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**The Form of Descartes’ Method of Doubt**

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**Abstract**: I argue that Descartes’ approach in the First Meditation is the same as the one found in Rule VIII, with some modifications, and this helps toward establishing a connection between the *Regulae* and *Meditationes* that has gone unnoticed by scholars.

In the Dedicatory Letter to the Sorbonne, Descartes tells us the *Meditationes* is an outcome of his method, which suggests, in some sense, it is the result of the procedure outlined in the *Discours* and *Regulae* (*Meditationes*, AT VII 3; CSM II 4).[[1]](#endnote-1) There seems, however, to be serious pitfalls for this thesis, especially for his analytic stage of the method. For instance, Edwin Curley (1978, pp. 42-45; Schuster, 1977, pp. 373-387) highlights that Descartes uses inconsistent doubts; he proposes hyperbolic sceptical scenarios to clear away preconceived opinions in the *Meditationes*, casting doubt initially even on mathematics, but uses mitigated or practical doubts in the *Regulae*, leaving mathematics beyond doubt. In a similar vein, Daniel Garber (1992, p. 47; 2001, pp. 33-51) argues that, while the analytic procedure is important, if not essential, to the method in the latter, there is no analytic procedure whatsoever in the former. There is a preparation of the *Cogito*, he tells us, but adds that the method strictly requires one to begin with a discrete question that follows with a series of more targeted questions, deductively ordered, where the final answer results in an intuition, which is missing from the *Meditationes*.

In this paper, I propose a response to this problem. I argue that Descartes’ analytic approach applied in Rule VIII of the *Regulae* is that of the *Meditationes*, with a few exceptions, and this approach provides a response to Garber’s and Curley’s proposed inconsistencies. I follow Garber’s insight that the general procedure of the former is too abstract to guide a historian to explain or a Cartesian investigator to resolve a scientific or mathematical problem. For this reason, Garber directs us to an example of the method: the proof of the anaclastic curve in Rule VIII (1626), where Garber derives a definitive, question-answer procedure. I then extend this approach to the next example in this rule, what Descartes calls the “finest example” (1628), where he asks, “What is human knowledge and what is its scope” (AT X 397; CSM I 31)? I present and explain the structure or form of his example and then compare it to that of the First Meditation, bracketing the specific doubts proposed, and conclude that the core aspects of the procedure are the same.

**I. The Form of the Method of Doubt in the *Regulae***

In the *Regulae*, Descartes defines knowledge as “*certain and indubitable cognition*” and provides a general procedure to meet this goal:

We shall be following this method exactly if we first *reduce complicated obscure propositions step by step to simple ones*, and then, starting with the intuition of the simplest ones of all, try to ascend through the same steps to a knowledge of all the rest. (AT X 379; CSM II 20)

Similar to the presentation in the *Discours*, Descartes distinguishes two stages of the method: an analytic stage and a constructive one. In this paper, I focus solely on the former. He instructs that the Cartesian investigator should begin by analyzing a confused proposition into more basic ones, essentially breaking or analyzing the initial proposition into simpler ones, until one or more of them are known immediately (Rule VIII, AT X 407; CSM I 37).

The procedure is simple enough in the abstract, but when a Cartesian investigator turns to apply the method, this cursory account is insufficient, for the text does not provide the amount of detail necessary to resolve an actual dilemma. In response, Daniel Garber (2001, p. 37, 88.) proposes that we turn to a case where Descartes applies, or at least claims to apply, the method, so we can derive further rules to clarify his approach that are not formerly stated in the *Regulae*. Garber directs us to Descartes’ optical example in Rule VIII.[[2]](#endnote-2) The details of his account, which I provide elsewhere, are not pertinent for the purposes of this paper (Brissey, 2014, pp. 15-21). For this reason, I concentrate on his general explanation of Descartes’ analytic procedure.

Descartes’ presentation is essentially a summary or formal description of key parts of his optical discovery.[[3]](#endnote-3) Garber’s insight is that implicit to the presentation are questions that Descartes proposes as a heuristic to help him discover an intuition. His approach, Garber tells us, begins with an initial question (Q1 in Table 1)—What is the shape of a line (lens) that focuses parallel rays of light to the same point?—and proceeds by asking a series of more, targeted questions (Q2–Q6) whose answers are prerequisite before satisfying the initial one.

**Table 1: Garber’s Reconstruction of the Anaclastic Line Example**[[4]](#endnote-4)

Q1. What is the shape of a line (lens) that focuses parallel rays of light to the

 same point?

Q2. What is the relation between angle of incidence and angle of refraction (i.e.,

 the law of refraction)?

Q3. How is refraction caused by light passing from one medium into another?

Q4. How does a ray of light penetrate a transparent body?

Q5. What is light?

Q6. What is a natural power?

 Intuition: A natural power is. . . .

Construction: The construction consists in traversing the series of questions from Q5 to

 Q1, deducing the answer to each question from that of the preceding

 question.

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Garber then generalizes this approach as the definitive procedure of the *Regulae*. The analytic portion of the method is thus conducted when an investigator: (1) begins by posing a question, (2) proceeds by asking more, targeted questions that are deductively ordered, and (3) continues until the discovery of a foundational question that has a self-evident answer.[[5]](#endnote-5)

Garber’s explanation of Descartes’ application of his method in the *Regulae* ends here.[[6]](#endnote-6) Descartes, however, continues in Rule VIII with his epistemological question, “What is human knowledge and what is its scope?,” what he calls his “finest example.” Presumably, it is his finest because the question deals with “the true instruments of knowledge and the entire method are involved in the investigation of the problem […]” (Rule VIII, AT X 397; CSM I 31). Nevertheless, my strategy is to extend Garber’s interpretation of Descartes’ analytic approach in the anaclastic line example to his epistemic example. Descartes provides three formulations of his response in Rule VIII.[[7]](#endnote-7) My interest is the final and most developed formulation. The following is the passage I have in mind:

But the most useful inquiry we can make at this stage is to ask: What is human knowledge and what is its scope? We are at present treating this as one single question, which in our view is the first question of all that should be

examined by means of the Rules described above. This is a task which everyone with the slightest love of truth ought to unde rtake at least *once in his life* [*semel in vitae*], since the true instruments of knowledge and the entire method are involved in the investigation of the problem […] But in order to see how the above points apply to the problem before us, we shall *first divide into two parts* whatever is relevant to the question: *the question ought to relate either to us, who have the capacity for knowledge, or to the actual things it is possible to know*. We shall discuss these two parts separately.

 Within ourselves we are aware that, while it is *the* *intellect alone that is*

*capable of knowledge, it can be helped or hindered by three faculties*, *viz*.

*imagination, sense-perception, and memory*. We must look at these faculties in turn, to see in what respect each of them could be a hindrance, so that we may be on our guard, and in what respect an asset, so that we may make full use of their resources. We shall discuss this part of the question *by way of a sufficient enumeration* as the following Rule will make clear.

 We should *then turn to the things themselves*; and we should deal

with these only in so far as they are within the *reach of the intellect*. In that respect we divide them into *absolutely simple natures* and *complex composite natures*. Simple natures must all be either *spiritual or corporeal, or belong to each of these categories*. As for composite natures, there are some which the intellect experiences as composite before it decides to determine anything about them: but there are others which are put together by the intellect itself. All of these points will be explained at greater length in Rule Twelve, where it will be demonstrated that there can be *no falsity save in composite natures* which are put together by the intellect. In view of this, we divide natures of the latter sort into two further classes, *viz*. those that are deduced from nature which are the most simple and self-evident […] and those that presuppose others which experience shows us to be composite in reality. (Rule VIII, AT X 397-399; CSM I 31-32)

 As we will see, all the essential features of Garber’s interpretation of the method are invoked in this passage. Descartes begins by stating his question (Q1 in Table 2) and then proceeds by simplifying it by implicitly asking more, targeted questions, deductively ordered,

**Table 2. The Form of the “Finest Example” in the *Regulae***

Q1. What is human knowledge and what is its scope?

Q2. What is the standard for human knowledge?

Q3. Which faculties are capable Q4. Which propositions are known with

of knowledge? certainty?

 Q3.a. Do the corporeal faculties Q4.a. Which propositions are simple,

 (sensation, imagination, and and which are composite? Which are

 memory) guarantee knowledge? spiritual or corporeal?

 Q3.b. Does the faculty of deduction Q4.b. Which propositions are

 guarantee knowledge? deduced from simple natures?

 Q3.c. Does intuition guarantee Q4.c. Which propositions are self-

 knowledge? evident?

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until a question is posed that will result in an intuition (Q2-Q4.c.). His move after the initial question is once again an implicit one. In order to understand the question, one must have a prerequisite grasp of the standard of knowledge, for one must know what knowledge and doubt are in order to know whether a faculty or proposition is certain (Rule XII, AT X 419; CSM I 44). On this point, he tells us that the “entire method [is] involved in the investigation of the problem” and informs us, as early as Rule Two, that knowledge is “certain and indubitable cognition” (Rule II, AT X 362; CSM I 10). Thus, in the background of Descartes’ example is his standard of knowledge.

The aim of the remaining investigation is to break down his conception of an indubitable cognition. He writes, “[…] we shall first *divide into two parts* whatever is relevant to the question; for the question ought to relate either to us, who have the capacity of knowledge, or to the actual things it is possible to know. We shall *discuss these two parts separately*” (Rule VIII, AT X 398; CSM I 32, emphasis added). In this stage of the investigation, he provides a distinction between the agent who knows from the object that is known. On the latter point, he presumes an isomorphism between the proposition perceived and its corresponding object, for his analysis focuses entirely on the “simple nature” or proposition cognized, not the object itself. With this, his path forward is to search for an indubitable faculty (Q3) and indubitable judgments of propositions (Q4), a task that, as we will see, requires Descartes to transition back and forth from one stratum to the other, from a consideration of possibly apodictic judgments of propositions to his search for an indubitable faculty and *vice versa*. The two inquiries, moreover, are eventually unified, for the discovery of an indubitable faculty necessitates the cognition of an indubitable proposition.

On his first track of investigation, his assessment of the faculties, Descartes does not disclose the fine-tuned details of his procedure in Rule VIII. He did, however, provide the conclusion of his inquiry. He wrote: “while it is the intellect alone [intuition and deduction] that is capable of human knowledge, it can be helped or hindered by three other faculties, *viz*. imagination, sense-perception, and memory” (Rule VIII, AT X 398; CSM I 32). He provides similar remarks in the first formulation of the finest example, but, in this case, he reveals some of the details of the general procedure:

 […] nothing can be known prior to the intellect, since knowledge of everything else depends on the intellect and not *vice* *versa*. Once he as surveyed everything that follows immediately upon knowledge of the pure intellect, among what remains *he will enumerate whatever instruments of knowledge we possess in addition to the intellec*t; and there are only two of these, namely imagination and sense-perception. He will see that *there can be no truth or falsity in the strict* *sense except in the intellect alone*, although truth and falsity often originate from the other two modes of knowing; and he will pay careful heed to everything that might deceive him […] (Rule VIII, AT X 398; CSM I 30)

His investigation “*by way of a sufficient enumeration*” is a crucial feature of the *Regulae*. On this procedure, Descartes is to list the human faculties, hypothesizing each as capable of assuring certainty, and then test each of them with doubt. If a faculty is found dubitable, even by the slightest counterexample, then it is discarded as capable of guaranteeing certain cognition, as Descartes explains, “he will enumerate whatever instruments of knowledge we possess in addition to the intellect [and] will see that there can be no truth or falsity in the strict sense except in the intellect alone [Q3.a.-Q3.c]” (Rule VIII, AT X 395-396; CSM I 30).

In addition to this, he provides a brief description of the applied procedure in Rule XII. In terms of the corporeal faculties, his strategy, like his approach in the *Meditationes*, is to cast doubt on the senses (in this case, using mitigated skeptical scenarios) because, by doubting this first principle, he additionally casts doubt on the corporeal faculties in general, imagination and memory (Q3.a.). He tells us, “[we] must not judge […] that the senses take on the true shapes of things, or in short that external things always are just as they appear to be,” for if we do, “we are liable to go wrong” (Rule XII, AT X 423; CSM I 47 and Rule III, AT X 368; CSM I 14.). In particular, those with “yellow jaundice” are “deceived,” for they judge “everything is coloured yellow” (Rule XII, AT X 423; CSM I 47). His empirical example served as an occasion in which the senses do not provide the gospel truth. For this reason, he discards sense perception in general as a candidate for insuring indubitable cognition. This reason for doubt, likewise casts doubt on the other corporeal faculties whose ideas are parasitical on the sensory ones. In terms of the “imagination,” he tells that it does not “faithfully represent objects of the senses,” for instance, “when our imagination is impaired (as it is in depression) and we think that its disordered images represent real things” (Rule XII, AT X 424; CSM I 47).[[8]](#endnote-8) Similarly, he tells us that “memory is no different from imagination […];” that is, it is a passive faculty that, at times, represents distorted information as true (Rule XII, AT X 416; CSM I 43 and Rule XVI, AT X 454; CSM I 67). The intellectual faculties, on the other hand, “cannot be performed wrongly” (Q3.b.-Q3.c.) and, based on this, guarantee certainty and can lead one’s will to the aspects of sensations and memories which are true (Rule II, AT X 365; CSM I 12; Rule IV, AT X 372; CSM I 16; and Rule XIV, AT X 440).

On the other stratum of investigation, Descartes seeks for an indubitable proposition (Q4). He openly tells us that this portion of his philosophical program was not fully developed in the 1620s, and, for this reason, he merely proposes questions, examining the propositions in classes and describing the psychological qualities that certain propositions ought to have, not divulging, for whatever reason, the specific propositions doubted as he later does in the *Meditationes* (Rule VIII, AT X 397; CSM I 31; Part Two, *Discours*, AT VI 22; CSM I 122; and Part Three, *Discours*, AT VI 30-31; CSM I 126). He begins this stratum by distinguishing his propositions into two classes (Q4.a.). He writes, “we divide them into *absolutely simple natures* and *complex composite natures*” (Rule VIII, AT X 399; CSM I 32).[[9]](#endnote-9) His move is to require the Cartesian investigator to classify the sum total of ideas into two categories, a task that would be endless, for “one lifetime would generally be insufficient for the task,” as he tells in Rule VII and later in the First Meditation (Rule VII, AT X 390; CSM I 26; First Meditation, AT VII 18; CSM II 12). For this reason, Descartes reduces his burden in the next sentence. He writes, “[s]imple natures must all be either *spiritual or corporeal* […]” (Rule VIII, AT X 399; CSM I 32).[[10]](#endnote-10) With this, he transitions from sorting the sum total of simple and complex ideas to a categorization of the types of simples: mainly corporeal and spiritual (Q4.a.). As is noticeable, crucial steps seem to be missing in this transition. On a closer inspection, however, this question, the new classification schema, also is a sorting of composite and simple propositions. Descartes tells us in Rule VIII: “nothing can be known prior to the intellect, since knowledge of everything else depends on the intellect and not *vice versa*,” and, in Rule XII, he tells us that “the power through which we know things in the strict sense is *purely spiritual* […]” (Rule VIII 398; CSM I 230 and Rule XII, AT X 415; CSM I 42, emphasis added). Thus, the foundation of knowledge is spiritual and intellectual, and all other faculties, and later propositions, are dependent on these, for Descartes’ general procedure is to analyze complex propositions into parts, to doubt those that are dependent, until one discovers an self-evident one (Rule XII, AT X 415-416; CSM I 42).

This all, however, is again on the faculty side of the problem. In terms of the propositions, those that were “purely intellectual,” Descartes tells us, are known “without aid of any corporeal image,” and those “purely corporeal” are “recognized to be present only in bodies” (Rule XII, AT X 419; CSM I 44-45). Descartes’ distinction was based, in one sense, on the source of the proposition, but also it was based on the judgment of the psychological qualities of the perception. If he derives the idea from the senses, that is, the idea has a mental duplicate in the imagination, one that is extended in length, breadth, and depth and arrayed with colors, then it is corporeal. If not, it is spiritual. As an example, he tells us elsewhere that “it is impossible to *form any corporeal idea* which represents for us what knowledge or doubt or ignorance is, or the action of the will, which may be called ‘volition,’ and the like […]” and, presumably, his early formulation of the *cogito*, “everyone can intuit that he exists, that he is thinking” (Rule XII, AT X 419; CSM I 44 and Rule III, AT X 368; CSM I 14).

His next move in this stratum of investigation is to differentiate the composite (derived) spiritual ideas from the simplest ones of all (immediate, incorporeal intuitions) and this is done by assessing whether the proposition is epistemically dependent. More specifically, he is to distinguish those that are self-evident and intuitive, the axioms of knowledge (Q4.c.), say the *cogito* of Rule III and the Second Meditation (Rule VIII, AT X, 368; CSM I 14), from those that are inferentially known and spiritually composite (Q4.b.), e.g. his “I am, therefore God exists” of Rule XII and the Third Meditation (Rule VIII, AT X 399; CSM I 32; Rule XII, AT X 421; CSM I 46).[[11]](#endnote-11) On this point, he writes in Rule VIII, “we divide natures of the latter sort into further classes, *viz*. those that are deduced from natures which are the most simple and self-evident […]” and then goes on to describes a category of non-necessary composite ideas (Rule VIII, AT X 399; CSM I 32). Nevertheless, in this distinction, he differentiates self-evident ideas from those that are inferentially known, essentially distinguishing the products of intuition and deduction. Now, he reminds us, “there can be no falsity save in composite natures which are put together by the intellect” and that “deduction or pure inference of one thing from another can never be performed wrongly […]” (Rule VIII, AT X 399; CSM I 32 and Rule II, AT X 365; CSM I 12). His claim is that composite ideas deduced by the intellect are indubitable in the strict sense. On this point, he tells us elsewhere that, “the inference 2 plus 2 equals 3 plus 1” is deductively certain (Rule III, AT X 369; CSM I 15). In the finest example, however, there is also a sense in which spiritual composite propositions are not certain (Q4.b.); for such propositions to be known in the Cartesian sense, there must be a prerequisite intuition (Q4.c.), that is, there must be at least two things that are known indubitably in this case before a Cartesian deduction is conducted, but, at this point in his analytic procedure, we have not arrived at an intuition. Thus, such mathematical inferences are without a foundation, as he tells us in Rule IV that “mathematics” is the “outer garments” of the method, essentially a derivation, not its core parts, and, for this reason, the discipline is loosely dubitable in the “finest example,” dependent on the core procedure, his philosophical psychology of the *Discours* and *Regulae* (Rule IV, AT X 373; CSM I 17).

In sum, our reconstruction of Descartes’ procedure suggests that the approach of the finest example is consistent with Garber’s interpretation of the Cartesian method, for Descartes (1) begins by posing a question, (2) proceeds by asking more precise questions that are deductively ordered, and (3) ends the analytic portion of the method by posing a question that leads him to discover a self-evident proposition. From this general perspective, we have the groundwork for our reply to Curley and Garber. Nevertheless, we need to show that the specific method in the finest example is the approach of the First Meditation to complete our response. Once we establish this, we can hold that there is an analytic procedure in the First Meditation and that the exotic skeptical scenarios of his mature philosophy are not an essential feature of his method of doubt.

**II. The Form of the Method of Doubt in the *Meditationes***

With this formal conception of the analytic method, we can now turn to its presentation in the *Meditationes*. In the first paragraph, Descartes implicitly invokes the question of Rule VIII (Q1 in Table 3)—“What is human knowledge and what is its scope?”—for the central goal expressed is to “demolish” or doubt all of knowledge completely, to establish a new foundation for his ongoing investigations in natural philosophy(First Meditation, AT VII 17; CSM II 12 and Part Two, *Discours*, AT VI 40; CSM I 131).[[12]](#endnote-12)

With his question established, he proceeds by providing his definition of knowledge. He writes, “Reason now leads me to think that I should hold back my assent from opinions which are not *completely certain and indubitable* just as carefully as I do from those which are patently false” (Q2) (First Meditation, AT VII 18; CSM II 12, emphasis added). This definition is similar to that of the *Regulae*: “All knowledge [*scientia*] is *certain and evident cognition*. Someone who has doubts about many things is no wiser than one who has never given them a thought […]” (Rule II, AT X, 362; CSM I, 10). In the *Meditationes*, he then purses two parallel strands of inquiry, searching for an indubitable faculty (Q3), on the one hand, and indubitable propositions (Q4), on the other. On this point, he explains: “[…] I will not need to run through [my ideas] all *individually*, which would be an *endless task* […] so I will go straight for the *basic principles on which all my former beliefs rested*” (First Meditation, AT VII 18; CSM II 12, emphasis added).[[13]](#endnote-13) His two tracks of investigation, like the *Regulae*, are examined intermittently where he moves from one stratum to the other and then back again because the evaluation of the faculties, the first principles of his propositions, are not mutually exclusive of his consideration of his propositions. As we have seen, if he doubts a faculty, he likewise doubts a category of propositions, and, at the completion of his analytic procedure, his discovery of an apodictic faculty necessitates an indubitable proposition.

 He begins with his faculties: “Whatever I have up till now accepted as most true I have acquired either *from the senses or through the senses*. But from time to time I have found that *the senses deceive* […]” (First Meditation, AT VII 18; CSM II 17, emphasis added). This deception amounts to his well-known sensory illusion, the dreaming, and the malicious, demon-deceiver skeptical scenarios. These doubts, however, were only part of his approach. Their ultimate purpose is to eliminate the corporeal faculties as viable candidates for guaranteeing that one has achieved an apodictic cognition (Q3.a.). Like his procedure in the *Regulae*, he hypothetically considers each of his faculties as capable of certainty and then assesses whether it can withstand doubt. Sensation was his focus, but we can see that the imagination and memory were also in his scope. For example, after he poses his skeptical scenarios, he uses the term “imaginary” as synonymous with “false,” and, in the Second Meditation, he tells us, “I will suppose then, that everything I see is spurious. I will believe that *my memory tells me lies*, and that *none of the things that it reports ever happened*” (First Meditation, AT VII 20, 22; CSM II 14, 15 and Second Meditation, AT VII 24; CSM II 16).

**Table 3. The Form of the Method of Doubt in the *Meditationes***

The Procedure of Sufficient Enumeration

 Q1. What is the essence and scope of human knowledge?

 Q2. What is the essence of knowledge? (i.e. what is the goal of the investigation?)

 Q3. Which faculty provides an Q4. Which propositions are known with

 indubitable cognition? certainty?

 Q3.a. Do the corporeal faculties Q4.a.i. Are sensations of things very

 (sensation, imagination, and small and in the distance certain?

 Memory) guarantee indubitable

 cognition? Q4.a.ii. Are simple sensory propositions

 certain?

 Q3.b. Does the faculty of *deduction*

 guarantee indubitable cognition? Q4.b. Are arithmetical and geometrical

 propositions certain?

The Procedure of Sufficient Enumeration

Q3.c. Does the faculty of *intuition* Q4.c. Can I doubt that I’m thinking and

guarantee indubitable cognition? that I exist while I’m doubting?

 I. Descartes’ intuition is the “cogito sum” of the Second Meditation.

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 In terms of the *Regulae*, the elimination of the corporeal faculties leaves intuition and deduction as viable candidates for knowledge. In the *Meditationes*, however, he has changed his terminology, now referring to his intellectual faculties under an alternative term: clear and distinct perception. This change, however, is minor and is to be expected, for he suggests the need for this nominal change in the *Regulae* (Rule III, AT X 369; CSM I 14). He, moreover, continues to use his early conception of the faculties throughout his mature writings, where he explicitly makes use of his early terminology when describing the *Meditationes* (Second Replies, AT VII 140, 155; CSM II 100, 110; May 1637 to Silhon, AT I 353; CSMK 55; November 13, 1639 to Mersenne, AT II 599; CSMK III 140; March or April 1648 to Silhon, AT V 135-139; CSMK III 330-332.).[[14]](#endnote-14) For these reasons, I use Descartes’ early terminology to provide a stronger connection between the *Regulae* and *Meditationes*.

 This brings us to his assessment of the intellectual faculties (Q3.b. and Q3.c.). In the *Regulae*, Descartes holds that deduction by definition is indubitable; and, for this reason, he turns away from his evaluation of the intellectual faculties in his analytic procedure to the assessment of composite propositions, for a bonafide deduction necessitates a prerequisite intuition. In the *Meditationes*, he similarly transitions from the intellectual faculties to an examination of composite propositions, but, in this case, he specifies mathematical propositions (incorporeal, necessary inferences). On this point, he proposes that “arithmetic, geometry and other subjects of this kind […] *contain something certain and indubitable*” (First Meditation, AT VII 21-22; CSM II 14, 15). He provides examples to illustrate his point: “whether I am awake or asleep, *two and three added together are five*, and *a square has not more than four sides*” (First Meditation, AT VII 20; CSM II 14). What is certain is the necessary relation between the premise and conclusion. But, immediately after this claim, he proceeds with his demon-deceiver skeptical scenario, a second-order doubt, where he holds that mathematical propositions are dubitable.

What is noticeable is that when Descartes transitions to his most exaggerated doubt he moves away from his examination of the faculties to mathematical propositions, the second stratum of his investigation. It is unclear and somewhat controversial how to interpret this move. First, it is possible that Descartes’ transitions from the faculties to mathematical propositions because he brackets or does not place doubt on his intellectual faculties. On this reading, he considers the intellect indubitable at the outset and then shows that mathematics as not apodictic. Second, he may have turned to mathematics to examine his deductive faculty and shows that the slight metaphysical doubt indicates that this faculty is dubitable, that is, without a supplemental divine guarantee. Third, it may be the case that he moves to mathematical propositions to show that these are dependent on the *cogito* and the will of God. The deductive faculty, however, is free from doubt on this reading because a prerequisite intuition has not been discovered, a necessity of a Cartesian deduction. Whichever interpretation is the most plausible, each has a structural similarity: they all assess whether the deductive faculty is capable of certain cognition (Q3.b.) and then proceeds to an evaluation of intuition (Q3.c.). Now, it may be the case, on some readings, that the deductive faculty is doubted, but this is not problematic for the present view, for there is still a consideration of the faculty, which is formally similar to the approach in the *Regulae*.

 Intermittent with this examination, Descartes assesses the epistemic status of his judgment of propositions. In this stratum of his investigation, there is much development since his 1628 reflections, for he has now nailed down the specifics. He tells us that the target of his doubts is the basic principles on which his opinions are based. In one sense, this is a turn away from this stratum and towards assessing the sensory faculty itself, but, in another sense, it is an assessment of the propositions, whether they are corporeal and composite, or spiritual and simple. He tells us that he emerged from school as an empiricist, but found that there were occasions where the senses deceived, e.g. “[s]ometimes towers which had looked round from a distance appeared square from close up” (Q4.a.i.) (Sixth Meditation, AT VII 74, 76; CSM II 51, 53; 53). This and similar skeptical scenarios cast doubt on objects that are small and faraway and, further, were the subject of his *Dioptrics*, where he provides guidance to not make mistakes concerning depth perception (AT VI 130-147; *Dioptrics*, pp. 101-113). For this reason, he turns to an examination of the simplest sensory propositions (Q4.a.ii). He begins with his epistemic best: “that I am here, sitting by the fire, wearing a winter dressing-gown, holding this piece of paper in my hands, and so on” (First Meditation, AT VII 18; CSM II 13). In sleep, he reports that he has the same very same experiences, or at least similar ones, that he has while awake, which suggests that there is a possible world or state of affairs where he senses that he has eyes, hands, and a body, but, to the contrary, he does not, for it is possible that his life could be a “continuous dream.” (*The Search For Truth*, AT X 511; CSM II 407-408).

His discovery is that his sensory representations fail to correspond to objects in the world. Despite this, he notes that the colors that make up possibly fictional objects had to come from somewhere, so at least these must be real. Moreover, he can know that such propositions are extended in length, breadth, and depth, “corporeal nature in general,” and, whether awake or asleep, mathematical propositions are true (First Mediation, AT, VII 20; CSM II 14). On this latter claim, he writes:

So a reasonable conclusion from this might be that physics, astronomy, medicine,

and all other disciplines which *depend on the study of composite things are doubtful*; while arithmetic, geometry and other subjects of this kind, which deal only with the simplest and most general things, regardless of whether they really exist in nature or not, contain something certain and indubitable. (First Meditation, AT VII 20; CSM II 14, emphasis added)

Descartes’ point, in part, is that mathematics, physics, and similar disciplines are composite because they depend on foundational disciplines (Part VI, *Discours*, AT VI 76; CSM I 150; February 22, 1638 to Vatier, AT I 563; CSMK 87; March 1, 1638 to Mersenne, AT I 661-662; CSMK 92; May 27, 1638 to Mersenne, AT II 141; CSMK 103; French Preface, *Principia*, AT IXB 14-15; CSM I 186-187). He does tell us, however, that mathematics deals with the simplest things (Q4.b.), though these are not to be considered absolutely the most simple, as Descartes tells in the *Regulae*: “mathematics” is an “outer garment” of the method, not its “inner parts” (Rule IV, AT X 374; CSM I 17). In his early and mature writings, he is interested in *mathesis universalis*, the search for “the primary rudiments of human reason [that] extend to truths in any field whatever” (Rule IV, AT X 374; CSM I 17). This discipline is the foundation of the other sciences, and one of the purposes of his method of doubt is to show that all disciplines, even mathematics, are dependent on this core discipline.

With this in mind, his next move is to place doubt on mathematical propositions. He proposes that it is possible that an omnipotent God may deceive him in the simplest most matters, say, every time he adds two and three (Q4.b.). Descartes’ point is to show that numbers and geometrical entities are dependent on more basic things, like his *res cogitans* of the Second Meditation and the will of God as he tells us in the 1630 letters to Mersenne. Descartes thus moves from mathematics to the *cogito* in the Second Meditation (Q4.c.). This discovery then transitions him to his constructive stage of the method.

**III. Conclusion**

We now have the principal parts of the form of Descartes’ method of doubt.[[15]](#endnote-15) For Descartes, the method in the *Regulae* and the *Meditationes* began (1) with a question, and then proceeds by posing more targeted questions that are deductively ordered such that the answers to the more basic ones provide guidance to answer the more complex ones. In this endeavor, he (2) defines knowledge as certain cognition and advances by deriving two intermediary strands of investigation: (3) one concentrating on the veracity of the faculties and (4) a parallel one examining his propositions. In the first stratum of his investigation, he (5) lists each faculty as hypothetically capable of certain cognition, tests each with doubt, and concludes that the faculty that withstands doubt guarantees certain cognition. Along side of this investigation, he (6) applies his analytic procedure to his propositions. In the *Regulae*, he provides a classification schema to distinguish the types of propositions that correspond to his faculty psychology. In the *Meditationes*, however, he has the specific propositions nailed down to replace his early account. He concludes the analytic procedure when he (7) discovers an indubitable faculty and object.

 This account of the form of Descartes’ method of doubt provides a response to Curley’s and Garber’s worries, one that generally concedes their principal points but incorporates them into a more comprehensive argument. First, we agree with Curley that there are differences between Descartes’ skeptical scenarios and propositions doubted in the *Regulae* and *Meditationes*. These content differences, however, are not a crucial difference on this reading and do not get at the core of his method of doubt. If we take it as a form or procedure, the two works have consistent general and specific procedures: a loose-deductive order with similar questions proposed. We, on the other hand, disagree with Garber’s claim that the particular procedure of the *Regulae* was not applied in the *Meditationes*. Our route to this alternative conclusion is established by first adopting Garber’s formulation of Descartes’ method in the anaclastic line example and extending it to Descartes’ “finest example” in Rule VIII. We then show that the particular analytic procedure in Rule VIII is similar to his method of doubt in the *Meditationes*.[[16]](#endnote-16)

1. **Notes**

 I use the following abbreviations: AT = Descartes, 1964-1974; CSM = René Descartes, 1984-1985, vols. I and II; CSMK = Descartes, 1991, vol. III. *Dioptrics* = Descartes, 2001, pp. 65-173; *Les Météores* = *ibid.*, pp. 263-361. [↑](#endnote-ref-1)
2. Garber also covers Descartes’ explanation of the rainbow in Discourse Eight of the *Les Météores***.** See Garber, 2001, pp. 41-43, 95-102. [↑](#endnote-ref-2)
3. Some argue that the *Regulae* contains three inconsistent projects, which resulted in him dropping the method. See Garber, 2001, pp. 33-51; 1992, pp. 30-62; Dear, 1984, pp. 147-177; Schuster, 1980; and Weber, 1964, pp. 81-108. For an alternative, see Brissey, 2014, pp. 9-31; Marion, 1981, pp. 55-69; and van de Pitte, 1991, pp. 375-395. There is also a new, recently discovered Cambridge copy of the *Regulae*. See Schuster, 2013, p. 235, fn. 23; p. 388, fn. 73. [↑](#endnote-ref-3)
4. I have discarded Garber’s proposal of Descartes’ answers due to my focus on his analytic procedure. [↑](#endnote-ref-4)
5. Garber additionally holds that the reductive method is “tidy” and does not stray off the positive path of inquiry. See Garber, 1992, pp. 47-48. For an alternative, see Brissey, 2014, pp. 17-19 and Florka, 2004, pp. 137-139. [↑](#endnote-ref-5)
6. Garber proceeds to the “finest example,” but he tells us that Descartes left the problem incomplete, and, further, Garber does not reconstruct the argument as completely and with the precision as he does in the anaclastic line example. See Garber, 1992, p. 42. [↑](#endnote-ref-6)
7. Descartes provides three formulations or sketches of his response in Rule VIII. The first begins with the clause “the finest example of all.” The short, second entry compares his method to the work of a blacksmith attempting to make initial tools, while the third begins with the clause “the most useful inquiry” and is where he outlines the type of answer that he expects to discover. Many argue that Descartes slowly begins a new project in the second and third formulations, which eventually results in him dropping the method. For a concise account, see Gaukroger, 1997, pp. 111-124, 152-181. [↑](#endnote-ref-7)
8. Descartes also describes, what he calls, “composition by way of conjecture,” the active function of the imagination, as “a source of error.” See Rule XII, AT X 423; CSM I 47. [↑](#endnote-ref-8)
9. The use of the term “composites,” in part, refers back to his distinction between “absolute” and “relative” natures in Rule VI where he explains, “I call ‘absolute’ whatever has within it the pure and simple nature in question; that is whatever is viewed as being independent, a cause, simple, universal, single, […].” Relatives, on the other hand, are natures that are “dependent, an effect, composite, particular, many, […].” See Rule VI, AT X 381; CSM I 21. [↑](#endnote-ref-9)
10. He also includes natures that belong to both categories, ideas that he describes as logical relations. I do not address this category in this essay. [↑](#endnote-ref-10)
11. For Descartes’ early formulation of the *cogito* and the inference “I am, therefore God exists,” see Rule III, AT X 368; CSM I 14 and Rule XII, AT X 422; CSM 46. [↑](#endnote-ref-11)
12. This reading assumes that the *Discours* is a systematic work, essentially a plan for Descartes’ emerging philosophical program. For a justification, see Brissey, 2013, pp. 37-60. [↑](#endnote-ref-12)
13. Compare this to his statement to a similar one in Rule VII. See AT X 391; CSM I 27; Menn, 1999, p. 225; and Schouls, 2000, p. 10. [↑](#endnote-ref-13)
14. Some hold that Descartes proposes the natural light as a third intellectual faculty. See Rickless, 2005, pp. 309-336. Descartes, however, refers to intuition and deduction, clear and distinct perception, and the natural light synonymously. For instance, see March or April 1648 to Silhon, AT V 135-139; CSMK 330-332. [↑](#endnote-ref-14)
15. I take these stages of the procedure as necessary but not sufficient.

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d’enseignement supérieur. [↑](#endnote-ref-15)
16. [↑](#endnote-ref-16)