
DECEPTION IN THE LANGUAGE GAME. TRACING THE NATURAL ROOTS OF THE VICE OF LYING¹

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Abstract

In the public political sphere truth telling is becoming more the exception than the rule. Of all the tendencies to sin, lying is arguably one of the most destructive and most distinctive of human societies. Or is it? Is it, for example, right to exaggerate the importance of keystone species in order to enhance public support for biodiversity conservation? Longstanding philosophical debates exist about the moral legitimacy of lying in certain circumstances where not to do so would lead to harmful social outcomes. What might be the evolutionary roots of tendencies to deceive and how might this map onto human capacities for lying? Is an Augustinian approach to lying as always fundamentally wrong too rigid an approach or is it essential to Christian witness in a world where truth telling is habitually compromised? This paper will explore the fuzzy boundaries between natural and social evils and tease out in a preliminary way their relationships with original sin.

Keywords: deception; truth; lying; language; morality; natural evil; original sin

Introduction

For the purposes of this paper I will be focusing on a specific aspect of sin – lying – which is, arguably, one of the most fundamentally important, as its ramifications are felt in the social and political sphere and not just expressed as a private but essentially individualistic sin. It is also particularly interesting insofar as there are analogies with evolutionarily significant natural tendencies for *deception* and psychological explanations as to why human beings tell lies. It is, therefore, one of the most important aspects of biocultural evolution that theologians need to take seriously and draw into conversation with their own theological and biblical traditions on lying as a sin and vice. The social politically charged nature of the topic of deception and lying is obvious. Having spent the last eight years working for a United States University in the period in which Donald Trump became elected, a kind of politics that is indifferent to truth telling became obvious to me. According to a report published in the USA, in three presidential debates in November 2016 Trump made a total of 104 false claims (Dale and Talaga 2016). His lies are significant, as they aim not just to deceive, but also to re-write history. While in office he continues to use these tactics, including accusations that his opponents are trying to deceive during impeachment proceedings (Smith 2019).

¹ A fuller account of many of the arguments in this chapter is presented in Deane-Drummond (2022).

Another good example that is particularly important ecologically is the public debate sometimes known as “Climategate” surrounding leaked emails following Prof Philip Jones’ private discussion of the results of his climate research with a colleague, Prof Michael Mann, in 2009, immediately prior to the Intergovernmental Panel on Climate Change (IPCC) meeting in Copenhagen (Deane-Drummond 2011). The problem with the leaked emails is that they seemed to suggest that the scientists involved were portraying the statistics in a deceptive way so as to make a high risk of extreme warming more likely. At the time reports in the media, including the *Daily Telegraph*, portrayed this as “the worst scientific scandal of our generation” (Booker 2009). Three months later, in February 2010, another equally strident report published in *The Guardian* claimed that the “Climategate” scandal was “bogus” and based on “climate skeptic lies” (Pearce 2010). Prof Jones claimed in his original email to a colleague that “the ‘trick’ hides ‘the decline’”, an ambiguous phrase that triggered the suspicion that some results had been covered up. His use of the word “trick” referred to his use of statistics. But the suggestion that this was meant to “hide the decline in temperature” was impossible, since in 1999 the global climate temperatures were still rising; rather he referred to the fact that analyses of *tree rings*, traditionally used by scientists as a marker to indicate temperature change, seemed to show a decline in temperatures in the last half century. However, this was a false result, since the correlation between temperature and tree rings has broken down in the last half century due to other interfering factors, such as pollution. The “trick” was a shorthand way of saying two different data sets were combined in order to remove the ambiguity in the presentation of the statistics.

A month later, in March 2010, an international panel of experts published a report which examined the research of the Climate Research Unit in East Anglia. They concluded that greater transparency is needed, and that “climate scientists need to take steps to make available all the data that support their work and full methodological workings, including their computer codes” (Oxburgh *et al.* 2010). They did, however, express regret that some information may have been deleted. The overall conclusion is that when there are heated political issues at stake, deception and deliberate manipulation of information are common, and are used at the personal cost of those who are caught up in processes. Are there ever cases of deception not just to disguise climate change, but to promote the work of environmentalists and ecologists? A photographer who published a photograph of a lone polar bear starving to death in 2017 and claimed that this was related to climate change, provides a good example. In retrospect many think that this went too far – the actual cause of that polar bear’s death was not known. *National Geographic* later admitted this mistake (Mittermeier 2018).

Lies are socially and politically important, as they can not only ruin individual lives, but also change the social and political landscape through incitation to violence, cruelty and potentially warfare. Even when Trump is recognised as a liar, his popularity among his supporters does not wane, as he is seen to lie in the name of authenticity and legitimacy. Millennials’ desire for authenticity means that lies do not appear to be quite as socially abhorrent in Western cultures today compared with attitudes even half a century ago. Lies are socially binding in the sense that they can bring people together under a common lie. Yet when directed against others, lies can break into violence. Hannah Arendt’s analysis of the ineffectiveness of outrage about lying in politics (Arendt 1972) is true to the extent that moral outrage against racism and misogyny in the case of

Trump seems to make very little difference to his popularity. His supporters tap into a different kind of rage over the loss of white masculinity as power and a rejection of “political correctness” (Dale and Talaga 2018).

Theological ethics cannot afford to be neutral, though it must be cognisant of the fact that simple moral outrage is ineffective against those who are driven by other emotively inspired lights. Lying is to an extent part and parcel of social and cultural fabric as recorded in countless works of literature. Shakespeare’s plays, for example, include accidental incidences of deception (= non-linguistic lying), as in the *Comedy of errors*, or more deliberate manipulative tactics as in *Othello* or *Julius Caesar*, or fear of being deceived by faithless lovers as in *The winter’s tale*, *Othello*, or *Much ado about nothing*, or even examples of self-deception as in *Macbeth* or *Twelfth night*.

The aim of this paper is to try and tease out a little more of those aspects of “natural evil” as reflected in deception and lying in psychological and evolutionary terms, and ask how that might impinge on theological ideas on “moral evil”, including discussion of its source understood according to the doctrine of original sin. I will engage with an Augustinian approach to lying compared with the Thomistic position, and explore the way in which the boundary between natural and moral evil is blurred, but at the same time there are distinct features in Thomistic and Augustinian positions which are brought to the surface through their specific use of the language of lies.

Bio-cultural roots of deception

Psychologists and evolutionary biologists generally treat different forms of deception in social communities as natural phenomena to be explained rather than a matter of ethical judgment of right or wrong. The basic ability to deceive others is viewed as a psychological *adaptation* to learning the demands of living with others in a community (Lewis and Saarni 1993). Deception may be used either for socially approved goals or for reasons that provoke subsequent condemnation or distrust. There are usually strong psychological motivations behind deception, for example: (a) fear of being found out to have committed misdeeds, or (b) feeling threatened by another’s dominance, or emotions of envy or greed, or (c) in some cases feeling protective of or desiring to care for vulnerable others (Lewis and Saarni 1993:7).

As well as these mixed motivations, deception may have different degrees of self-awareness, including self-deception. Lying that is self-aware can take various forms. First, it may be implemented to cover up a misdeed in order to avoid punishment, interpreted as part of an adaptive strategy in children as young as two years of age (Lewis and Saarni 1993:9-17). Second, people may lie in an attempt to gain advantages, such as cheating in school, common from elementary level. Third, deception may be a deliberate exaggeration in order to gain attention, also known as emotional dissemblance, found in children as young as three years of age. Children as young as five years can use deception in manipulative ways in order to attract attention or gain other advantages. Self-illusory deception is harder to identify in young children, but there is some evidence that from about seven years children are capable of it, such as believing a dead animal will suffocate if it is buried in the ground (Lewis and Saarni 1993:17).

Deception is a biological phenomenon described at the most basic level through evolutionary means, and can be defined as follows: In deception the deceiver represents something else to one who is being deceived than is actually the case in order for the

deceiver to gain advantages that it would not have otherwise. Biologist Robert Mitchell proposes different levels of deception, beginning with basic mimicry through to behavioural deceptions. Snakes will sometimes feign death, and predatory fireflies mimic the reproductive displays of other species in order to capture them (Mitchell 1993:68). According to Mitchell's definition, something like camouflage would not count. Part of the difficulty of understanding deception biologically is that if deception is common, then there would be adjustment of behaviour where deception is assumed, so it is not obvious why deception would work to deceive at all. It therefore has to be part of a more general system in which "honest" signalling is the norm, and which includes means of detecting those who give incorrect information to their own advantage or who "cheat".

A good example of deception that is fairly common is false predator alarm calls between birds when feeding. Those that give the alarm calls are the less dominant, so that the predator alarm has the effect of giving them greater access to food. For the birds that are deceived the cost of not responding to a predator is death, while responding to a false alarm is temporary loss of food. When at a feeding source, false alarming for predators was observed to be higher than honest alarm calls at a ratio of 1.70 for great tits and 1.17 for white-winged shrike-tanager (Searcy and Nowicki 2005:65-66).

Anthropologist Donna Kean and her colleagues have observed important physiological changes among tufted capuchin monkeys, *Sapajus nigritis*, when making false alarm calls (Kean *et al.* 2017:37-46). Vocal production in terrestrial mammals is linked with affective states, and specific calls arise spontaneously rather like human laughter. However, Kean and associates report behavioural and neurobiological evidence to suggest that there is actually a degree of voluntary control over whether or not to produce an alarm call in a given emotional state. So, the emotional state may be necessary for the call to be produced, but may not be sufficient on its own to account for such calls. Their results show that for both tufted capuchins observed in the wild and in captivity, anxiety is a necessary precondition for producing false alarm calls, but such states are not sufficient.

The language of lies

One of the interesting aspects to explore is the relationship between biologically driven deception and lies. This forms a topic for an exploration of cultural evolution. Are lies that necessarily use language (at least in most definitions) just exaggerated forms of deception or not? Commenting on the psychological predisposition to lie in the context of a discussion of a contemporary interpretation of Augustine's doctrine of original sin, Jesse Couenhoven claims that such predispositions that seem to be based on deep psychologically driven tendencies amount to support for the idea of original sin arising from the social sciences. So "the traditional idea of sin's originality offers a variation on the theme via the striking claim that human beings, while first and fundamentally created good, are now constituted as sinners via an inherited infection that is shared among our race" (Couenhoven 2013:3). He assumes, incorrectly in my view, that it is possible that originating humans were not inclined to lying and deception – an assumption which is not supported by current science showing widespread deception in the animal world. His main point is that, even if we cannot help involuntary forms of sin, we are still responsible, and "we should not be too ready to excuse ourselves" (Couenhoven 2013:3).

He argues that psychological tendencies towards self-deception, such as attribution bias,² brings empirical plausibility to the doctrine of original sin (Couenhoven 2013:220). At the same time, facing up to such a bias allows an ownership of the narratives, rather than just characterising persons as puppets of moral luck or bodies with diseases (Couenhoven 2013:222).

Couenhoven's argument is interesting, but only really adequate if the natural tendency for self-deception is in direct continuity with the basic ground for lying. My argument in this paper is that this is only a partial truth, in that language cannot be reduced to psychological or even evolutionary coherent accounts. In addition, Augustinian thinking, by prioritising grace over against natural tendencies to sin, is ambiguous with respect to its compatibility with psychological theories. Couenhoven argues that original sin is realistic in noting the depth of our ability to deceive ourselves in a way which is compatible with psychological theories, but he does not sufficiently acknowledge that the doctrine of original sin still relies on a different normative framework compared to that of science. Further, even if we agree with the theoretical moral importance of truth telling, Augustine's own absolutist analysis of the evils of lying leads to some troubling ethical conclusions.

Charles Taylor's *The language animal* argues for a constitutive theory of language drawing on the 18th century German philosophers Johann Gottfried von Herder, Johann Georg Hamann and Wilhelm von Humboldt, whereby language makes possible a very different kind of consciousness, one that is reflective, *besonnen* (Taylor 2016:6). Such reflection becomes a kind of sensitivity to “rightness” that he argues cannot simply be reduced to psychology, because it is about an inner recognition of validity (Taylor 2016:7-8). It is not, therefore, simply “success” in a task, but an “awareness which is independent from, or can sit alongside of, response triggering... a new kind of response, linguistic recognition” (Taylor 2016:9). Taylor suggests that the difference is that while sophisticated social animals such as primates may be able to use symbols, they are incapable of “symbolic invention” (Taylor 2016:10-11).³ For Taylor the significance of language is also about establishing new relationships and recognition of where someone is positioned in the social sphere, a process he terms “footings” (Taylor 2016:28). Language also helps constitute meanings not present before, having a creative existential function in terms of describing and understanding our human condition (Taylor 2016:46). Language is about a web of relationships in face to face encounters.

Rowan Williams similarly resists the view that the natural sciences are sufficient to capture the meaning of language (Williams 2014:1-34). Like Taylor, he is interested in material practices as the context which shapes language (Williams 2014:95-125). He

² There are various attribution biases that could be a factor in self-deception. For example, the tendency to believe that external factors are responsible for failure rather than the self and success the result of internal factors is thought to be characteristic of more individualistic cultures. The issue is complicated by the fact that it is also possible to make assumptions about someone else on the basis of attributing actions to the influence of a particular culture, known as cultural bias. Further, it is even possible to have cognitive bias in the ability to detect deception accurately (e.g. O'Sullivan 2003).

³ Referenced in footnote 10. Taylor unfortunately tends to dismiss the views of those working on chimpanzee language as if they presuppose it is the same as, or at least in continuity with, human language. In my own experience of discussing such topics with primatologists this is far from correct: the awareness of discontinuity is still acute, even if primatologists do not always have the philosophical language to identify what distinguishes human language from animal communication more precisely.

develops the transcendental dimension of language, including the place of silence as part of making meaning (Williams 2014:156-185). It follows, therefore, that both Taylor's and Williams' understanding of language renders a discussion of lying rather different from one of deception, since it highlights the fact that lying is not simply a matter of lack of correspondence to a given fact, but rather subtler; a falsity whereby an active agent bears false witness (Williams 2014:45). Could lying, therefore, also be language free, that is, through a specific and deliberate use of silence? This is theoretically possible in Williams' scheme, though he does not discuss it. Furthermore, the philosophy of language tends to focus on the explicit use of language to deceive as an integral part of what a definition of a lie means.

Lying as a uniquely human activity is particularly interesting as it is about a philosophy of language and ethical dilemmas associated with lying. According to Jennifer Saul, lying in the first place requires a type of *saying*, something false needs to be said in order to lie (Saul 2012). However, it is not just about saying something false (as in jokes, for example), but also more commonly saying something false with an intention for another to believe that what is said is true (Saul 2012:6-7). It is a type of *warranting* (Saul 2012:11).

In ethics there are two different philosophical traditions on lying (MacIntyre 1994). One is broadly based on the intention to deceive; here some lying is permissible depending on motivations or consequences. Aristotle follows this view. While he is generally negative about the permissibility of lying, especially lying related to boasting and false humility, he allows for some lies to be morally permissible when they harm no one and when they stem from an excellence rather than a deficiency in character (Zembaty 1993).

The other tradition, such as that followed by Immanuel Kant, is narrower; in this case lying is never permissible. According to this second tradition, the distinction between lying and misleading is significant, and deliberately giving misleading information that is *technically* not a lie is morally better than acts which tell lies.

A well-known narrative tells of St Athanasius in disguise, who was asked by would be persecutors "Is Athanasius close at hand?" His reply "He is not far from here" *technically* did not lie, but was deliberately misleading (MacIntyre 1994:336). Of course, if Athanasius adhered to the first broader tradition on lying, then saying a deliberate lie to save his life would be permissible anyway. The point is that this second tradition goes to extreme lengths not to tell a lie.

Augustine and Aquinas are interesting as they follow the two different traditions named earlier, Augustine supporting a more absolute stance against lying, but Aquinas modifying that approach and leaning more towards a broader one that countenances some lies which are permissible, or, rather, are still sins, but count as venial rather than mortal sins.

Augustine believes the lie by definition to be a deliberate act of duplicity:

... that man lies, who has one thing in his mind and utters another in words, or by signs of whatever kind. Whence also the heart of him who lies is said to be double; that is, there is a double thought: the one, of that thing which he either knows or thinks to be true and does not produce; the other, of that thing which he produces instead thereof, knowing or thinking it to be false. (Augustine 1887 §3)

Theologian Paul Griffiths argues that the core of an Augustinian understanding of lying is this duplicity, *duplex cor*, so that what is said does not correspond to what the speaker believes to be true (Griffiths 2004:30). Griffiths' staunch defence of an Augustinian absolutism on lying based on a priority of grace means that lying is never under any circumstances defensible. Williams describes this view as "austere" and asks "how do we know that this hideously costly truthfulness will not be the occasion for smugness rather than anguish?" (Williams 2014:49).

Aquinas supports a more flexible approach and extends the broader category of lying as a sin against the truth, not just in words, but also in actions:

... just as it is contrary to truth to signify something with words differently than what one has in mind, it is also contrary to truth to use signs of deeds or things to signify the opposite of what is in oneself, and this is properly called dissimulation. Thus dissimulation is properly a lie told through the signification of outward deeds. (Aquinas 2a2ae Qu. 3.1)

Aquinas, like Augustine, defines the lie, *mendacium*, as both saying something false and deceiving someone. He defines the lie as the sin against truthfulness, *veritas*, so it is always associated with *falsitas* (Aquinas 2a2ae Qu. 110.1). Truthfulness is a form of communication that relies on the use of reason that connects accurately signs with a particular idea, a *conceptum*.

To what extent is deceiving among animals related to human lying when considered from a biological perspective? It is worth commenting that biologists call accurate signalling by animals, *honest* signalling in a way that captures something of what is true about biological relationships. Of course, their own use of language is replete with human metaphors when used to describe animal behaviour. It is often difficult to capture meaning without some resort to human metaphors, that is, to anthropomorphic terms. The difference, in the case of human speech, is that humans alone have the ability to abstract ideas from situations in a way that reflects veracity or falsehood. According to Aquinas, the ability of the lie to deceive another is not so much intrinsic to the lie, but rather its perfection, so a lie that deceives is successful, but a lie that does not deceive is still lying. At the lower levels of deception in the biological world it would not make sense to talk about deception that does not work; it simply would not be registered as deception. At the same time, complex social animals do have complex cultural worlds, which in some cases includes intentionality, for example the behaviour of a lower ranking chimpanzee that aims to mislead a dominant but is unsuccessful, could be interpreted as a failed attempt to deceive.

Griffiths claims that Augustine's interest in lying just for the pleasure of doing so is more psychologically acute than Aquinas' two-stage model (Griffiths 2004:175). I am much less convinced of this point. If there is no ability to deceive, then that lack of ability undercuts the culminating purpose of the lie which, it seems to me, is still grounded in a biologically driven desire to deceive others. Further, in Aquinas' definition, if a person believes something is false (whereas in fact it is true), and states it as truth, that is not a lie, so, like Augustine, the issue of duplicity is very important to him.

Aquinas' less severe condemnation of moderate lying depends on his categorisation of lies as mortal and venial sins. When a lie is about what refers to God, or about the

human good in a way opposed to love, then it is a mortal sin. It is also a mortal sin when it intends to harm someone else, either directly or indirectly, for example as in inciting scandal. Aquinas defines the difference between mortal and venial sin as follows: Mortal sin arises “when the soul is so disordered by sin as to turn away from its last end, viz., God, to Whom it is united by charity (...); but when it is disordered without turning away from God, there is venial sin” (Aquinas 2012: 1a2ae Qu. 72.5). All other lies are classified as venial sins, that is, they are not classified as opposed to humanity’s end in God.

By dividing lies into mortal and venial sins, Aquinas moves away from the absolutist position of Augustine by generating a hierarchy of different types of lie, some of which do not necessarily separate those who commit such acts from God’s love. Augustine insists that any lie, regardless of its effects, is always wrong. Aquinas’ more moderate position allows for some lies in some circumstances if the intent behind that lie is love rather than harm, such as to protect a child or vulnerable person. In naming lies as sins against God, against the virtue of truth, he also refuses to accept a purely reductionistic explanation for their existence. Stewart Clem argues that Aquinas’ focus on lies as primarily a sin against truth and only secondarily a sin against justice is important as it shows that moral wrongdoing goes further than the notion of harm (Clem 2018:261). Is the categorisation into mortal and venial sin fully convincing or does Aquinas not entirely escape Augustine’s stricture against all lying? As with many aspects of the moral life, Aquinas intends to be faithful to Augustine while moderating or qualifying his position. In this respect it depends on how far venial sins are considered to be serious or not in the moral life. By naming such lies sins, of a qualified sort, Aquinas is refusing to declare any lie as good. However, distinguishing mortal and venial sins permits a more flexible approach to the moral life that avoids rigidity. Such an approach is also more compatible with moral psychology that tends to find social or cultural reasons why some lies are committed, such as in defence of the most vulnerable, rather than naming them as inevitable “evils”. At the same time, given his elevation of the importance of truth, he refuses to reduce ethics to moral psychology. In so far as a lie, in his thinking, is always a sin against truthfulness it can never be classified as a good. Yet, by softening the condemnatory approach to all lying characteristic of Augustine’s position, it takes account of the complexity of moral decision making in difficult or challenging circumstances where to tell a lie would lead to significant harm.

Preliminary conclusions

Studying deception and lying provides a fascinating way to probe the relationships between natural and social evils and interpret these in theological and ethical terms. Evolutionary biologists prefer to frame the debate on deception in terms of payoffs for advantages that are significant in evolutionary terms, such as basic survival with alarm calls, or other reproductive advantages like deception in attracting a mate. Too much deception is counter-productive, as it undermines trust in what a biologist would call “honest signalling”. In chimpanzee societies deception is relatively rare, and there is evidence of some awareness of what another is thinking (“theory of mind”), and a degree of control about, for example, whether or not to emit false alarm signals, though anxious states presuppose such a tendency. In human communities there are signs of a very early

development of a capacity to deceive in different ways, either to avoid punishment or in order to gain benefits (through exaggeration).

What difference might *lying* make to the tapestry of deception? Language is distinctive in allowing human beings to reflect inwardly on and create particular concepts. Language, in so far as it is able to identify what is right and fitting for a given context, can create social worlds that extend beyond a direct one to one truthful correspondence. Lying, similarly, in so far as it draws on the imagination, can create falsehoods and generate illusions both in the self and others, more often than not for destructive purposes, though on occasion arising from the desire to protect another. Lying can go further than simple deception, as it is also about the need for warranting. As language opens up to the beautiful and even the transcendent, so lying has the capacity to open up to the diabolical and destructive. Under psychological pressure, human beings are far more likely to tell lies. As climate change becomes more severe and ecological anxiety increases, lying is more likely to be the sin that chokes the human condition and prevents effective action. At the same time, it is important to recognise its natural roots and make at least some allowances for lying.

If humans have evolved a language-ready brain, then perhaps they have in some sense evolved a lying-ready brain as well. Discerning whether a lie is justifiable or not needs to recognise natural inclinations and cultural perspectives on the acceptability of lying. Theologians generally resist collapsing explanations of lying into such biocultural processes and perceive the lie as an offence against the truth as transcendental. The virtue of wisdom helps people to make right judgments as to when or under what circumstances particular passions are appropriate. I rejected an Augustinian hard line on the absolute prohibition of lying, favouring instead Thomistic moderation, which, while still consistent in attributing lying as sin, in so far as it is less judgmental, seems to be rather more in keeping with contemporary psychology and biology. At the same time a line needs to be drawn between truth and falsehood. Anthropologists as a rule refuse to draw such ethical lines. The link between individual, community and political forms of deception is all too clear in our contemporary social context. A theological analysis of lying alongside insights from the social and natural sciences may perhaps help to begin to make sense of it all.

BIBLIOGRAPHY

Aquinas, Thomas. 2012. *Summa Theologiae, Prima Secundae 71-114 Volume 16*, translated by Laurence Shapcote, edited by John Mortensen and Enrique Alarcón. Lander: Aquinas Institute.

Aquinas, Thomas. 2012. *Summa Theologiae, Secunda Secundae 1-91 Volume 17*, translated by Laurence Shapcote. Green Bay: Aquinas Institute.

Aquinas, Thomas. 2012. *Summa Theologiae, Secunda Secundae 92-189 Volume 18*, translated by Laurence Shapcote, edited by John Mortensen and Enrique Alarcón. Lander: Aquinas Institute.

Arendt, Hannah. 1972. Lying in politics: Reflections on the Pentagon Papers [1971]. In Hannah Arendt, *Crises of the republic*. San Diego: Harcourt/Bruce.

Augustine, *De Mendacio* 1887. §3 (On Lying), translated by H. Browne. In Philip Schaff (ed.), *Nicene and post-Nicene fathers, First Series Volume 3*. Buffalo, NY: Christian Literature Publishing Co. Revised and edited for New Advent by Kevin Knight. Available online: <http://www.newadvent.org/fathers/1312.htm> (Accessed 15 June 2019).

Booker, Christopher. 2009. Climate change: This is the worst scientific scandal of our generation, *Daily Telegraph*, 28 November 2009. Available online: <https://www.telegraph.co.uk/comment/columnists/christopherbooker/6679082/Climate-change-this-is-the-worst-scientific-scandal-of-our-generation.html> (Accessed 5 December 2010).

Clem, Stewart. 2018. *Truth as virtue: A Thomistic framework for the ethics of lying and truthtelling*. PhD dissertation, University of Notre Dame.

Couenhoven, Jesse. 2013. *Stricken by sin, cured by Christ: Agency, necessity and culpability in Augustinian theology*. Oxford: Oxford University Press.

Dale, Denis and Tanya Talaga. 2016. Donald Trump: The unauthorized database of false things, *Toronto Star*, 4 November 2016. Available online: <https://www.thestar.com/news/world/uselection/2016/11/04/donald-trump-the-unauthorized-database-of-false-things.html> (Accessed 29 March 2019).

Deane-Drummond, Celia. 2011. A case for collective conscience: Climategate, COP-15, and climate justice, *Studies in Christian Ethics* 24(1):1-18.

Deane-Drummond, Celia. 2022. *Shadow Sophia: The evolution of wisdom Volume 2*. Oxford: Oxford University Press (in press).

Griffiths, Paul. 2004. *Lying: An Augustinian theology of duplicity*. Grand Rapids: Braznos Press.

Kean, Donna, Barbara Tiddi, Martin Fahy, Michael Heistermann, Gabriele Schino, Brandon C. Wheeler. 2017. Feeling anxious? The mechanisms of vocal deception in tufted capuchin monkeys, *Animal Behaviour* 130:37-46. Available online: <https://doi.org/10.1016/j.anbehav.2017.06.008>.

Lewis, Michael and Carolyn Saarni (eds). 1993. *Lying and deception in everyday life*. New York: The Guildford Press.

MacIntyre, Alasdair. 1994. *Truthfulness, lies and moral philosophers: What can we learn from Mill and Kant?*, Tanner Lectures on Human Values 1994, delivered at Princeton University, 1994. Available online: https://tannerlectures.utah.edu/_documents/a-to-z/m/macintyre_1994.pdf (Accessed 23 June 2019).

Mitchell, Robert. 1993. Animals as liars: The human face of non-human duplicity. In Michael Lewis and Carolyn Saarni (eds), *Lying and deception in everyday life*. New York: The Guildford Press, pp. 59-89.

Mittermeier, Cristina G. 2018. Starving polar bear photographer recalls what went wrong, *National Geographic Magazine*, August 2018. Available online: <https://www.nationalgeographic.com/magazine/2018/08/explore-through-the-lens-starving-polar-bear-photo/> (Accessed 14 October 2019).

Oxburgh, Ron, Huw Davies, Kerry Emanuel, Lisa Graumlich, David Hand, Herbert Huppert Michael Kelly. 2010. Report of the International Panel set up by the University of East Anglia to examine the research of the Climatic Research Unit, March 2010. Available online:

http://www.uea.ac.uk/documents/3154295/7847337/SAP.pdf/a6f591fc-fc6e-4a70-9648-8b943d84782b (Accessed 5 April 2010).

Pearce, Fred. 2010. How the “Climategate” scandal is bogus and based on climate skeptic lies, *The Guardian*, 1 February 2010. Available online: <http://www.guardian.co.uk/environment/2010/feb/01/climate-emails-sceptics> (Accessed 5 March 2010).

Saul, Jennifer Mather. 2012. *Lying, misleading and what is said: An exploration in philosophy of language and in ethics*. Oxford: Oxford University Press.

Searcy William A. and Stephen Nowicki. 2005. *The evolution of animal communication*. Princeton: Princeton University Press.

Smith, David. 2019. The lies have it. Republicans abandon truth in Trump impeachment proceedings, *The Guardian*, 15 December 2019. Available online: <https://www.theguardian.com/us-news/2019/dec/15/donald-trump-impeachment-defense-republicans-fox-news> (Accessed 16 December 2019).

Sullivan, Maureen. 2003. The fundamental attribution error in detecting deception: The boy-who-cried-wolf effect, *Personality and Social Psychology Bulletin* 19(10):1316-1327. Available online: <https://doi.org/10.1177/0146167203254610>.

Taylor, Charles. 2016. *The language animal: The full shape of the human linguistic capacity*. Cambridge/Mass: Belknap/Harvard University Press.

Williams, Rowan. 2014. *The edge of words: God and the habits of language*. London: Bloomsbury.

Zembyt, Jane. 1993. Aristotle on lying, *Journal of the History of Philosophy* 31(1):7-29.