
Science, conscience, consciousness

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Abstract

Descartes' metaphysics lays the foundation for the special sciences, and the notion of consciousness (*conscientia*) belongs to metaphysics rather than to psychology. I argue that as a metaphysical notion, 'consciousness' refers to an epistemic version of moral conscience. As a consequence, the activity on which science is based turns out to be conscientious thought. The consciousness that makes science possible is a double awareness: the awareness of what one is thinking, of what one should be doing, and of the possibility of a gap between the two.

Keywords

Augustine, conscience, consciousness, René Descartes, science, sin

Introduction and Preview

This contribution to an issue on the science of consciousness is about what one might call the consciousness of science: the kind of consciousness that makes science possible. Descartes calls the discipline that deals with this kind of consciousness metaphysics. Metaphysics provides the foundation for the special sciences, such as applied ethics, physics, or psychology. It is not one of these special sciences. Its subject matter is thinking things: the human soul as the finite thinking thing and God as the infinite thinking thing. Thought is thus the central metaphysical notion for Descartes. He defines thought as something that happens in us, of which there is consciousness (*conscientia*) in us. This definition gives rise to two questions. First, if thought is a basic metaphysical notion and metaphysics provides the foundation of the special sciences, including psychology, Descartes should not rely on a psychological account of consciousness in his definition of

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thought. What does he mean by consciousness, then? Second, Descartes wants to lay the foundation of science by reflecting on what it means to be a subject of conscious activity. What is the relation between conscious activity and science, such that a reflection on conscious activity may provide the foundation of science?

I will argue that in his definition of thought, Descartes uses the Latin term *conscientia* in its traditional meaning. Traditionally, the term referred mainly to what we would nowadays call moral conscience. Moral conscience is, in general, the awareness that we may have of the moral value of our actions. In order to understand Descartes' definition of thought, we have to consider an epistemic version of moral conscience, which is an awareness of the epistemic status of our thoughts. I will submit that this is the sense of 'conscious' in which Descartes defines thought as conscious activity. He characterizes the basic activity of the scientist as conscientious thinking.

Sin, in general, is an action against one's moral conscience, and, according to Descartes, scientific error is a thought against one's epistemic conscience. As he writes in the Fourth Meditation, such errors are possible only for a thinker who transgresses the boundaries of what she is in a position to justify. To commit a sin is to overstep the boundaries of what one can responsibly do. It is to act in spite of the awareness of a gap between what one is doing and what one ought to do. Since sins are also often described as acts *contra conscientiam*, it is quite natural to take *conscientia* to be the awareness of this gap. I will therefore discuss the Augustinian notion of a sin in order to clarify in what sense it may be applied to the epistemic case. When Descartes defines thought as conscious activity, he describes it as the activity of someone who is aware of a possible gap between what she is doing and what she should be doing. This awareness involves what Augustine calls a 'double thought': the awareness of what one is doing and of what one should be doing. Descartes maintains that this kind of double awareness makes science possible.

The Foundation of Science

In the letter to Picot that was added as a preface to the French edition of his *Principles of Philosophy*, Descartes writes that the overall aim of his philosophy is to attain 'a perfect knowledge of all things that a human being can know, for the conduct of his life as well as for the preservation of his health and the discovery of all kinds of skills' (AT IXB 2).¹ Descartes believes that in order to attain such knowledge, one must start from first causes or principles, which must be clear, evident, and knowable independently of everything else. He provides these foundational principles by means of his *cogito* argument, developed in most detail in the *Meditations*. In a letter to Mersenne, Descartes writes: '... I may tell you, between ourselves, that these six Meditations contain all the foundation of my physics' (AT III 297–8). This, however, is only their hidden agenda. Manifestly, according to their subtitle, the *Meditations* are concerned with proving the immortality of the soul and the existence of God (see also AT VII 1–2 and 7–9).

How can a treatise on God and the soul lay the foundation of physics? It is sometimes supposed that for Descartes, there must be one indubitable truth at the beginning of all science (i.e. the truth that there is a thinking thing), which then bequeathes its indubitability to all other scientific truths. The *cogito* argument (I think, therefore I am) would then be something like an axiom, from which the rest of Cartesian science may be inferred.

This, however, is not quite true. For one thing, it is certainly not a groundbreaking discovery that there is a thinking thing (that is, some being that thinks). No one before or after Descartes seriously denies this, and hence, its proof should not be taken to change much. Further, the *cogito* argument leads to a truth that every thinker can only ascertain for herself. I may be certain that I am a thinker, but you need not be certain that I am a thinker. Scientific knowledge, however, such as the truths of geometry and physics, is intersubjectively valid, and it is far from clear how one should be able to infer it from a statement that every thinker can ascertain only for herself. Moreover, the truths of geometry and physics are not in fact as indubitable as the *cogito*. Descartes does not claim that the existence of the empirical world is beyond doubt, and, as he sees it, even mathematical and logical truths do not immediately follow from the *cogito*. Rather than inheriting their truth directly from the *cogito*, the truths of Cartesian physics follow from the existence and benevolence of God. However, a proof that everything ultimately rests on the existence of God cannot actually help any scientist. It does not render any particular one of his claims less dubitable than before. In the special sciences, we had better not justify anything by reference to God. Everything that is the case is brought about by the Cartesian God, there is nothing that God could not have brought about, and we generally do not know why God does what he does. Therefore, one cannot really explain anything by saying that God brought it about.²

To sum up, the fact that a thinking thing exists does not require proof, it does not have the generality that it would have to have in order to provide a basis for science, and Descartes does not actually infer any of the truths of science from this fact. The *cogito* argument is not important because it shows a particular fact to be indubitable. It does not provide the foundation of science by proving a truth from which specific scientific truths could be inferred.

How does the *cogito* argument establish the foundation of Cartesian science, then? Descartes writes that the primary aim of his methodical doubt is not to establish the truth of the doubted claims (that humans have bodies, that there is a world, etc.) but to clarify their epistemic status (AT VII 15–16). I take it that this is how the *cogito* lays the foundations of science. In order to do science, one must begin with a clear understanding of the epistemic status of scientific activity. One must begin with a reflection on what is involved in thought. Thought, as Descartes defines it, is paradigmatic for all genuine scientific activity, and the thinking subject of the *Meditations* may thus be taken to be the paradigmatic scientist. Descartes' *Meditations* on the immortal soul and God really are meditations on the subject of scientific activity and the ideal of scientific truth. The *cogito* argument does not so much show that a thinking thing must exist, but that it must stand at the beginning of all science. It shows that we must already understand what thought and consciousness are before we can discover any specific scientific truth. There can be a science of consciousness, but we cannot wait for this science in order to understand what consciousness is. In order to engage in any kind of scientific activity, we must already understand what thought and consciousness are. In this sense, the study of thought and consciousness primarily belongs to metaphysics.

Thought

Read as an account of scientific thought, the *Meditations* start with the following claim: there can be no science without a thinking thing.³ In order to do science, we must

understand what it is we are doing when we engage in science, and in order to understand what science is, we must understand what thought is. In the body text of the *Meditations*, Descartes does not state an explicit definition of thought. He provides one in the appendix to the *Second Replies* (AT VII 160), and a slightly different one in the *Principia*. The latter reads as follows:

By the term ‘thought’, I understand all things that happen in us such that we are conscious of them, in so far as there is consciousness of them in us. (*Principia* I 9, AT VIII A 7)

The most important term in this definition is ‘consciousness’. Therefore, in order to understand what thought is, we must understand what consciousness is. Now it is crucial to note that Descartes uses this term in a special sense here. For assume that in the definition of thought, consciousness means what it means today: some kind of awareness, such as the awareness that we have of things we attend to. Then, thought would be something that happens in us such that we are aware of it. However, one may then object, so is our digestion. It happens in us and we may be aware of it. But could Descartes possibly want to say that one’s digestion is a thought, in so far as one is aware of it? This seems wrong.⁴

It seems that consciousness is a rather special kind of awareness. It cannot be the ordinary kind of awareness that we have whenever we attend to something that happens in us. It might be a special kind of inner sensation that one has of the content of one’s own mind.⁵ Indeed, there is a passage in the *Interview with Burman* where Descartes says that ‘to be conscious somehow is to think and to reflect on one’s thought’ (AT V 149). However, this hardly helps with the definition of thought quoted above. We already know that, by definition, we are conscious of all our thoughts, and that as a consequence, consciousness must be something that occurs whenever we think.

Moreover, the idea cannot be that consciousness is a reflective thought in the sense of a thought about another thought.⁶ This is not, to be sure, what Burman says; he merely says that consciousness is what goes on when one thinks and reflects on one’s thought. However, it is also not what Descartes could have meant, for in his *Replies* to Bourdin, he clearly rejects the view that to be conscious of a thought would be to entertain another thought about the first one (e.g. AT VII 559). The assumption that consciousness is a reflective thought about another thought would in any event lead to a regress. If we are conscious of all our thoughts, and if to be conscious of a thought is to entertain a further thought about the first thought, this latter thought would again have to be the object of a further thought, and so on. Therefore, consciousness cannot be a species of thought.

On the other hand, consciousness cannot be an activity of our mind other than thought. Descartes defines the mind as the thing that thinks, so that by definition, all it does is thinking. Therefore, if consciousness is something the mind does, it must be a kind of thought. If consciousness is not a thought, it cannot be anything the thinking thing does. However, if consciousness is not an activity of the thinking thing, how can the thinking thing be conscious of anything? Therefore, it seems, consciousness must be a species of thought.

One might think that instead of being an activity of the thinking thing, which would have to be a thought, consciousness is a disposition. But again, Descartes would not agree. He writes to Arnauld that the object of our consciousness can only be a particular token thought (*operatio*, VII 232 and 246–7). A disposition, however, has no particular token

performance as its object. The object of my disposition to smoke is not a particular instance of smoking, but smoking in general. If consciousness were a disposition, its object could only be thought in general, not a particular thought. According to the definition of thought, however, we are conscious of each particular one of our thoughts.

Our problem, then, is the following. Descartes maintains that all science must be based on a clear understanding of what is involved in thought (*cogitatio*). Thought, in turn, is defined in terms of consciousness (*conscientia*). However, we seem to have no clear idea of what consciousness is. Although consciousness appears to be some kind of awareness, it cannot be a further thought. What is it then? What is consciousness, such that a study of conscious activity can provide the foundation of science?

In the section immediately following the definition of thought quoted above, Descartes informs us that he is not going to explain every word he uses, especially when its meaning is sufficiently clear by itself (*Principia* I 10, AT VIII A 8). Since *conscientia* is a word that he does not explain anywhere, he seems to assume that its meaning is sufficiently clear by itself. Therefore, since we cannot explain what Descartes means by ‘consciousness’ by exclusively relying on what he says, we must fill in an account from other sources.

The question of what consciousness is may be taken in two ways. First, one may ask what the phenomenon is, if there is one and only one, that we nowadays call consciousness. Second, one may ask what Descartes and his contemporaries meant when they used the term ‘consciousness’ (*conscientia*). It is striking that these two questions concern two quite different things. What we nowadays call consciousness is some kind of awareness of our own thoughts and actions. In and before Descartes’ time, however, the word *conscientia* was almost exclusively used in order to refer to what we would rather call moral conscience.⁷ This latter observation needs to be put carefully. The notion of moral conscience has undergone some significant changes over the centuries, especially in the 19th century. Therefore, it would be misleading to say without further qualification that *conscientia* referred to moral conscience. Further, people have always used *conscientia* in more than one sense, and it is often quite appropriately translated as ‘consciousness’ or ‘awareness’. Still, in Descartes’ time, *conscientia* clearly had much stronger moral connotations than ‘consciousness’ has today.

In the following, I will be concerned with the second question about consciousness: What did Descartes mean, and what did his readers naturally take him to mean, when he used the word *conscientia* in his definition of thought? This is a question about the meaning of a particular word at a certain time. In order to answer it, we must look at how this term was used at that time. Since we want to know how Descartes understood the term, we must look at his sources. However, a discussion of all relevant sources would of course go far beyond the scope of this article, even if we restrict ourselves to passages that Descartes obviously knew. I will here only develop a small detail of the relevant history.⁸ What I say about *conscientia* should thus not be taken to be the final word, although I am confident that it is paradigmatic.

Speaking Contrary to One’s Mind

There is one passage in Descartes’ *Replies* to Bourdin where he uses *conscientia* in a remarkable and possibly illuminating way. He accuses Bourdin of purposely misreading

the *Meditations*, and thus being intellectually dishonest. Then he adds that according to the commonly accepted definition of a lie, such behavior can only be called lying. For according to this definition, to lie is 'to speak *contra mentem & conscientiam*' (AT VII 525).⁹ If a lie is a statement against one's *conscientia*, a better grasp of what a lie is should contribute to our understanding of what *conscientia* was taken to be. Since a lie is a species of sin, the following discussion of lies as statements *contra conscientiam* will also prepare the account that I am going to give of the relation between consciousness and sin.

The first author who wrote systematically about lies was Augustine. What Augustine says is interesting in the present context because Descartes was clearly influenced by the Augustinian tradition, and the term *conscientia* stems from that tradition. Also, in his discussion of lies, Augustine explicitly contrasts *conscientia* and *scientia*, and we are here interested in the relation between science and consciousness.

In *Contra Mendacium* 5.8,¹⁰ Augustine argues that a heretic who expresses his false belief is not as blameworthy as a catholic Christian who pretends to believe in heresy. The reason is that the former is not aware of his blasphemy and only speaks *contra scientiam*, that is, in the absence of knowledge. The latter, however, knowingly states what is contrary to his belief and thus speaks *contra conscientiam*. This opposition between *scientia* and *conscientia* suggests that the crucial difference lies in the prefix *con-*: *scientia* is objective knowledge, whereas *conscientia* is, in some sense, contextual knowledge (knowledge-with-something). Here, it is knowledge that someone has while she is speaking. A lie is thus a statement contrary to something the speaker is aware of, and *conscientia* is the awareness that the speaker has of this thing.

What exactly is the object of *conscientia* in this context? What does a liar speak against? There are three possibilities. *Conscientia* could be (1) one's knowledge of right and wrong, (2) one's knowledge of what is true, or (3) one's awareness of the difference between what one is saying and what one should be saying. Let me consider each of these possibilities in turn.

- (1) There is, presumably, a moral rule that one should not tell lies, and if *conscientia* is the awareness of such a rule, a liar acts against this awareness. However, it would not make much sense to define a lie as a statement against one's own *conscientia* in this sense. If one would define a lie as a statement contrary to one's awareness that one should not tell lies, what a lie actually is would remain undefined. If one would define a lie as a statement contrary to one's general awareness of moral rules, the definition would cover acts that are not lies. For one may well act against moral rules by telling the truth.
- (2) As for the possibility that *conscientia* is one's knowledge of the truth, it seems that not all statements against what one takes to be true are lies. First, irony and sarcasm are not lies, but they are still statements contrary to what one takes to be true. To be sure, Augustine does say that actors lie (*Soliloquia* 2.9.16). However, one may also report or translate a false statement made by another person, and in this context it would be wrong to alter the statement so that it turns out true. In this context, a statement contrary to what one takes to be true is clearly not a lie. Therefore, if a lie is a statement against one's *conscientia*, *conscientia* cannot simply be one's

awareness of what is true. It must be or involve some awareness of what one should say, and in some cases, one should say what is false.

- (3) If the *conscientia* against which a lie is spoken is not simply the awareness of moral standards or of the truth, it must be the awareness of the difference between what one is actually saying and the truth that one should be stating.¹¹ As such, it must involve an awareness of what one is saying and an awareness of what one should be saying. Augustine accordingly writes that all lies involve a ‘double thought’ (*De Mendacio* 3.3). The liar knows, on the one hand, what he is saying. On the other hand, he knows that what he is saying is not what he should be saying, which means that he also has an idea of what he should be saying.

The question was: given that a reflection on thought is to provide the foundation for scientific knowledge, what is *conscientia*, such that Descartes can refer to it in his definition of thought? We have seen in what sense a lie is a statement *contra conscientiam*: in this context, one’s *conscientia* is one’s awareness of a gap between what one is saying and what one should be saying. In order to understand how Descartes could define thought as an activity of which there is *conscientia* in us, in this sense of *conscientia*, we need to slightly generalize this notion, such that *conscientia* is the awareness of the gap between what one is thinking and doing (not only saying) and what one should be thinking and doing.

Thought is, accordingly, something one is doing such that one is aware of whether what one is doing is also what one should be doing. This kind of awareness involves what Augustine calls a ‘double thought’. On the one hand, it involves an awareness of what one is doing. This part of *conscientia* is what we still call consciousness. But *conscientia* is not simply the same as consciousness in this sense, since not everything in a person of which she is aware is a thought. I have pointed out that one may be aware of one’s digestion, but that this does not turn digesting into thinking. In addition to an awareness of what one is doing, one’s *conscientia* must involve an awareness of what one should be doing, and thus also an awareness of the relevant standards that apply to what one is doing. This aspect of *conscientia* survives in our notion of moral conscience.

Moral and Epistemic Sin

We are now in the possession of a rough idea of what *conscientia* could refer to, at least in a certain context, and this idea might help us to understand why conscious activity is the basis on which scientific knowledge may be achieved. *Conscientia* may be described as conscientiousness, which involves both consciousness (awareness of what one is doing), and conscience (awareness of what one should be doing). To act *contra conscientiam* is to consciously violate certain normative standards.

The *Meditations* are an attempt to think as conscientiously as possible. This is most obvious in the Fourth Meditation. As Descartes announces in the Synopsis, the Fourth Meditation is about the possibility of both moral and epistemic error (*de peccato, vel errore*, AT VII 15). In his *Second Replies*, he also writes that to judge in unknown matters is to sin (AT VII 147). Epistemic error and morally wrong agency are thus of the same kind. In both cases, the problem is not simply that our bodies are weak and fallible,

but rather that our will goes beyond our actual capacity. What we might perceive as a defect of our bodily nature is not a positive datum. Following Augustine, Descartes argues that to lack perfection is to participate in non-being, and that it is therefore wrong to suppose that a lack of perfection has any kind of real or positive being (AT VII 54).¹² The lack consists precisely in there not being as much as there should be. Insofar as our bodies are a part of nature, there is nothing wrong with them, even if bodily passions may lead to a wrong action, or a defect in our sense organs to a wrong judgment. In any case, our bodies perfectly obey the laws that truly apply to them: the laws of physics and physiology (AT VII 84–5). Wrong actions and judgments are possible only in cases where we rely on our bodies even though we should not. This, however, is a defect of our will, not of our bodies.

Descartes concludes that all epistemic errors, as well as moral sins, go back to a misuse of free will. To err and to sin is to judge and decide in matters that one does not sufficiently understand (AT VII 58). Because God is omnipotent and benevolent, however, there must be a way to avoid sin and error (AT VII 80). According to Descartes, we can do this by assenting only to what is clearly true (AT VII 59). And this is precisely what Descartes sets out to do in the *Meditations*. The *Meditations* lead to a method for achieving the perfect knowledge that Descartes calls science (AT VII 62). We get this knowledge by avoiding the epistemic analogues of sins. This is a good reason for inquiring into the general relation between *conscientia* and sin.¹³

For Augustine, every lie is a sin against the truth. There is also a sense in which, conversely, every sin is a kind of lie. Augustine characterizes lies as paradigmatic sins in that they are statements contrary to the truth, and contrary to what is (*Enarrationes in Psalmos* 5.7). For God is both the personified Truth and He who is (Exodus 3.14). All sins are violations of some normative standard, and since God incorporates all standards of perfection by exemplifying them, all sins are actions against God. Further, since God is the Truth, all morally wrong actions are also against the Truth (*Contra Mendacium* 19.38). Therefore, by being contrary to the Truth, all morally wrong actions are a kind of lie.

In order to clarify further what *conscientia* is, it will therefore be useful to look more closely at Augustine's treatment of sin.¹⁴ Three themes may be distinguished: sins are (1) acts that violate a moral rule, (2) acts that reveal a corruption of the will, and (3) instances of haughtiness (*superbia*).

- (1) In *Contra Faustum* 22.27, Augustine generally characterizes morally wrong actions as something done, said, or desired contrary to eternal law (*factum vel dictum vel concupitum aliquid contra aeternam legem*). What he calls the eternal law here is not a list of commandments that might be revealed to some and remain unknown to others. Rather, to act according to eternal law is to act according to one's own nature. To act contrary to eternal law is thus to act against one's own nature. Further, Augustine claims that the most natural thing for humans to do is to contemplate the image of God (which amounts to contemplating the normative standards that apply to humans and their actions). Hence, he writes, we live in accordance with eternal law as long as we 'live from the sincere faith that works through love, having, in a good *conscientia*, the hope of immortality and incorruption laid up in heaven' (*Contra Faustum* 22.27).¹⁵

- (2) For a human to sin is to deviate from one's nature, and to deviate from one's own nature is to deny God (Menn, 1998: 174). In *Retractationes* 1.5.2, Augustine quotes Wisdom 1.3, 'your sins separate you from God'.¹⁶ He remarks that he came to properly understand this only when he realized that by committing a sin, we do not spatially separate ourselves from God but *normatively*, that is, by falling short of the standard he incorporates. The result of sin is thus a non-spatial, normative distance between an actual, imperfect instance and the normative standard that it falls short of (Cary, 2000: 108). This does not mean that every defect is a sin. For Augustine, a sin is a deviation from that which is most essential to humans, and the capacity that is most essential to all humans is the ability to deliberate and choose freely. An abuse of this capacity is fatal because it leads to the corruption of the capacity that is being abused. The paradigmatic sin is therefore a choice by which someone gives away the very capacity to choose. The standards that are violated in such an act are constitutive of this very act. Accordingly, a sin may also be characterized as a perversion of the will itself (*Confessiones* 7.16.22).¹⁷
- (3) Augustine does not always describe sin as falling short of a standard, but sometimes as a movement that might appear to be the reverse. Referring to *Sirach* (*Ecclesiasticus*) 10.13(15), he writes that the beginning of all sin is *haughtiness* (*superbia*: *De Civitate Dei* 12.6). This, however, involves *overestimating* one's own value, and to sin is to fall *short of* normative standards. How does this fit together? To misuse one's capacity for free choice is to give up what is divine in us, and, in this sense, sin consists in choosing a lesser good than is appropriate for humans. What is bad about this is not just that something less than optimal is chosen. To choose a lesser good is not always wrong, let alone morally wrong. What is bad about falling short of human nature is that he who chooses to do so makes less of himself and thus lowers the standard he applies to himself. Where a standard is lowered, the thing that is measured by it appears better than it is. This is why choosing a lesser good can at the same time be a case of *superbia*: it involves measuring oneself by a standard that makes one appear better than one actually is (cf. James 4.10). It should be noted, however, that Augustine admits that many sins do not involve *superbia* at all. That *superbia* is the origin of all sin is true only chronologically (*De natura et gratia* 29.33).

Sin is thus, according to Augustine, a failure to meet certain normative standards, where these standards are constitutive for our ability to freely choose, which is our ability to meet any normative standards at all.

Thought as Conscientious Activity

Augustine is, of course, not the only source one should consider in a more general treatment of the prehistory of Descartes' notion of consciousness. There is certainly more to be said about scholastics such as Bonaventure, Aquinas and Suárez, as well as Seneca and others. It is nonetheless interesting to observe what happens when one reads Descartes directly on the basis of what I have extracted from Augustine. If our

conscientia is the awareness of a possible gap between what we are doing and what we should be doing, the Cartesian definition of thought reads as follows:

By the term 'thought', I understand all things that happen in us such that we are aware of a possible gap between what is happening in us and what should be happening in us, and (it is a thought only) in so far as there is such awareness in us.

Thought is thus one of the many things that may happen in us, and it is distinguished from such things as our digestion and respiration in that we may not only be aware of it, but also be aware of a possible gap between what is happening in us and certain standards that apply to it. These standards are what I call *normative* standards. They are standards an awareness of which is constitutive for the actions that are subject to them, and when they are violated, one acts contrary to this awareness.

A normative standard is not simply a standard; that is, it is not merely something according to which another thing may be measured. Normative standards define what it is for an instance of a kind to be a flawless and complete instance of this kind. When we measure the length of a piece of wood, we apply a standard, and the piece of wood may fall short of having a certain length. It does not thereby fail to be what wood should be. Normative standards are such that by failing to meet them, a thing fails to be a proper instance of its kind. Further, normative standards are such that one may consciously violate them, that is, violate them while being aware that one does so. In general, the violation of a normative standard constitutes a sin. If Augustine is right, there is something that humans should do in order to be proper instances of their kind. Humans and their actions are thus governed by normative standards, and humans may consciously act against these standards. If the ability to choose freely is essential to humans, for instance, then a human being who gives away her own capacity to choose is intrinsically imperfect. She does not simply fail to satisfy a standard, but by failing to do so, she fails to be human. The standard she fails to meet is normative for humans and their actions.

Conscientia must have to do with normative standards. Descartes defines thought as something that happens in us such that we are aware of the standards that apply to it, so that it is a thought only insofar as we are aware of these standards. Thought is possible only for a being that can be aware of standards. Thinking requires an (implicit) awareness of the standards that apply to thought. In order to be a digesting being, in contrast, one need not even be implicitly aware of any standards that apply to digestion. There are no rules according to which digestion is properly done. We are the ones who digest, but there are no standards we would need to be implicitly aware of in doing so.

It would be circular to define *conscientia* as the awareness of the normative standards that apply to *thinking*. For in order to know what standards apply to thinking, one would need to know what thinking is, but thought is defined as conscious activity. Hence, *conscientia* can in this context only be the awareness of the normative standards, of whatever kind, that properly apply to what happens in us. Thought is, quite generally, whatever we do with a view to normative standards, insofar as these standards apply to it.

I have argued at the beginning of this article that the consciousness that defines thought cannot be ordinary awareness and that it cannot be a species of thought or a disposition. The assumption that Descartes uses *conscientia* in its traditional sense allows us

to see in what sense it is not a simple awareness of what happens in us. It is double awareness: awareness of what we are doing and of what we should be doing. This awareness is constitutive of thought, so that there can be no thought without it. Further, this awareness need not amount to a further activity of the thinker, of which he would have to be aware in the same sense. To be conscious is not to think that one is thinking. It is to act with a view to certain normative standards.

One may be aware of something without explicitly thinking of it. To use a popular example, a driver may be aware of the traffic while driving a familiar route without thinking of it. That one is aware of something may be manifest only in the way one reacts to it. Similarly, someone who is acting with a view to certain standards may be said to be aware of these standards by simply acting according to them, not because she explicitly thinks of them. I submit that precisely this is the case with what Descartes defines as thought. Thought is an activity that is subject to certain standards, such as truth and coherence, and whoever engages in it must be implicitly aware of these standards, in the same sense in which a driver is implicitly aware of the traffic. Therefore, one may act such that one is aware of the standards that apply to one's actions without performing a further act of considering these standards. That thought is something of which the thinker is aware does not imply that in order to think, a thinker must entertain a further thought about her thinking. It only implies that the thinker must be implicitly aware of the fact that what she is doing is subject to certain standards, which it may fail to satisfy.

Science and Ethics

Consciousness is thus a normative notion. As such it is the subject matter of metaphysics and not of psychology. It is the awareness not only of what is happening in our minds, but also of its relation to the normative standards that apply to it.

As we have seen, Descartes adapts Augustine's discussion of moral evil to the epistemic case in his Fourth Meditation. The question is not any longer: How can there be evil in a world created by God? It is: How can there be imperfection in an epistemic subject created by God? Descartes' answer is considerably more optimistic than Augustine's. Augustine had argued, against the Pelagians, that it is not within our power to choose a morally flawless life. For the epistemic case, Descartes claims that by using the right method, we can make sure that we will never have an erroneous belief.¹⁸

Descartes makes this claim not only with regard to *epistemic* standards. He claims that for doing well in general, it must suffice that one judges well (AT VI 28). In a letter to Princess Elizabeth of Bohemia, he also writes that the moral worth of our actions can depend only on whether they agree with our own conscience (AT IV 316). There is thus a clear connection between Descartes' moral philosophy and his account of thought as conscientious activity. He sometimes says that virtue in general consists in the unalterability of one's decisions (AT IV 265). To be virtuous, he writes, is to acknowledge that nothing is in one's power except one's own will, and to act on a firm and unalterable resolution to use it according to reason (AT XI 445–6). It is thus a sign of moral weakness or *humilité vitiieuse* when one takes back a judgment or decision or does things that one later regrets (AT XI 450). The consequences of acting before resolving one's

irresolution are pricks of conscience (AT XI 376). All guilty conscience can therefore be avoided if one never acts on uncertain grounds (AT XI 464). Here, Descartes uses the French term *conscience*, which is not equivalent to *conscientia*. However, like *conscientia* in general, the moral conscience it refers to is concerned with a difference between what one did and what one thinks one should have done.

Thus according to Descartes, one's conscience is clear as long as one firmly sticks to one's resolutions. Obviously, this cannot be all there is to virtue, since one may very well make wrong decisions, and when one does so, it is better not to stick to them. In the ideal case, however, our convictions should be unchanging because they are right (AT XI 368). This is the sense in which Cartesian science ultimately serves virtue: it provides the basis on which we can make decisions that we will never have to revise. We may avoid moral sin by avoiding the epistemic analogue of sin. The science that will eventually make this possible is in turn based on an explicit and rigorous evaluation of all our thoughts according to epistemic standards. In order to evaluate one's thoughts in this way, one has to think conscientiously. This is how thought, as Descartes defines it, makes science possible.

Notes

1. This refers to the *Oeuvres de Descartes*, ed. C. Adam and P. Tannery (Descartes, 1996), vol. IX, part 2 (= B), p. 2. Subsequent references are to be read accordingly. Translations are my own.
2. To be sure, Descartes thinks that the immutability of God implies certain physical conservation principles (AT VIII A 61–2). But his argument is weak. Since God can do anything he likes, there can be no proof that what he does *must* be governed by conservation principles. Descartes also says that in the absence of a proof of the existence of God, we cannot have any certain knowledge (AT VII 71). Again, however, this does not mean that any substantial claim can be *derived* from the claim that God exists.
3. This section is partly based on Hennig (2006: ch. 2).
4. One might think, at this point, that digestion is not a thought because it happens in our body and not in our minds. However, when Descartes speaks of 'all things that happen in us', he cannot already confine himself to things that happen in our minds. His aim is to say what the mind is, and he is going to define it as the thing that thinks. This definition would be circular if he would already rely on a distinction between mind and body in the definition of thought.
5. This is what Malebranche seems to suppose in the *Recherche de la Verité* III.2.vii.
6. John Cottingham writes that according to Descartes, all thoughts must be 'objects of reflective awareness' (1978: 211). If by 'reflective awareness', Cottingham refers to a further activity of the mind beyond the thinking of the thought itself, he is mistaken (as I am going to show). If not, one would like to know what reflective awareness is.
7. See, among many others, Lindemann (1938); Hofmann (1941); Potts (1982); Davies (1990); and Hennig (2006).
8. I do not develop this detail in Hennig (2006).
9. Cf. De Montaigne, *Essais* I.9, ed. Villey (1965: 35). The definition of a lie as a statement *contra mentem et conscientiam* is sometimes backed up by rather dubious etymology. The Latin *mentiri*, it is said, derives from *contra mentem ire*. It is difficult to find a paradigmatic or

- authoritative reference for this derivation. Random references may be found in dictionaries, in *Summae Confessorum*, and in glossaries of juridical Latin (s.v. *mendacium* or *mentiri*). Possible early sources are Cassiodorus' *In Psalmos* 17.46 (*mentiri enim est contra mentem loqui*) and Hieronymus' *In Esaiam* 57.11 (*si contra mentis tuae conscientiam dicere aliquando uoluisti, mentita es*).
10. I quote Augustine from the *Corpus Christianorum, Series Latina* when available; otherwise from the *Patrologiae cursus completus, Series Latina*.
 11. A statement contrary to this awareness is a lie only if one is (1) not saying what one takes to be true, but is (2) aware that one should be saying what one takes to be true.
 12. Cf. Augustine, *Confessions* 10.11.17; Menn (1998: ch. 7).
 13. Harrison (2002) points out that the notion of a sin is also connected to the project of early modern science in a further way. He shows that in early modernity, the original sin was taken to be the cause of our epistemic shortcomings, for which science was taken to be a remedy.
 14. Lexically, the notion of sin is only loosely connected to the topic of consciousness and science in Augustine, but the connections are nonetheless illuminating. Augustine occasionally associates our *conscientia* with the awareness of moral wrongness. In *Sermo* 37.10, he writes that virtuous actions lead to a *bona conscientia*. Conversely, the *mala conscientia* separates us from the City of God (*De Civitate Dei* 20.9), and according to Wisdom 1.3, what separates us from God are our perverse thoughts. In *Sermo* 88.6, Augustine writes that as long as Adam's *conscientia* was pure, he 'rejoiced in the presence of God'. By committing the first sin, however, he turned away and 'hid himself from the face of God'. A *mala conscientia* is thus a symptom of hiding from God, that is, of falling short of one's own nature.
 15. It might seem as if, here, Augustine establishes a conceptual connection between sin and *conscientia*. However, the word slips in only because he is quoting 1 Timothy 1.5: *finis autem praecepti est caritas de corde puro et conscientia bona et fide non ficta*. In this context, a good *conscientia* is simply the same as a pure faith. The word '*conscientia*', by the way, occurs several times in *Contra Faustum*, but in most cases, it occurs either within a quote or in the discussion of a quote, and there it may take on such diverse meanings as pure and impure faith (as in 1 Timothy 1.5 and Titus 1.15), or being privy to a crime (*Contra Faustum* 22.5, quoting Faustus). There is no systematic relation between *peccatum* and *conscientia* in this treatise.
 16. In *Retractationes* 1.5.2, Augustine reads '*peccata vestra separant inter vos et Deum*' where the Vulgate has '*perversae enim cogitationes separant a Deo*'.
 17. Babcock claims that Augustine's account of sin is unintelligible because '*Unless there is some recognizable continuity between agent and act, it will appear either that the evil angels' evil will was caused by something other than themselves (some form of compulsion) or that it was completely uncaused (a chance or random outcome)*' (Babcock, 1988: 45). Babcock is confusing explanation with attribution: we may attribute an action to an agent without thereby *explaining* why the agent performed it. Agents may act for no reason. Agent causation, if there is such a thing, is not an explanatory relation.

Against Babcock, MacDonald (1999) argues that sin is possible because one may fail to take one's own reasons for acting into account. However, no one voluntarily fails to do *this*. Further, there are only two possibilities. (1) Free agency, which is a good, makes such occasional carelessness necessary. Then, however, this carelessness is not a misuse of free will, and thus not morally wrong. Alternatively, (2) carelessness is not necessary, and there may be a free agent who is never careless. Then, Augustine's theodicy would not work: there could have

been a more perfect world with free will and without sin. What Augustine wants to say is precisely that one can *not* understand how anyone might freely choose to commit a sin, since to sin is to *give up* one's capacity to choose. According to Augustine, the cause of sin is a deficient cause (*De Civitate Dei* 12.7): it is a perverse and corrupted will, that is, a will that defects from what it should be. Insofar as it is perverse, it cannot be understood.

18. Cf. AT III 544 for Pelagius and AT III 248–9 for a related passage quoted from Ambrose (*De fuga Saeculi* 1) and Augustine (*Contra Julianum* 2.8.23).

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