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The Evolution of Sin

Gregor Etzelmüller

To speak of the evolution of sin may be surprising. The topic of this essay – the "evolution of sin" – combines a term from biology, or more generally from the natural sciences, with a specifically theological concept. Nonetheless, the evolution of sin is a fundamental fact. The history of life not only leads to forms of life exemplifying stunning beauty, empathy, and cooperation; evolution has also brought about structures of life in which biological processes continually shake our trust in life, generate lovelessness, and rob us of hope. It is in this sense that we can speak of the evolution of sin.[1]

In dialogue with evolutionary biology, the current contribution strives to achieve greater clarity about the evolution of sin as a structure of life. On the one hand, it is my hope that theology gains a realistic understanding of sin. On the other hand, I wish to make the strengths of a theological concept of sin accessible for the dialogue with the sciences.

To begin with, I will draw on approaches in evolutionary biology in order to clarify how sin begins to evolve in the shadow side of creation. This will help us see that, already before the evolution of human beings, we need to acknowledge how sin influences life. What this means for the understanding of human sin, in turn, be worked out in dialogue with evolutionary psychology. Finally, I will address boundary cases in the dialogue, which will undergird the specific potential of a theological understanding of sin.

1 On sin as a communicative structure that erodes trust, generates lovelessness, and undercuts hope see Sigrid Brandt, "Sünde: Ein Definitionsversuch," in *Sünde: Ein unverständlich gewordenes Thema* (eds. Brandt et al.; Neukirchen-Vluyn: Neukirchener Verlag, 1997), 13–34 (translator's note: quotations from texts with a German bibliography have been translated by the translator of this article).

1. The Evolution of Sin from the Shadow Side of Creation

1Evolutionary theory describes a universe at liberty "to discover and realize its potentiality through the shuffling explorations of possibility."[2] By describing the origin of species with the interplay of variation and natural selection, Charles Darwin not only discovered the law of natural selection, but also introduced chance as a scientific concept.[3] Darwin himself hardly realized the revolutionary significance of this aspect of his theory. However, the combination of evolutionary theory and genetics shows that variations are due to accidental genetic mutation.[4] The conclusion: evolution is characterized by a specific openness, yet one which is not arbitrary as it is delimited by natural selection. From a theological perspective, this openness can be understood as an openness towards or rejection of God's creative intentions. Every mutation, every event influencing history henceforth can help clarify – or distort – God's intentions towards creation.

With this perspective, theology introduces a distinction into the description of a developing universe which is present in prescientific intuitions by biologists but which can no longer be a part of biological science itself. As a science, biology is indifferent to any cruelties distorting the goodness of creation, which it describes merely as successful evolutionary strategies.

A case in point is the behavior of the ichneumon wasp, which deposits its eggs in live insects, so that the larva feeds on the host from the inside. Such cruelties of nature made Darwin doubt that it was the work of a benevolent creator. In a letter to his friend Asa Gray, Darwin wrote in 1860: "I cannot persuade myself that a beneficent and omnipotent God would have designedly created the *Ichneumonidae* with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play

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2 John Polkinghorne, *Science and Theology: An Introduction* (London: SPCK/Minneapolis: Fortress Press, 1998); see Friedrich Cramer, *Der Zeitbaum: Grundlegung einer allgemeinen Zeittheorie* (Frankfurt am Main: Insel, 1996), 214–18.

3 See Dieter Hattrup, *Darwins Zufall oder Wie Gott die Welt erschuf* (Freiburg: Herder, 2008), 191–210; Eve-Marie Engels, "Charles Darwins Kritik an der Lehre vom 'intelligent design,'" in *Schöpfungsglaube vor der Herausforderung des Kreationismus* (eds. Bernd Janowski et al.; Theologie Interdisziplinär 6; Neukirchen-Vluyn: Neukirchener Verlag, 2010), 68–106: 91.

4 See Jacques Monod, *Chance and Necessity: An Essay on the Natural Philosophy of Modern Biology* (trans. A. Wainhouse; New York: Knopf, 1971), 111–15, 118f.

with mice."[5] For Darwin the theological problem was not that cats eat mice, but that they would play with their prey first.

This distinction corresponds to a key insight in Karl Barth's doctrine of creation. According to Barth, in creation "light exists as well as shadow."[6] The "shadow side of creation," however, must not be confused with sin as a structure of life and nothingness (*das Nichtige*).[7] Turning back to Darwin we might say: The fact that life lives at the expense of life is part of the shadow side of creation, while the cruelty that Darwin discerned in the behavior of ichneumon wasps and cats is sin. For this behavior obstructs the creator's good intentions.

We can sometimes observe how the evolutionary process brings forth alternatives to cruelty that turn out to be equally successful strategies. In this context the biologist and theologian Christopher Southgate refers to

> the behaviour of certain kinds of orca which, in killing sealions, will toss their victims playfully in the air, prolonging their agony. This type of orca is so feared by its prey animals that dolphins will drag themselves onto land and suffocate rather than face their predators. As we consider this behaviour our focus may be on the orcas themselves. The freedom of behaviour involved in their lifestyle as predators *can* lead to what seems to human observers like the gratuitous infliction of suffering, but it does not necessarily do so. Other types of orca do not show this behaviour.[8]

This observation makes clear: The fact that life lives at the expense of life can lead to unimaginable cruelty, but it does not do so by necessity. To put it theologically: Sin can interface with the shadow side of creation, but it is by no means certain that the shadow side will result in sin is by no means certain.

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5 Charles Darwin's letter to Asa Gray, 22 May 1860, in *1860* (vol. 8 of *The Correspondence of Charles Darwin*; eds. Frederick Burkhardt et al.; Cambridge: Cambridge University Press, 1993), 223f., 224.
6 Karl Barth, *Church Dogmatics* III,3: *The Doctrine of Creation* (eds. G. W. Bromiley and T. F. Torrance; trans. G. W. Bromiley and R. J. Ehrlich; Edinburgh: Clark, 1960), 295 (sect. 50); idem, *Kirchliche Dogmatik* III,3: *Die Lehre von der Schöpfung* (2nd ed.; Zurich: Evangelischer Verlag, 1961), 334: "*wie eine Licht – so auch eine Schattenseite.*" Cf. *Church Dogmatics* III,3, 350: there is a "'shadow side' of creation."
7 See Barth, *Church Dogmatics* III,3, 295-96 (sect. 50): "Viewed from its negative aspect, creation is as it were on the frontier of nothingness and orientated towards it. Creation is continually confronted by this menace. It is continually reminded that as God's creation it has not only a positive but also a negative side. Yet this negative side is not to be identified with nothingness, nor must it be postulated that the latter belongs to the essence of creaturely nature."
8 Christopher Southgate, "Creation as 'Very Good' and 'Groaning in Travail': An Exploration in Evolutionary Theodicy," in *The Evolution of Evil* (eds. Gaymon Bennett et al.; Religion, Theology, and Natural Sciences 8; Göttingen: Vandenhoeck & Ruprecht, 2008), 53–85: 59.

A brief aside: While theology does not typically speak of sin in the context of nonhuman behavior, this is not entirely foreign to Biblical traditions. In the primeval story of the priestly code, the reason for the flood is that "all flesh had corrupted its ways" (Gen 6:12), so that "the earth is filled with violence" (Gen 6:13). Thus not only human beings, but all flesh, that is, human beings and animals equally,[9] rendered God's good creation unrecognizable. If one conceives of the history of life as an evolutionary continuum, the priestly perspective indeed seems appropriate, as it makes us expect at least preliminary stages of sin in prehuman evolutionary history.[10]

While the fact that life lives at the expense of life must be attributed to the shadow side of creation, the cruelty that may result from this can be an expression of sin as a structure of life, which continually distorts God's good intentions with creation. Even from a biological view "predation for food could not be more different from aggression against rivals."[11] We can observe this in every cat. When on the hunt, it is silent and highly focused. Upon meeting another cat, however, it rises up with its hair on end and hisses. From a neurological point of view, these different behaviors activate different circuitries in the brain.[12] When hunting, the circuitry of the Seeking system is active, while aggression activates the Rage circuit. Thus, a clear difference between predation and aggression also emerges from a biological perspective.

At the same time ethologists have observed a nonrandom correlation of predation and intraspecies aggression. For example, highly successful hunters such as chimpanzees also display a considerable amount of aggression towards conspecifics. One in five

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9 Erich Zenger, *Gottes Bogen in den Wolken: Untersuchungen zu Komposition und Theologie der priesterschriftlichen Urgeschichte* (2nd ed.; *SBS* 112; Stuttgart 1983), 109, footnote 22; Andreas Schüle, *Der Prolog der hebräischen Bibel: Der literar- und theologiegeschichtliche Diskurs der Urgeschichte* (Gen 1–11) (*ATANT* 86; Zurich: Theologischer Verlag 2006), 269. Accordingly, after the flood God does not simply make a covenant with humanity, but explicitly with "every living creature" (Gen 9:12,15).

10 See Joshua Moritz, "Evolutionary Evil and Dawkins' Black Box: Changing the Parameters of the Problem," in *The Evolution of Evil* (eds. Gaymon Bennett et al.; Religion, Theology, and Natural Sciences 8; Göttingen: Vandenhoeck & Ruprecht, 2008), 143–88: "Fleshing out the Free Process Defense" (178–86), where the author suggests "that non-human animals in their activities and choices should be understood not as *amoral* but rather as *protomoral*" (ibid., 185).

11 Steven Pinker, *The Better Angels of Our Nature: The Decline of Violence in History and its Causes* (London: Lane/Penguin Books, 2011), 497, see 497-98., also for the following example.

12 Jaak Panksepp, *Affective Neurosciences: The Foundations of Human and Animal Emotions* (Oxford: Oxford University Press, 1998), 144–63, 187–205.

chimpanzees dies as a consequence of intraspecies aggression.[13] By contrast, bonobos, which do not hunt for monkeys, are also peaceful among themselves.[14]

Based on these observations and others, the South African psychologist Victor Nell has developed a theory that distinguishes aggression and cruelty from predation, while suggesting that cruelty and aggression have developed out of predation.[15] If true, this theory substantiates how the sin as a structure of life can develop out of the shadow side of creation.

The biblical traditions in turn draw attention to difficulties in describing the behavioral complex of predation and aggression appropriately with the distinction between the shadow side of creation and sin as a structure of life. According to the priestly account of creation, humans and animals are given only plants to eat. The priestly primeval story presents human beings as "very good" and as vegetarians (Gen 1:29[16]). Only after the flood are humans allowed to consume meat (Gen 9:2-3). This biblical view in fact seems realistic in the light of current knowledge about human evolution, as the ancestors of modern humans were herbivores.

At the same time, human beings would not have made their way to the savannah and thus towards cultural development had they not evolved into omnivores. To be realistic we have to accept that the evolution of complex life would have been impossible without the consumption of meat. Biblical traditions face this fact in the wisdom texts, especially in the psalms and the divine speeches at the end of the book of Job. The creator is portrayed as providing lions and vultures with meat dripping with blood (Ps 104:21, Ps 147:9, Job 38:39–41, 39:30). Thus, creation itself testifies to the fact that life is robbery.

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13 J. Michael Williams et al., "Causes of Death in the Kasekela Chimpanzees of Gombe National Park, Tanzania," *American Journal of Primatology* 70 (2008), 766–77: 766; see also 768, 770–72.
14 Richard Wrangham and Dale Peterson, *Demonic Males: Apes and the Origins of Human Violence*, (Boston: Houghton Mifflin Harcourt, 1996), 216, 219; see ibid.: "Murder and hunting may be more closely tied together than we are used to thinking."
15 Victor Nell, "Cruelty's rewards: The gratification of perpetrators and spectators," *Behavioral and Brain Sciences* 29 (2006), 211–57; see ibid., 211: "Cruelty is a behavioural by-product of predation."
16 Jürgen Ebach, *Ursprung und Ziel: Erinnerte Zukunft und erhoffte Vergangenheit: Biblische Exegesen, Reflexionen, Geschichten* (Neukirchen-Vluyn: Neukirchener Verlag, 1986), 32-33.

The tension between wisdom texts and and the priestly primeval story points to the difficulties posed by the fact that life lives at the expense of other life – even for those attributing that fact clearly to the shadow side of creation or the life structure of sin. While the primeval story recognizes the close correlation between carnivorous life and aggression, thus attributing carnivorous life to the life structure of sin, wisdom texts emphasize the difference. This multiperspectivity in the Bible can be seen as an indication that there is simultaneously a distinction and close relationship between predation and aggression. While aggression is to be distinguished from predation, it can develop from this behavior which comes from the shadow side of creation.

In my view, the theological doctrine of sin would do well to examine such interfaces between the shadow side of creation and the life structure of sin in interdisciplinary dialogue. The relationship between predation and aggression is only one such interface. Another such interface exists when creatures recognize another aspect of creation's shadow side, their own mortality, while pursuing strategies of sin that promise to optimize life through the use of violence. This would be worth more detailed description in interdisciplinary dialogue as well. Along these lines, the social sciences diagnose a correlation between low life expectancy and a high rate of lethal violence.[17] This correlation seems understandable from the perspective of evolutionary theory, as organisms with a lower probability of survival exhibit a higher openness to risk. Having less to lose, they tend to seek direct confrontation.

Indeed, humanity appears to have emerged in a creation that not only has a shadow side but in which the life structure of sin had already established itself before humans evolved. This structure of life characterizes the environment in which humanity is battling for survival. For example, observing hyenas and wild dogs enthusiastically devouring their prey reveals a life structure that continuously erodes trust, generates lovelessness and undermines hope. Yet the evolution of this structure of life is also part of human evolution. The motives characterizing the behavior of organisms in the human environment are likewise part of the inner human experience. Humans are both predators

17 Margo Wilson and Martin Daly, "Life expectancy, economic inequality, homicide, and reproductive timing in Chicago neighbourhoods," *British Medical Journal* 314 (1997), 1271–74 is representative for various studies.

and prey. As such they succumb to the danger of orienting themselves by the violent behavior of others – thus reinforcing the life structure of sin.

Such an evolutionary view of humanity can certainly enter into dialogue with the primeval story in the Bible. According to Gen 2 humans are distinguished from the animals in that God addresses them directly. Humanity perceives God's commission in greater clarity, that is, in language (Gen 2:16f). Thus addressed by God, humanity is, according to Gen 3, caught up exactly in the tension between trusting in God's preferential course of action – and following the wisdom of the environment, symbolized by the snake. It is highly likely though not inevitable that humans will follow environmental prompts the imitation of the environment has withstood the test of natural selection. According to primatologist Frans de Waal, "primates automatically copy their surroundings."[18]

2. The Theological Doctrine of Sin and Evolutionary Psychology

Evolutionary psychology points out that evolutionary history equips humans with social skills even before individuals are shaped by their social environments – they are thus "evolutionarily socialized in advance."[19] Human beings are shaped by a long evolutionary history of violence, starting with the evolution of predators, which results in phenomena such as envy and cruelty and in which violence ultimately serves the establishment of hierarchies implying a certain security of expectations. In evolution, "predation, dominance, and vengeance" have proved to be of value – and as a consequence they are part of our biological heritage.[20]

In my view this perspective from evolutionary psychology is closely related to Paul's understanding of sin, according to which persons are sold as slaves to sin on account of their fleshly state (Rom 7:14). According to Paul, the reason for human

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18 Frans de Waal, *The Age of Empathy: Nature's Lessons for a Kinder Society* (New York: Harmony Books, 2009), 62.

19 Harald A. Euler, "Die Beitragsfähigkeit der evolutionären Psychologie zur Erklärung von Gewalt," in *Gewalt: Entwicklungen, Strukturen, Analyseprobleme* (eds. Wilhelm Heitmeyer and Hans-Georg Soeffner; Frankfurt am Main: Suhrkamp, 2008, 411–35), 417: "*evolutionär vorsozialisiert.*" As an introduction to evolutionary psychology see David M. Buss, *Evolutionary Psychology: The New Science of the Mind* (3rd ed.; Boston/Munich et al.: Pearson, Allyn & Bacon, 2008).

servitude to the power of sin lies "in the fundamental quality of the first – or the unfinished – creation as flesh."[21] By following the natural tendency of their biological existence, that is, what Paul calls the desires of the flesh, human beings serve sin. As Paul locates desire in the flesh, he, too, counts desire as part of the human biological heritage. For in his terminology, *sarx* can also mean heredity and inheritance. Thus, Christ is Davidic "according to the flesh" (Rom 1:3); Abraham was forefather of the Jews "according to the flesh" (Rom 4:1); and the Israelites are Paul's brothers "according to the flesh" (Rom 9:3-4).

Correspondingly, the works of the flesh that are to be overcome, according to Paul, are predominantly forms of "behavior with a biological orientation."[22] Whoever cedes to the flesh behaves like an animal, and Paul warns: "If, however, you bite and devour one another, take care that you are not consumed by one another." (Gal 5:15) To live according to the flesh is thus a mode of existence in which human beings become addicted to "their creaturely characteristics."[23] Persons become slaves to the tendencies of their biological form of existence, whose aim is self-affirmation and self-assertion. In this sense we can agree with Robert Jewett, who understands the desires of the flesh as "the sin of asserting oneself and one's group at the expense of others."[24]

Both evolutionary psychology and Paul recognize that natural life and the human body are inscribed with the tendency to pursue one's own interests – including the interests of one's group – at the cost of others – if necessary even with the use of violence.[25]

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20 Pinker, *The Better Angels of Our Nature*, 483.
21 Klaus Berger, *Theologiegeschichte des Urchristentums: Theologie des Neuen Testaments* (2nd ed.; Tübingen/Basel: Francke, 1995), 549.
22 Gerd Theissen, *Biblical Faith: An Evolutionary Approach* (Philadelphia: Fortress Press, 1985), 134.
23 Michael Wolter, *Paulus: Ein Grundriss seiner Theologie* (Neukirchen-Vluyn: Neukirchener Verlag, 2011), 176; see also Gerd Theissen, *Verhalten und Erleben der ersten Christen: Eine Psychologie des Urchristentums* (Gütersloh: Gütersloher Verlagshaus, 2007), 81: "Human persons take worldly and biological affairs as guidelines for their actions."
24 Robert Jewett, "The Anthropological Implications of the Revelation of Wrath in Romans," in *Reading Paul in Context: Explorations in Identity Formation: Essays in Honour of William S. Campbell* (eds. Kathy Ehrensperger and J. Brian Tucker; London: Clark, 2010), 24–38: 33.
25 See also Ted Peters, "The Evolution of Evil," in *The Evolution of Evil* (eds. Gaymon Bennett et al.; Religion, Theology, and Natural Sciences 8; Göttingen: Vandenhoeck & Ruprecht, 2008) 19–52: 35–7, 52.

While evolutionary psychology seeks to understand the human evolutionary heritage with as much nuance as possible, a more general inquiry presents two motives of human behavior in particular that have been inherited in evolution. On the one hand, organisms strive for a "wide distribution of their own genes;" on the other, they are programmed "to procure their own survival and well-being."[26] Both motives are intertwined, because survival and well-being are the conditions for successful reproduction.

From the perspective of evolutionary biology one would expect that the desires of the flesh would be directed toward procreation and the direct optimization of life. Indeed, Paul's vice lists mention fornication first (1 Cor 6:9-10, Gal 5:19–21). The charge against the Jews in Rom 2 can also be interpreted from the perspective of evolutionary psychology. Paul names theft as the first offense, thus addressing two roots of human violence, that is, rapacity and mimetic desire, which makes me desire that which another desires. Again this is followed by the accusation of adultery. With evolutionary history in mind, such human behavior – rapacity and adultery – can indeed be understood as natural.

In arguing for a life not oriented towards natural desires, but towards the Spirit of Jesus Christ, Paul's letters distinguish between human nature and the human calling. Rather than simply pursuing procreation and the optimization of life, thus merely imitating the behavior prevalent in the environment, humans are called upon to relate creatively to their evolutionary conditioning in such a way that something new emerges.

According to Paul, this is possible in the Holy Spirit.[27] The Spirit connects the natural conditions of human life to God's intentions and perspectives. This way dietary needs and sexuality are integrated into the construction of more comprehensive forms of life and community.

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26 Thomas Junker, *Die Evolution des Menschen* (2nd ed.; Beck Wissen; München: Beck, 2008), 48.
27 Samuel Vollenweider, "Der Geist Gottes als Selbst der Glaubenden: Überlegungen zu einem ontologischen Problem in der paulinischen Anthropologie," *ZTK* 93 (1996) 163–92: 189: "The Spirit makes the ego give itself up as far as its sarkic origin is concerned, makes it let go of itself, 'die,' so that it come into being once more, but now infused with the divine Spirit (Gal 2:19f., 6:14 b)."

It is striking, however, that Gal 5 does not contrast fornication as a work of the flesh with chastity or marriage, but with love. Paul contrasts a world that stages, among other things, sexuality as a power discourse[28] with the life of *agape*, which he views as the voluntary restraint of self for the benefit of others.[29] In the context of sexuality, the Spirit enables believers to mutually restrain themselves rather than each asserting his or her own power. Paul writes about different forms in which such voluntary self-restraint can be put into practice: either through an asexual life as preferred by Paul himself (1 Cor 7:7,37) or through monogamy, which 1 Cor understands in traditionally Jewish fashion as a safeguard against idolatry. Entering into the marital bond, spouses forgo the chance to distribute their genes far and wide, thus rising above evolutionary influences. In this sense monogamy – like the ascetic way of life as well – prevents humans from focusing exclusively on natural, inherited motives and thus rendering to nature the obedience that only God is due.[30]

Moreover, Paul also does not view the intake of food as a merely physical process dominated by the immediate satisfaction of wants. Instead, Paul relates this biological dimension of eating to the building up of the congregation. Thus, in the Pauline congregations eating during communion is supposed to strengthen the kind of fellowship that states of itself: "those members of the body that we think less honorable we clothe with greater honor" (1 Cor 12:23). Life in the Spirit thus transcends the natural conditions of human life, so that a structure of life results that, in contrast to the law of selection, is oriented toward those "that seem to be weaker" (1 Cor 12:22).

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28 On this, see the analyses by Michel Foucault, *The Care of Self* (vol. 3 of *The History of Sexuality*; trans. R. Hurley; New York: Vintage Books, 1988), esp. 30: the ancient world "sees the sexual act first and foremost as a game of superiority and inferiority: penetration places the two partners in a relationship of domination and submission. It is victory on one side, defeat on the other; it is a right that is exercised for one of the partners, a necessity that is imposed on the other." Bearing in mind the close relationship between prostitution and the gory games in the arenas, we can indeed draw an analogy here: "the raging sexuality of the arena came to a focus in the gladiator's scarred body, and Rome's prostitutes gathered at the arena exits, where they did a brisk trade" (Nell, "Cruelty's rewards," 220).

29 On the understanding of love as a "power of free, creative self-restraint for the benefit of others," see Michael Welker, *Gottes Offenbarung: Christologie* (2nd ed.; Neukirchen-Vluyn: Neukirchener Verlag, 2012), 208–19.

30 Paul considers marriage a form of mutual subordination (1 Cor 7:4), which is crucial for the difference between marriage and the structure of sexuality as an assertion of power in fornication. On the issue see Theißen, *Verhalten und Erleben der ersten Christen*, 434–55.

The theological insight that it is human calling to overcome those evolutionary processes that have given rise to humanity in the first place finds expression even within evolutionary biology itself. Even Darwin already noted that humans can assert themselves against those very mechanisms of selection to which they owe their existence.[31] Thus humans fall short of their calling if they refuse to support the weak and helpless. In *The Descent of Man*, Darwin writes: "we build asylums for the imbecile, the maimed, and the sick; we institute poor-laws; and our medical men exert their utmost skill to save the life of every one to the last moment." While Darwin admits that no animal breeder would act this way, he notes: we cannot "check our sympathy, even at the urging of hard reason, without deterioration in the noblest part of our nature."[32]

Even Richard Dawkins's classic *The Selfish Gene* appeals to the human calling to transcend one's genetic condition: "We have the power to defy the selfish genes of our birth . . . We, alone on earth, can rebel against the tyranny of the selfish replicators."[33]

From this perspective, sin appears as the human failure to live up to one's divine calling – that is, by not transcending the evolutionary socialization that has already taken place and evolutionary advance socialization.

3. Boundary Cases in the Dialogue with Evolutionary Psychology and the Extent of Sin Unmasked in the Cross of Christ

Interdisciplinary discourse offers the chance for dialogue partners both to share insightful analogies and reveal blind spots in the other field. The danger also exists, however, that different disciplines will mutually reinforce one another's blind spots instead.

The dialogue between the theological doctrine of sin and evolutionary psychology is no exception in this respect. While evolutionary psychology draws attention to the fact that violent motives, having withstood the test of evolution, are passed on to all human

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31 Engels, "Charles Darwins Kritik an der Lehre vom 'intelligent design,'" 101.
32 Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* (eds. James Moore and Adrian Desmond; London: Penguin Books, 2004), 159.
33 Richard Dawkins, *The Selfish Gene* (30th anniversary edition; Oxford/New York: Oxford University Press, 2006), 200-201.

beings, it understands these motives only as a "danger for individuals."[34] In the theological doctrine of sin, this corresponds to an approach drawing on subjectivity theory, such as that proposed by Wolfhart Pannenberg. Pannenberg defines sin as "the locking up of the ego" in "contradiction of its exocentric destination."[35] Sin is accordingly located at the center of individual subjectivity: "Sin has its origin in the individual 'heart.'"[36]

As a consequence of this focus on the individual, the extent of sin is underestimated. Thus, faced with the danger posed by our biological heritage, Pannenberg points to the possibility that "reason and law can restrain" its effects.[37] This perspective is also supported by evolutionary psychology. Along these lines, the psychologist Steven Pinker explains a decrease in violence with the emergence of the nation state, law, and reason.[38]

From a theological perspective, however, the focus on the individual and trust in law and reason is in need of critique. Sin is not only to be located at the center of individual subjectivity, but needs to be grasped as a social reality. This fact is made accessible from a theological perspective on Christ's cross. The cross reveals that even the social forms which support and enhance life such as law, religion, and public reason can themselves become instruments of sin.[39]

To recognize the far-reaching effects of sin, we need to understand with greater precision the process by which Christ is convicted and executed. We would be missing an important insight into the disastrous consequences of sin, a recognition made possible by the cross, if we understood the cross merely in the context of "collective violence" and "collective murder."[40] Varieties of collective violence including even communal murder can be observed even among chimpanzees and are part of human history as well.

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34 Pinker, *The Better Angels of Our Nature*, 556.
35 Wolfhart Pannenberg, *Anthropology in Theological Perspective* (trans. M. T. O'Connell; London/New York: Clark, 2004), 85.
36 Idem, *Systematic Theology*, vol. 2 (trans. G. Bromiley; Grand Rapids: Eerdmans/Edinburgh: Clark, 1994), 256.
37 Ibid., 275.
38 See Pinker, *The Better Angels of Our Nature*, 31ff. (state societies), 378ff. (rights), 642ff. (reason).
39 Welker, *Gottes Offenbarung*, 179–84.
40 Pace René Girard: *I See Satan Fall Like Lightning* (Maryknoll: Orbis, 2001), 95.

According to the Gospel of John, Jesus was also exposed to such violence, and at two places the gospel speaks of an attempted stoning (John 8:59, 10:31).

Jesus's crucifixion differs from spontaneous collective violence in that it was the result of a legal process. The gospels portray the crucifixion as the joint work of law, religion, and public opinion.[41] The evolution of sin reaches its climax not simply in forms of collective violence, but in the fact that it subverts, of all things, those forms that are intended to overcome natural forms of violence. As a social reality sin rules not only over every individual person, since everyone has sinned, but even over cultural products such as law, religion, and public reason.[42]

The insight revealed in Christ's cross that sinful structures of life endanger even those entities supporting life and restraining violence also stands in Israel's prophetic tradition of the critique of cult and society. Evolutionary biologists and psychologists typically need no extra coaching to see that religion runs the risk of becoming itself an instrument of sin. In the interest of a theological critique of religion, theologians would do well to explore carefully what they can learn from the biological and psychological critique of religion.

Such a critique of religion becomes problematic, however, when it distorts those perspectives within Judeo-Christian traditions that have persistently contributed to unmasking the dynamics of sin. Both Israel's prophets and Christ's cross show that even legal justice can become an instrument of sin. Prophets may even warn against a false trust in the torah (Jer 8:8). In Jesus's crucifixion different legal traditions – in this case Roman and Jewish law – collaborate with one another and public opinion.

Christ's cross reveals the entire dynamics in the evolution of sin. Sin turns out to be a structure of life and of communication that comes from the shadow side of creation, the human environment, but sin also contributes to the shape of human evolution and thus poses a danger within and without for every person. It ultimately takes control of even

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41 Welker, *Gottes Offenbarung*, 180–82.

42 Accordingly, the activity of the Spirit in new creation not only counteracts "the animal impulses of the *sarx*, but at the same time also . . . the structuring power of the *nomos*." Samuel Vollenweider, *Freiheit als neue Schöpfung: Eine Untersuchung zur Eleutheria bei Paulus und in seiner Umwelt* (*FRLANT* 147; Göttingen: Vandenhoeck & Ruprecht, 1989), 404.

those cultural products intended to hem in violence. Evolutionary biology presents the deep evolutionary history of this structure of life and communication to theology. In dialogue with evolutionary psychology, Paul's doctrine of sin gains new plausibility, so that sin can be defined as falling short of the divine calling of humanity in such a way that humans fail to transcend their prior evolutionary socialization. Finally, theology can contribute to a better understanding of how the power of sin endangers those cultural entities upon which the hopes of modernity rest in the struggle to overcome violence. In this way theology can make an abiding contribution to a more accurate perception of reality.