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THE CURIOUS SENSATIONS OF PAIN, HUNGER AND THIRST.
RELIABILISM IN THE SECOND PART OF
DESCARTES' SIXTH MEDITATION¹

INTRODUCTION

It is an understatement that Cartesian infallibilist foundationalism is unpopular in contemporary epistemology. Fallibilist reliabilism and related forms of externalism are by far the dominant theories today.² Although Cartesian epistemology sharply contrasts with this present-day so-called “naturalized epistemology,” it may come as a surprise that Descartes himself has naturalizing tendencies. Yet, it is exactly this “anti-Cartesian” tendency that I want to explore in this paper. I try to show that Descartes holds a reliabilist view in the second part of his Sixth Meditation. This combination of opposing views does not, however, involve a contradiction in the Cartesian project because foundationalism still takes care of theoretical (or scientific) knowledge, whereas reliabilism only takes care of practical knowledge. But one important consequence of interpreting the last part of the Sixth Meditation in this light is that Descartes primarily and systematically executes a purely epistemological project from the beginning until the very end of *The Meditations*.

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² The most important dissenter and ardent contemporary Cartesian epistemologist is Laurence Bonjour. See, for example, Laurence BONJOUR, *Epistemology. Classical Problems and Contemporary Responses* (Lanham: Rowman and Littlefield Publishers, 2002); Laurence BONJOUR, “A Version of Internalist Foundationalism” in Laurence BONJOUR and Ernest SOSA, *Epistemic Justification. Internalism vs. Externalism, Foundations vs. Virtues* (Oxford: Blackwell, 2003), 3–96.

The paper unfolds as follows. In section 1 I make some remarks on the structure and content of the Sixth Meditation. In section 2 I separate the Cartesian epistemology from the teleology and theodicy, as well as from the anthropology and metaphysics of the second part of the Sixth Meditation. In section 3 I deal with Descartes' ambiguous use of the concept of nature in his criterion of nature's teachings against the background of Wilfrid Sellars' distinction between the logical space of reasons and the empirical space of causes. In section 4 I explain why there are, according to Descartes, true errors of nature. In section 5 I examine Descartes' fallibilism and externalist reliabilism as regards the beliefs based on the curious sensations of pain, hunger and thirst.

THE STRUCTURE AND CONTENT OF THE SIXTH MEDITATION

On a standard interpretation, the second part of the Sixth Meditation deals with the issue of *the mind–body unit or composite*, as Descartes himself indicates in the Synopsis: “the mind ... is shown, notwithstanding [the mind–body distinctness], to be so closely joined to it [the body] that the mind and the body make up a kind of unit” (AT 7:15).³ Yet, neither the title “The existence of material things, and the real distinction between mind and body,” nor the first sentence “It remains for me to examine whether material things exist” (AT 7:71) of the Sixth Meditation includes a reference to the subject-matter of the second part of the Sixth Meditation. The title and first sentence only cover the first part.⁴ After the argument from “clear and distinct understanding,” or the so-called *epistemological* argument,⁵ for mind–body distinctness, Descartes delivers his proof for the existence of material things. Of course, the second part of the title, “the real distinction between mind and body,” is also applicable to the conclusion of the argument from “indivisibility,” which appears in the second part of the Sixth Meditation (AT 7:85–86). But Descartes himself sees this second argument for mind–body distinctness merely as a *confirmation* of the already given first epistemological argument, as he in-

³ I work with the English translation by John Cottingham, Robert Stoothoff, and Dugald Murdoch (CSM), *The Philosophical Writings of Descartes* (Cambridge: Cambridge University Press, 1985), but use the classical AT references to the standard French-Latin edition by Charles Adam and Paul Tannery, *Oeuvres de Descartes* (Paris: Vrin/CNRS, 1964–76). For some points of detail, I also work with this French-Latin text.

⁴ As the Synopsis summarizes, the first part also includes a discussion of the distinction between the intellect and the imagination, as well as “a survey of all the errors which commonly come from the senses, and an explanation of how they may be avoided” (AT 7:15).

⁵ See, for example, Margaret D. WILSON, “The Epistemological Argument for Mind-Body Distinctness,” *Noûs* 10, no. 1 (1976): 3–15.

dicates in the Synopsis, “This conclusion [mind–body distinctness] is confirmed in the same [Sixth] Meditation” (AT 7:13). Since Descartes’ considerations about the mind-body composite on a standard interpretation make up half of the Sixth Meditation, one would have expected a short description of the second part of this meditation in the title. One would have expected the second part of the title to be something like “the unit or composite of mind and body,” or “[on] the nature of man as a combination of mind and body” (AT 7:88).

A question comes to mind in this connection. Why did Descartes not noticeably refer to this allegedly important content of the Sixth Meditation in its title? If the mind-body unit had been such a central part, then that part would have been indicated in the title. By contraposition, one could also suggest that the considerations about the mind-body unit are after all *not* so important *in itself* but only form an integral part of Descartes’ continuing considerations about *epistemological* issues. And if Descartes is just going on with his epistemological business as usual, there is no need for a separate indication in the title. On this interpretation, the proof for the existence of material things is at the same time also a proof for the existence of human bodies, for they constitute but a subclass of material things. Once Descartes proves that the external world exists, he also by the same token proves that human bodies in this world exist. This goes back to and dissolves the doubts about the existence of his own body in the First Meditation and the negation that he is a body in the Second Meditation, where Descartes states: “I am not that structure of limbs which is called a human body” (AT 7:27). Once the knowledge of the existence of one’s body is safeguarded, attention can be given to the epistemological credentials of the *bodily* sensations. At this juncture, after the proof for the existence of external objects, the “ideas of sensible objects” and the “faculty of sensory perception” (AT 7:79) become less important. Descartes now turns his attention away from “the external senses” to concentrate himself fully on “the internal senses” and their deliverances, especially the sensations of pain and thirst.⁶

On this interpretation, then, the primary purpose of the second part of the Sixth Meditation is not to introduce and to deal with the complexities about the mind-body composite. Its purpose is first and foremost the investigation of *the epistemic status of the obscure and confused sensations of the internal senses* in the ongoing epistemological project of the *Meditations*. In terms of the vocabulary of *The Passions of the Soul*, Descartes offers in this second part an analysis of

⁶ Descartes explicitly makes the distinction between external and internal senses: “And this applied not just to the external senses but to the internal senses as well. For what can be more internal than pain?” (AT 7:76–77).

the “passions” of *the body*—“The perceptions we refer to our body” (AT 11:346). Accordingly, the second part of the Sixth Meditation constitutes a long epistemological consideration about the bodily sensations of pain, hunger and thirst, which starts with the question “What of the other aspects of corporeal things [human bodies included] which are either particular (for example that the sun is of such and such a size or shape), or less clearly [and less distinctly] understood, such as light or sound or *pain*, and so on?” (AT 7:80, emphasis mine) and ends with the sentence: “For I know that in matters regarding *the well-being of the body*, all my senses report the truth much more frequently than not” (AT 7:89, emphasis mine). Of course, Descartes says some general things about the mind-body unit, such as that the mind is not merely present in the body “as a sailor is present in a ship” (AT 7:81). However, he does not bring in the mind–body composite in its own right to deal with its metaphysical complexities but only as an *explanation* of the sensations of the internal senses. Descartes connects the confused internal sensations of pain, hunger and thirst immediately with the mind–body composite as their cause: “... these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body” (AT 7:81). The fact that I have such internal sensations is explained by the fact “that I and the body form a unit” (AT 7:81).

Admittedly, this interpretation downplays the role of the “secondary qualities,” of that “great variety of colours, sounds, smells and tastes, as well as differences in heat, hardness and the like” (AT 7:81). My reason for this neglect is fourfold. First, Descartes says nothing further about colours (light) and sounds, which would be the central sensory perceptions if the focus were on external objects. Moreover, he himself does not make a clear distinction between bodily sensations—“sentiments [*de la douleur et de plaisir*]” in French—and sensory perceptions, i.e., “perception des sens” (AT 9:65–66). Furthermore, Descartes only mentions in his discussion heat and taste, which are the most bodily related secondary qualities as they involve intimate changes of bodily temperature and the gustatory system. Finally, Descartes takes the secondary qualities of external objects only into account as far as they have a beneficial or harmful effect on the mind–body composite that is detected by the bodily sensation of pleasure or pain.⁷

⁷ I just note that the “particular ... example that the sun is of such and such a size or shape” (AT 7:80) and the error of judgement “that stars and towers and other distant bodies have the same size and shape which they present to my senses” (AT 7:82) do not concern the secondary qualities but only the primary ones.

THE EPISTEMOLOGICAL PROJECT IN
THE SECOND PART OF THE SIXTH MEDITATION

There is not much controversy about what is going on in the first part of the Sixth Meditation. After the examination of the difference between the faculties of imagination and (pure) understanding, and the inspection of a probability argument from imagination for the existence of material things (which does not deliver the desired necessary inference), Descartes turns his attention to sensory perception as the basis for a deductive argument for the existence of corporeal things. Before he delivers this argument, he once more goes over his natural inclinations for taking the existence of external objects for granted and, subsequently, his reasons to doubt their existence: “To begin with, I will go back over all the things which I previously took to be perceived by the senses, and [commonly] reckoned to be true; and I will go over my reasons for thinking this. Next, I will set out my reasons for subsequently calling these things into doubt. And finally, I will consider what I should now believe about them” (AT 7:74). Finally, Descartes accepts as true the belief that sensory perceptions are produced by corporeal things and that “it follows that corporeal things exist” (AT 7:80). Clearly, the first part of the Sixth Meditation deals with the classic problem of knowledge of the external world in epistemology.

Interpretations of the second part of the Sixth Meditation are much more controversial. Very different themes have been connected with the supposedly central subject of the mind–body composite. On an anthropological interpretation, man is presented as a being in between animals (“beasts”) and angels.⁸ On a metaphysical interpretation, the Cartesian dualist relation between mind and body is reconsidered.⁹ Trialism (hylomorphism) is put forward as an alternative to dualism; and even holonmerism, the view that the mind is in the body as whole in the whole and as whole in the parts, is taken from the passage “the whole mind seems to be united with the whole body” (AT 7:86). Next to these interpretations, the second part of the Sixth Meditation has been connected with issues of teleology and theodicy. Descartes is seen as presenting a teleological or functional account of bodily sen-

⁸ See, for example, Geneviève RODIS-LEWIS, “Descartes and the Unity of the Human Being” in *Descartes*, ed. John Cottingham (Oxford: Oxford University Press, 1998), 197–210; John COTTINGHAM, “The Mind–Body Relation” in *The Blackwell Guide to Descartes’ Meditations*, ed. Stephen Gaukroger (Oxford: Blackwell Publishing, 2006), 179–92.

⁹ See, for example, Paul HOFFMAN, “The Union and Interaction of Mind and Body,” in *A Companion to Descartes*, ed. Janet Broughton and John Carriero (Oxford: Blackwell Publishing, 2008), 390–403; Marleen ROZEMOND, “Descartes, Mind–Body Union, and Holonmerism,” *Philosophical Topics* 31 (2003), 343–67.

sations.¹⁰ And he is taken as continuing his Fourth Meditation theodicy as regards errors of judgement into his theodicy as regards the errors of the (inner) senses: “It thus remains to inquire how it is that the goodness of God does not prevent nature, in this sense, from deceiving us” (AT 7:85).¹¹ I do not in the least claim or even suggest that all these interpretations are wrong-headed, far from that. Yet, aside from the fact that each of them is worth pursuing in its own right, they are all subordinated and subservient to Descartes’ *purely epistemological* project in the *Meditations*. In my view, the second part of the Sixth Meditation deals, as noted above, primarily with the epistemological problem of bodily sensations, such as pain, hunger, thirst and heat.¹²

There is a shift in Descartes’ epistemological project, however, as he indicates in the Synopsis: “The point is that in considering these arguments [which prove that there really is a world, and that human beings have bodies and so on] we come to realize that they are *not as solid or as transparent as* the arguments which lead us to knowledge of our own minds and of God, so that the latter are the most certain and evident of all possible objects of knowledge for the human intellect” (AT 7:16, emphasis mine). Although Descartes still contrasts a necessity argument from sensory perception with a probability argument from imagination for the existence of external objects, epistemic *certainty* does not seem to be his primary concern in the Sixth Meditation. With regard to the clearly and distinctly understood (mathematical) properties of material things, the knower’s beliefs can have a full epistemic guarantee. But with regard to the “very obscure and confused grasp of the [outer and inner] senses” (AT 7:80), the epistemic status of the knower’s beliefs needs to be downgraded significantly. As to the secondary qualities and bodily sensations the knower has to step down from certain, foundational knowledge to *probable, reliable* knowledge. Although such reliable knowledge does not meet the necessary criteria for theoretical, scientific knowledge, it is sufficient

¹⁰ See, for example, Karen DETLEFSEN, “Teleology and Natures in Descartes’ Sixth Meditation,” in *Descartes’ Meditations: A Critical Guide*, ed. Karen Detlefsen (Cambridge: Cambridge University Press, 2013), 153–75; John COTTINGHAM, “Descartes and Darwin: Reflections on the Sixth Meditation,” *Proceedings of the Aristotelian Society Supplementary Volume* 87 (2013): 259–77.

¹¹ For the Fourth Meditation theodicy, see, for example, C. P. RAGLAND, *The Will to Reason: Theodicy and Freedom in Descartes* (Oxford: Oxford University Press, 2016); for both theodicies, see, for example, Lex NEWMAN, “Error, Theodicies of” in *The Cambridge Descartes Lexicon*, ed. Lawrence Nolan (Cambridge: Cambridge University Press, 2016), 240–46; for a treatment of the errors of (all) the senses, see, for example, Sarah PATTERSON, “Descartes on the Errors of the Senses,” *Royal Institute of Philosophy Supplement* 78 (2016): 73–108.

¹² For an accessible account of bodily sensations in contemporary philosophy of mind, see, for example, David M. ARMSTRONG, *Bodily Sensations* (London: Routledge and Paul, 1962); David M. ARMSTRONG, *A Materialist Theory of the Mind* (London: Routledge and Paul, 1968), 306–22.

for practical, “moral” knowledge.¹³ Besides a major, foundational component, Descartes’ epistemological project in the *Meditations* also includes a minor, reliabilist component in the second part of the Sixth Meditation, which starts with the sentence “Despite *the high degree of doubt and uncertainty* involved here, the very fact that God is not a deceiver, ..., offers me a sure hope that I can attain the truth even in these matters” (AT 7:80) and ends with “in matters regarding the well-being of the body, all my senses report *the truth much more frequently than not*” (AT 7:89; emphasis mine). Before textually substantiating my claim that Descartes holds a reliabilist view in this closing part of the *Meditations*, I briefly introduce epistemic reliabilism and externalism.

Internalism and externalism are generic theories of epistemic justification. Although the dispute between the internalist and the externalist in contemporary epistemology is intricate, the following rough characterization of the issue can suffice.¹⁴ Take the standard analysis of the concept of knowledge as justified true belief:

S knows that P, if and only if

- 1) S believes that P—the belief condition;
- 2) P is true—the truth condition; and
- 3) S is justified in believing that P—the justification condition.

Internalism and externalism are theories about condition 3).

The internalist requires that all the justifiers—the factors needed to make a belief justified—be *cognitively accessible* to the person who has the belief, whereas the externalist allows that some, or even all the justificatory factors are external—they need not be thus accessible—to the believer’s cognitive perspective. The fundamental rationale for internalism is that when *I* ask what reasons (or evidence) *I* have for holding *my* various beliefs true, these reasons must be directly and unproblematically available from *my* cognitive perspective. How else could *I* justify *my* beliefs? Truth-conducive reasons (or good evidence) for beliefs about important matters must, therefore, be internal to the individual’s first-person cognitive perspective.

Classical, Cartesian internalist epistemology is challenged by recent externalist epistemology. Externalism is the denial of internalism. Since the most widely

¹³ For a general treatment of probable knowledge, which does not, however, discuss the second part of the Sixth Meditation, see John MORRIS, “Descartes and Probable Knowledge,” *Journal of the History of Philosophy* 8 (1970): 303–12.

¹⁴ For the debate, see, for example, Laurence BONJOUR, “Internalism and Externalism,” in *The Oxford Handbook of Epistemology* ed. Paul K. Moser (Oxford: Oxford University Press, 2002), 235–63; Alvin I. GOLDMAN, “Internalism Exposed,” in Alvin I. GOLDMAN, *Pathways to Knowledge* (Oxford: Oxford University Press, 2002), 3–23.

discussed and advocated version of externalism is reliabilism, I focus on this specific theory of epistemic justification. The reliabilist or externalist holds that what makes a belief justified is the reliability of the *causal* process via which it was produced; and the process is reliable when it leads to a high proportion of *true* beliefs. Importantly, the externalist does *not* require that the believer has cognitive access to, or even any sort of awareness of the reliability of the belief-producing process; nor does the believer need any kind of understanding of what the process involves. Accordingly, reliabilism disconnects epistemic justification from typically internalist notions such as “evidence, reasons, justificatory experience, explicit assessment” and “critical reflection” with the result that having evidence or other internalist factors are neither necessary nor sufficient for justification.

THE LOGICAL SPACE OF REASONS AND THE EMPIRICAL SPACE OF CAUSES

To articulate reliabilism a bit more and to sort out the different meanings of the word “nature” in the second part of the Sixth Meditation, I introduce Wilfrid Sellars’ distinction between the logical space of reasons and the empirical space of causes: “The essential point is that in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in *the logical space of reasons*, of justifying and being able to justify what one says.”¹⁵ Foundationalism has its home in the logical space of reasons, whereas reliabilism has at least one foot in the empirical space of causes. Fully naturalized epistemology has completely turned its back on epistemic justification to operate exclusively in the empirical space of causes. Placing beliefs in the logical space is normative in that it gives *good* reasons or the *best* possible evidence for them, whereas placing beliefs in the empirical space is descriptive in that it gives (only) causes for them. Descartes’ “general rule that whatever [he] perceive[s] very clearly and distinctly is true” (AT 7:35) is his basic normative principle. Meeting the criterion of clear and distinct understanding is the justifying reason to accept beliefs as true. Given the warranty of a non-deceiving God, the observance of this rule leads to infallible knowledge.

As to the epistemic status of obscure and confused bodily sensations the clear-and-distinct criterion obviously is inadequate. That is why especially in the second part of the Sixth Meditation Descartes works with the criterion of *nature’s*

¹⁵ Willfrid SELLARS, *Empiricism and the Philosophy of Mind*. Introduction by Richard Rorty and Study Guide by Robert Brandom (Cambridge, MA: Harvard University Press, 1997), §36; emphasis mine.

teachings as a fallible means to come close or closer to the truth: “everything that I am taught by nature contains some truth” (AT 7:80). Only this criterion is applicable to the obscure and confused bodily sensations of pain, hunger and thirst. Although we now leave the logical space of reasons and approach or even enter the empirical space of causes, we still can have “a sure hope that [we] can attain the truth even in these matters” (AT 7:80). The criterion of nature’s teachings is, however, worthless unless an exact definition of the ambiguous concept of nature can be given, as Descartes is well aware of: “But to make sure that my perceptions in this matter are sufficiently distinct, I must more accurately define exactly what I mean when I say that I am taught something by nature” (AT 7:82).

Apart from the global identification between nature and God, “nature” can mean “my own nature”, that is “the totality of things bestowed on me by God” (AT 7:80). Nature in this comprehensive sense—call it “natureT”—comprises not only nature as the mind alone—“natureM”—or as the body alone—“natureB”—but also as “a combination of mind and body” (AT 7:82)—“natureM+B”. Against the backdrop of Sellars’ distinction, natureM approximately corresponds to the logical space of reasons, natureB to the empirical space of causes and natureM+B to the intersection of these two spaces.¹⁶ Now the bodily sensations and the beliefs based on them belong to this intersection: “these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body” (AT 7:81). And when natureM+B teaches by these bodily sensations, it teaches with an eye towards the well-being of the body and the unit of which the body is a part. NatureM+B teaches thus to avoid the harmful and to seek the beneficial for the mind-body composite: “My nature, then, in this limited sense [i.e., in contrast with natureT], does indeed teach me to avoid what induces a feeling of pain and to seek out what induces feelings of pleasure, and so on” (AT 7:82). In particular, natureM+B teaches me “that when I feel pain there is something wrong with the body, and that when I am hungry or thirsty the body needs food and drink, and so on” (AT 7:79).

Armed with this specification of the criterion of nature’s teachings Descartes can return to the problem of the *curious* bodily sensations,¹⁷ which he left dangling earlier in the Sixth Meditation: “But why should that curious sensation of pain give

¹⁶ Schematically, natureT = natureM (logical space of reasons) + natureM+B (intersection) + natureB (empirical space of causes).

¹⁷ “Curious” is the CSM translation of the Latin “quædam” and the French “je ne sais quel(le).” The better translation might have been “who knows what,” so that we would have got the expression “the *who-knows-what* bodily sensations,” which more clearly brings out the central epistemological problem about them.

rise to a particular distress of mind; ... I was not able to give any explanation of all this, except that nature taught me so. For there is absolutely no connection (at least that I can understand) ... between the sensation of something causing pain and the mental apprehension of distress that arises from that sensation” (AT 7:76). Descartes is now in a position to explain and clarify the epistemic role of bodily sensations. Although the curious—who-knows-what—sensations of pain, hunger and thirst are obscure and confused, they are the instruments of natureM+B. As these instruments, they fulfil a definite purpose, and in that sense they are understandable and intelligible. The solution to the problem of the curious bodily sensations is captured in this central passage: “the proper purpose of the sensory perceptions [or bodily sensations] given me by nature is simply to inform the mind of what is beneficial or harmful for the composite of which the mind is a part; and to this extent they are sufficiently clear and distinct” (AT 7:83). The epistemic role of bodily sensations is not to give us theoretical knowledge but practical information for the purpose of the survival and well-being of the mind-body unit. Inasmuch as bodily sensations fulfil this function, *they are sufficiently clear and distinct*. In view of that, they partly belong to the space of reasons and their teleology constitutes a kind of normativity. So, as the elements in the intersection of the logical space of reasons and the empirical space of causes bodily sensations are not completely opaque but sufficiently transparent and intelligible.

TRUE ERRORS OF NATURE

The criterion of clear and distinct understanding, warranted by a non-deceiving God, identifies certain, infallible knowledge, which is immune to error. In contrast, the criterion of natureM+B’s teachings only identifies fallible knowledge. Correspondingly, although the sensations of pain, hunger and thirst have a certain epistemic value, they are not fully trustworthy because their information about beneficial and harmful effects on the mind–body unit is susceptible to error. Now this possibility of error poses a serious problem in the framework of Descartes’ epistemology and especially his proofs of the existence of a non-deceiving God in Meditations III and V. How is it possible that beliefs based on bodily sensations can be false “notwithstanding the goodness of God” (AT 7:83)? Descartes discusses in particular two cases of erroneous bodily sensations and false beliefs based on them: thirst in case of dropsy and phantom limb pain.¹⁸ These cases can-

¹⁸ Descartes describes persons in the former case as “Those who are ill, ..., may desire food or drink [on the basis of the sensation of thirst] that will shortly afterwards turn out to be bad for

not be reduced to cases of errors of judgement—“a habit of making ill-considered judgements” (AT 7:82)—because they really are cases of errors of the (internal) senses, that is to say, errors in what natureM+B teaches me: “a further problem now comes to mind ... regarding the internal sensations, where I seem to have detected errors and [added in the French version] thus seem to have been directly deceived by my nature” (AT 7:83).

Are there really errors in what nature—in the sense of “natureM+B”—teaches me? Although in some cases nature can be excused, there really are, according to Descartes, cases in which nature cannot be absolved. One might suggest that nature can be absolved in the case of a sick man suffering from dropsy with the excuse that this man’s “nature is disordered” (AT 7:84) which causes the erroneous sensation of thirst. However, this suggestion does not solve the problem but only reformulates and restates it. As before, it contradicts the goodness of a non-deceiving God that He should have given a deceitful or corrupted nature to the sick man, because this man is no less a creature of God than the healthy man whose nature is uncorrupted.

The difficulty here is (again) the ambiguity of the word “nature”: “But I am well aware that ‘nature’ as I have just used it has a very different significance from ‘nature’ in the other sense” (AT 7:85). When we say that “nature is disordered” or speak about an “error of nature,” we can use “nature” as an *extrinsic denomination* or an intrinsic one.¹⁹ As applied to the body alone—to “natureB”—we use the word “nature” extrinsically, whereas applied to the mind-body composite—to “natureM+B”—we use it intrinsically. When we say in the case of a sick man suffering from dropsy that the nature of his sick *body* is erroneous, we use “nature” extrinsically: “‘nature’ is simply a label which depends on my thought; it is quite extraneous to the things to which it is applied, and depends simply on my comparison between the idea of a sick man and a badly-made clock, and the idea of a healthy man and a well-made clock” (AT 7:85). Although we speak about errors

them” (AT 7:84) and in the latter as “those who had had a leg or an arm amputated sometimes still seemed to feel pain intermittently in the missing part of the body” (AT 7:77).

¹⁹ The CSM translation misleadingly renders this technical term as “extraneous label” (AT 7:85). For the explication of this term (in the French version “une denomination extérieure”), see, for example, Gideon MANNING, “Extrinsic Denomination,” in *The Cambridge Descartes Lexicon*, ed. Lawrence Nolan (Cambridge: Cambridge University Press, 2016), 276–78. I quote from this lemma: “‘Extrinsic denomination’ [*extrinseca denomination*] refers to instances of naming where a relation that a thing bears to something outside itself supports using the name, while an ‘intrinsic denomination’ is an instance of naming where a property of the thing itself is the support An animal is intrinsically denominated ‘healthy’ because health belongs to the animal itself. Food, however, is extrinsically denominated ‘healthy’ because it bears a causal relation to the healthy animal—that is, it makes the animal ‘healthy’” (276).

and malfunctions with reference to (human) bodies and machines such as clocks, the intrinsic properties of bodies and machines, and the laws of nature governing them, do not leave room for errors of nature. In the same way as a badly-made clock observes the laws of nature as strictly as a well-made clock, the sick man's body observes the laws of nature as strictly as a healthy man's body. In the light of Sellars' distinction, made above, it can be argued that there is no difference between malfunctioning and well-functioning clocks or bodies in the empirical space of causes. Causes are just causes; everything is covered by the same mechanical laws of nature. Malfunction, error and disorder presuppose at least a minimal form of normativity. That is why the body alone—"natureB"—is not susceptible to errors of nature. Now, as indicated above, the mind-body unit which has its place in the intersection of the logical space of reasons and the empirical space of causes is governed by a kind of normativity. This norm or function is precisely the purpose of the survival and well-being of the mind-body unit. That is why the mind-body unit—"natureM+B"—really is susceptible to errors of nature. When the bodily sensation of thirst gives erroneous information, there really is a deviation from the *intrinsic* nature of the mind-body unit. When we say in the case of a sick man suffering from dropsy that the nature of his *mind-body composite* is erroneous, we use "nature" intrinsically and, consequently, we speak about "a true error of nature" (AT 7:59), which is ineliminable.

CARTESIAN RELIABILISM

According to Descartes, there really are cases in which there definitely are errors in what natureM+B teaches me. As a consequence, he faces the problem of deceitful bodily sensations given the existence of a non-deceiving God: "how it is that the goodness of God does not prevent nature, in this sense [natureM+B], from deceiving us" (AT 7:85). Surprisingly perhaps, Descartes' solution to this problem is a kind of *externalist reliabilism*.²⁰ This solution comprises two elements: firstly, a description of causal mechanisms which produce bodily sensations and beliefs based on them; and secondly, a demonstration that such causal mechanisms are reliable, that is, that they have the general tendency to produce true beliefs instead of false ones. The solution is externalist for the following reason. The causal pro-

²⁰ Here I specifically have Goldman's version in mind. See, for example, Alvin I. GOLDMAN, "A causal theory of knowing," *The Journal of Philosophy* 64 (1967): 357–72; Alvin I. GOLDMAN, "What is justified belief?" in *Justification and Knowledge* ed. George S. Pappas (Dordrecht: D. Reidel, 1979), 1–23.

cesses leading to the beliefs are not accessible to the believers themselves from their internal, first-person standpoints but they can be objectively scrutinized by scientists (or God) from the externalist, third-person standpoint. And the solution is reliabilist for the following reason. These causal processes confer justification on the produced beliefs because they are reliable or truth conducive in the usual course of events. Still, the knowledge thus produced is fallible because the overall reliability of the belief-forming processes does not eliminate the possibility of error in the beliefs so produced. In his explanation Descartes focuses on the case of phantom limb pain, but “we must suppose [that] the same thing happens with regard to any other sensation” (AT 7:87).

In order to account for the possibility of phantom limb pain Descartes gives an empirical description of the causal mechanisms in the body—in particular the neural mechanisms of the (central) nervous system—which produce bodily sensations in the mind. He first remarks that the body as an extended thing is divisible into parts, so that “a foot or arm or any other part of the body [can be] cut off” (AT 7:86).²¹ He then observes that the states of the mind are only immediately affected by their proximal causes in the brain—the states of the brain in the pineal gland part—and not by their distal causes in the rest of the body. Additionally, he comments that similar proximal causes in the brain of bodily sensations in the mind are compatible with different distal causes in the rest of the body. Accordingly, the brain state A, which immediately causes bodily sensation S, for example the sensation of pain as occurring in the foot, can be the result of nervous state B in the back, or nervous state C in the thigh, or nervous state D in the foot. Given these properties of the nervous system, Descartes can give an explanation of the possibility of an erroneous bodily sensation in the case of phantom limb pain when the foot is amputated: “it can happen that, even if it is not the part in the foot but one of the intermediate parts which is being pulled, the same motion will occur in the brain as occurs when the foot is hurt, and so it will necessarily come about that the mind feels the same sensation of pain” (AT 7:87). The same sensation of pain as occurring in the foot can come about in a case with a deviant cause (for example, when C produces S) as it does in the standard case with its normal cause (when D produces S).

But notwithstanding that an occasional error is possible, the causal neural mechanisms are on the whole trustworthy. These mechanisms are reliable in that

²¹ The divisibility of the body is also a premise in Descartes’ additional argument for mind–body distinctness, but this ontological argument from “indivisibility” is, as remarked in my section on the structure and content of the Sixth Meditation, not of central importance for the overall epistemological argument in the second part of the Sixth Meditation.

they have the general tendency to cause adequate bodily sensations instead of inadequate ones, to produce true beliefs instead of false ones. A sensation of pain as occurring in the foot is *generally* produced “when the nerves in the foot are set in motion in a violent and unusual manner” (AT 7:88) on the occasion that the foot is hurt. This correlation of a bodily sensation with its *normal* cause is a good thing to rely on because such a correlation is the best guarantee for the survival and well-being of the body, and hence the mind–body unit of which it is a part. Pain in the foot is thus a reliable sign that something happened which is harmful for the foot; and to do away with the cause of pain in the foot is beneficial for the foot and hence the whole body of which it is a part.

Consequently, the (central) nervous system as it is, is the best possible system in function of the survival and well-being of the mind–body composite: “the *best* system that could be devised is that it should produce the one sensation which, of all possible sensations, is *most especially and most frequently conducive to the preservation of the healthy man*. And *experience shows* that the sensations which nature has given us are all of this kind” (AT 7:87, emphasis mine). If it is the best possible system to reliably produce bodily sensations that God could have created, then an occasional error in the system is compatible with the goodness of God: “It is quite clear from all this that, notwithstanding the immense goodness of God, the nature of man as a combination of mind and body is such that it is bound to mislead him *from time to time*” (AT 7:88, emphasis mine). NatureM+B’s teachings are fallible but not at all unreasonable: “This deception of the senses is natural, because a given motion in the brain must always produce the same sensation in the mind; and the origin of the motion in question is *much more often* going to be something which is hurting the foot, rather than something existing elsewhere. So *it is reasonable that* this motion should *always* indicate to the mind a pain in the foot rather than in any other part of the body” (AT 7:88, emphasis mine). Although the information about beneficial and harmful effects on the mind–body unit given by bodily sensations is susceptible to error, “I know that in matters regarding the well-being of the body, all my senses report the truth *much more frequently than not*” (AT 7:89, emphasis mine). That is to say, the curious sensations of pain, hunger and thirst and the beliefs based on them are reliable.

CONCLUSION

My reflections in this paper on the epistemic status of bodily sensations—especially the sensations of pain, hunger and thirst—and Descartes’ criterion of nature’s teachings in connection to true errors of nature lead to the perhaps remarkable

conclusion that Descartes takes a fallibilist and externalist reliabilist position in these epistemological matters. Of course, this position only concerns (a specific part of) practical knowledge and leaves fully intact his infallibilist and internalist foundationalist position regarding theoretical knowledge and science.²²

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²² I am very grateful to Przemysław Gut for our discussions of Descartes’ *Meditations* and his encouragements to write this paper.

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THE CURIOUS SENSATIONS OF PAIN, HUNGER AND THIRST.
RELIABILISM IN THE SECOND PART OF
DESCARTES' SIXTH MEDITATION

S u m m a r y

This paper discusses the epistemic status of bodily sensations—especially the sensations of pain, hunger and thirst—in the second part of Descartes' Sixth Meditation. It is argued that this part is an integral component of Descartes overall purely epistemological project in the *Meditations*. Surprisingly perhaps, in contrast with his standardly taken infallible, internalist and foundationalist position, Descartes adopts a fallibilist, externalist and reliabilist position as regards the knowledge and beliefs based on bodily sensations. The argument for this conclusion is justified by an analysis of both the criterion of nature's teachings and the concept of true errors of nature in terms of Wilfrid Sellars' distinction between the logical space of reasons and the empirical space of causes.

Keywords: bodily sensations; errors of nature; nature's teachings, reliabilism; the empirical space of causes, the logical space of reasons.

OSOBLIWOŚĆ TAKICH DOZNAŃ, JAK BÓL, GŁÓD I PRAGNIENIE.
RELIABILIZM W DRUGIEJ CZĘŚCI SZÓSTEJ
MEDYTACJI KARTEZJUSZA

S t r e s z c z e n i e

Artykuł omawia epistemiczny status cielesnych doznań takich, jak ból, głód i pragnienia, o których mowa w drugiej części szóstej *Medytacji* Kartezjusza. Argumentuję, że ów fragment stanowi integralny komponent epistemologicznego programu, który można znaleźć w *Medytacjach*. Na ogół widzi się Kartezjusza jako zwolennika infallibilizmu, internalizmu oraz fundacjonalizmu. Tymczasem w odniesieniu do wiedzy i przekonań opartych na doznaniach cielesnych przyjmuje on fallibilizm, eksternalizm i reliabilizm. Na rzecz tego wniosku przemawia z jednej strony, analiza tego, czego naucza nas – według Kartezjusza – natura przez wrażenia bólu, głodu i pragnienia, z drugiej strony jego analiza błędów, którym podlega nasza natura, przeprowadzona przeze mnie z wykorzystaniem zaproponowanego przez Wilfrida Sellarsa podziału na logiczną przestrzeń rozumu oraz empiryczną przestrzeń przyczyn.

Słowa kluczowe: doznania cielesne; niedostatki natury; pouczenia natury; reliabilizm; empiryczna przestrzeń przyczyn; logiczna przestrzeń rozumu.