output will be natural as well. The idea I am trying to show is that synthetic does not mean artificial. Therefore, every output will be natural and should therefore be compared to other living organisms, not species membership.

What about species membership has made it the go-to method for assigning moral status to living things? I found the closest answers to Peter Singer's analogies of racism or sexism when debating moral considerations between human beings themselves. A racist would argue that one's race makes one superior in theory, which is a bias towards their own race or group. In reality, there is no universal "superior" race, as every individual has the potential to be better in some capacity. Therefore, that same ideal can be taken towards a "speciesist" viewpoint as Singer entails that human beings in particular hold their species in higher regard, even though millions of other individual organisms are capable of similar behaviors such as sentience, empathy, or even simply surviving or reproducing.[42] If a racist or sexist is incorrect with their approach, then how can a speciesist maintain their argument? Singer pragmatically explains that speciesist reasoning occurs when certain members of a species lack the typical capacities of the majority, yet are still granted full moral consideration. The claim that every human automatically possesses greater functional abilities than every non-human organism is unfounded, since capacities vary widely across living beings. Yet society will grant all humans higher moral

42 Peter Singer, "All Animals Are Equal," in *Animal Rights and Human Obligations*, ed. Tom Regan and Peter Singer (Cambridge: Cambridge University Press, 1989), 215–226.

status than non-human animals solely based on species membership.[43] This analysis of Singer's thoughts on speciesism highlights the flaws in assigning moral status based solely on species membership, which reinforces the need to evaluate proxy organisms based on individual capacities.

To claim that proxy organisms deserve distinct moral considerations through a moral individualist lens, it needs to be clear why individuality matters in a de-extinction context. I asserted earlier that proxy organisms will not fit into pre-existing species groups, nor do they have defined ecological roles. Individuality is important for de-extinction because it recognizes that every proxy organism developed is more than its physical parts, and judges every being based on its moral status. I would like to reference some ideas from philosopher James Lindsay, who claims that "the individuality of the soul which feels and loves" and "the individuality of the mind which thinks and comprehends" must work together in unity for true individuality to exist.[44] Proxy organisms in themselves are unified beings with moral worth, which speaks to their capacity to experience first-person, subjective experiences and exist in the world. The view highlights the intrinsic worth of proxy organisms through their unified individuality of mind and soul, as it can be easy to label the entities as purely instrumental and artificial organisms. The accountability that humans bear is heightened because, as discussed earlier, humans are not recreating organisms that went extinct. That is impossible. Metaphysically, the proxy organism itself constitutes edited genetic material mixed with genomic content from a current living relative.[45] This situation makes these proxy organisms vulnerable, as they cannot rely solely on adaptive processes that guide natural species, since it is currently unclear how well they will adapt in the wild. Presently, there's a lack of epistemological evidence that humans understand how the genetics of extinct organisms work, which adds a level of unknown. It's a difficult analysis because many extinct organisms have gaps in their genome, which are filled through educated assumptions and artificial intelligence. If humans take on the synthetic development of living organisms, there should be a moral obligation rooted in individuality. Therefore, moral individualism should be the perspective when dealing with de-extinction, with concepts proposed by philosopher Jeff McMahan.

The focus on individual organisms fulfilling defined criteria and not being subjected to unfair treatment is ultimately the best way to ensure every organism is valued correctly. McMahan approaches all living beings similarly, where if certain beings fulfill specific criteria, then they should be treated with moral considerations, regardless of their species grouping. This is important because the early stages of using de-extinction

43 *ibid*., 220–221.

44 James Lindsay, "The Ethical Value of Individuality," *International Journal of Ethics* 30, no. 4 (1920).

45 Jay Odenbaugh, "Philosophy and Ethics of De-Extinction," *Cambridge Prisms: Extinction* 1 (2023): e7.

technologies *will not* create the ideal proxy organisms that researchers envision as similar enough to the Woolly Mammoth, for example. Proxy organisms will be created that display certain characteristics or traits that may not be accounted for or predicted due to pleiotropy. Because this phenomenon is bound to occur, these organisms, which still exhibit healthy capabilities, need to be looked after and treated respectfully. Further, McMahan quotes an assertion developed by James Rachels:

> ...if we think it is wrong to treat a human in a certain way, because the human has certain characteristics, and a particular non-human animal also has those characteristics, then consistency requires that we also object to treating the non-human in that way...[46]

To stay consistent in terms of treating organisms equally, this thought implies that if engineered organisms possess behaviors or characteristics that align with other organisms, then they should be treated similarly. Although the emphasis is between a non-human organism and a human, this same idea can be applied between current organisms that exist and proxy organisms that potentially can be created. This would establish that every living being that shows certain traits would be granted a certain moral status, despite synthetic or natural origins, signaling a moral individualism approach towards de-extinction. Singer never mentions moral individualism itself, yet his analysis of the ability to suffer based on an account from Jeremy Bentham showcases a moral individualist approach to how beings are given moral consideration.[47] He never defines suffering, but I assume his definition aligns closely with physical pain and a lower quality of life due to negative experiences. It would be absurd for me to claim that a species can suffer as the species can only suffer as far as the individual organisms that compose that species are suffering. These are all variables to account for if all living beings have some final objective value. The only way to treat every organism created in a synthetic environment fairly is to understand its final value through moral individualism.

I aim to show how special considerations could be given to proxy organisms from here. The Institutional Animal Care and Use Committee (IACUC) describes the three R's as the main bioethical principles, which are Reduction, Replacement, and Refinement to ensure that non-human individuals are treated humanely. Reduction refers to simply the "decrease in the number of animals used," replacement is using "non-living systems as alternatives," and refinement is the "change in some aspect of the experiment."[48] These same principles can be applied to de-extinction, which would ensure

46 Jeff McMahan, "Our Fellow Creatures," *Journal of Ethics* 9 (2005): 353–380.
47 Peter Singer, "All Animals Are Equal," in *Animal Rights and Human Obligations*, ed. Tom Regan and Peter Singer (Cambridge: Cambridge University Press, 1989), 215–226.
48 Abraham Osinubi, "Animal Experimentation: Contemporary Ethical Considerations," *Journal of Anatomical Sciences* 4 (2013): 3–13.

that the selection of organic life forms and methodologies is morally permissible. As humans continue to improve their knowledge in the subject, technological advancements would be equated to replacement, by not using simple organisms for experimentation. If computer visualizations, machine learning models, and artificial intelligence can be improved to steer researchers in the right direction, then the pillars of reduction and refinement will all simultaneously work as well.[49] As described in **Section III**, a process such as CRISPR, which is currently flawed by unintentional off-target impact on genes that were not designed to be edited, would be improved to ensure that those mistakes do not occur after better sequencing technology becomes available. De-extinction could be an early approach to biological research where using organic life forms is ultimately not required, therefore saving millions of lives and allowing humans to see the fruition of their creation.

An important concept raised by the American College of Laboratory Animal Medicine (ACLAM) shifted the focus to stewardship. The concept is defined as a "universal responsibility that goes beyond the immediate research needs to include acquisition, care, and disposition of the animals...," a concept that ought to be emphasized from the operational standpoint in de-extinction.[50] Stewardship goes a step further in the intentional strategy and planning of conducting these experiments, focusing on preventing harm to organisms. Current animal experimentation guidelines, while good for most modern experimentation, don't fully address the unique ethical challenges posed by proxy organisms, since the risks of unforeseen suffering are much higher.[51] When de-extinction efforts produce proxy organisms, it will be imperative to allow those organisms to thrive in synthetic environments initially, before co-existing with extant organisms in natural ecosystems.[52] Beyond their physical health, the social and psychological development of these organisms will be the ethical obligation of researchers to ensure they live a "good life."[53] If the organism develops in a manner that reduces its quality of life, it will be important to ensure a "good death," null of suffering and pain, specifically "painless, achieve rapid unconsciousness and death."[54] These procedures ensure the highest quality of life for the organism whose interests should be considered due to the positive environmental impact that those proxy organisms would bring.

The technology involved in de-extinction is novel and also comes under scrutiny as

49 *ibid*.
50 *ibid*.
51 E. Roe and B. Greenhough, "A Good Life? A Good Death? Reconciling Care and Harm in Animal Research," *Social & Cultural Geography* 24, no. 1 (2021): 49–66.
52 Rebecca L. Walker, "Virtue Ethics and Laboratory Animal Research," *ILAR Journal* 60, no. 3 (2021): 415–423.
53 E. Roe and B. Greenhough, "A Good Life? A Good Death? Reconciling Care and Harm in Animal Research," *Social & Cultural Geography* 24, no. 1 (2021): 49–66.
54 B. Close et al., "Recommendations for Euthanasia of Experimental Animals," *Laboratory Animals* 30, no. 4 (1996): 293–316.

violating current bioethical standards. A counterargument against de-extinction typically expresses the practice of developing "artificial" organisms that are truly devoid of any "naturalness" or natural value because of human intervention and their technologies.[55] I believe natural value is simply the value associated with something without any human intervention. The different technologies themselves, when reduced, are simply a biological process that humans have understood and are now trying to control. The development of the proxy Woolly Mammoth is possible due to its own natural genome and that of an Asian Elephant. There are no unnatural parts to the organism, which in theory should preserve all of its natural value.[56] As humans push de-extinction forward, it will become crucial to reconcile the advancements with evolving bioethical frameworks, without alienating proxy organisms to a system that does not ensure their full well-being from inception to birth, as in-vitro organisms.

VI. CONCLUSION

De-extinction reflects humanity's insatiable ambition to reshape the natural world using emerging technologies. As explored in **Sections III** and **IV**, the technologies introduce significant applied ethical concerns, and I showcase positive and negative aspects of the current technical approaches to de-extinction. A final note to discuss is the argument that it would be a more productive exercise to take de-extinction technologies and solely use them for conservation initiatives. If the same biological tools are applied to species whose populations are in decline, it would help repair ecological damage caused by humans *now*. Colossal Biosciences has started conservation initiatives to help aid vulnerable species like the American Buffalo (*Bison Bison*) or African White Rhino (*Ceratotherium Simum*), but it could be argued that perhaps the technologies they currently employ should be *solely* used for extant species.[57] Additionally, the company has raised 50 million dollars to start the Colossal Foundation, a non-profit extension of the company aimed at spreading technological advancements to current conservation organizations and groups.[58] This conservation initiative focuses on beneficence and justice for organisms that live today, as CEO of Colossal Biosciences, Ben Lamm, notes that over 50% of species could be extinct by 2050.[59]

Despite the varying discussions that occurred in this paper, there are some remaining limitations of my arguments and areas of future study. While I proposed moral individualism-based frameworks for assessing the being, steps need to be taken to draft laws with more thought from philosophers, policy-makers, scientists, and biotechnologists alike. De-extinction is going to hit the world soon, according to Colossal Biosciences, by 2028

55 S. Cohen, "The Ethics of De-Extinction," *NanoEthics* 8 (2014): 165–178
56 *ibid.*
57 "Conservation," *Colossal Biosciences*, February 22, 2024
58 *ibid.*
59 *ibid.*

or 2029. Before that reality, have legal frameworks or legislations been drafted? Finally, can biologists truly assess the long-term impacts of reintroducing proxy organisms into ecosystems, and is humanity prepared to handle the unknown consequences? This paper serves as a cautionary piece for humans intervening with biological entities at the cellular level and attempting to control them as beings without individual value. De-extinction is not just a scientific pursuit but a moral challenge, and our ability to balance innovation with responsibility will define the future.

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