

On Hobbes's distinction of accidents

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An interpolation introduced by K. Schuhmann in his critical edition of De corpore (chap. VI, § 13) diametrically overturns the meaning of Hobbes's doctrine of distinction of accidents in comparison with all previous editions. The article focuses on the complexity of this crucial juncture in De corpore argument on which depends the interpretation of Hobbes's whole conception of science. It discusses the reasons pro and contra Schuhmann's interpolation and concludes against it, because it is not compatible with the rationale underlying the complex architecture of De corpore, which involves a symmetry between the 'logical' distinction of accidents and the 'metaphysical' distinction of phantasms.

Keywords: Hobbes, De corpore, Accident, Phantasm, Imaginary Space

What I intend to do is to develop some reflections on Hobbes's doctrine of distinction of accidents, a key doctrine to understand Hobbes's doctrine of science. Let me start from a text of chapter six, paragraph thirteen, which contains a fundamental distinction whose sense is diametrically overturned by the 1997 critical edition in comparison with the previous editions. I shall quote the text first according to Schuhmann's critical edition of 1999 and then according to *editio princeps* of 1655:

Principia autem illa solae Definitiones sunt, quarum duo sunt genera. Alia enim sunt eorum vocabulorum, quae res significant, **quarum causa aliqua intelligi <non> potest; alia eorum, quae res significant, quarum causa intelligi potest.** Prioris generis sunt corpus sive materia, quantitas sive extensio, motus simpliciter, denique quae omni materiae insunt. Secundi generis sunt corpus tale, motus talis et tantus, magnitudo tanta, talis figura, aliaque omnia, quibus unum corpus ab alio distingui potest¹.

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The text of the critical edition differs from all previous editions (except for 1997 German translation by Schuhmann himself): it differs not only from the 1655 *editio*

1. Thomas Hobbes, *De corpore. Elementorum Philosophiae Sectio Prima*, Édition critique, notes, appendices et index par Karl Schuhmann, Introduction par Karl Schuhmann avec la collaboration de Martine Pécharman, Paris: Librairie Philosophique J. Vrin, 1999 (hereafter referred to as Dc 1999), VI.13, p. 67 (bold mine).

2. *Elementorum philosophiae sectio prima De corpore. Authore Thoma Hobbes Malmesburiensi*, Londini: Andreae Crook, 1655 (hereafter referred to as Dc 1655), VI.13, p. 50 (bold mine).

princeps but also from the 1656 English translation, anonymous but published and revised by Hobbes himself. It differs from the next seventeenth and eighteenth century editions and from both the Molesworth editions and the 1972 Italian translation. It differs from all those previous editions because of the interpolation/displacement of the negation *non* which, obviously, reverses the meaning of the sentence³.

Thus, at this fundamental juncture in Hobbes's argument we have two contrasting versions of the doctrine of the distinctions of accidents.

The fact that Schuhmann needs to make such interpolations clearly shows, if only, how puzzling is this crucial point, essential to understanding the doctrine of distinctions of accidents.

The first question is, of course, why does Schuhmann make the interpolations? i.e.: why does he add the first negation and expunge the second one? The second question is: are his motivations justified, admissible or convincing?

To answer the first question is rather easy and it demands only to explain the contradiction Schuhmann admittedly intends to eliminate reversing the relationships between the sets of accidents *that have / have not some conceivable cause* and the sets of accidents *which are common to all Matter / we can distinguish bodies by*.

According to all pre-Schuhmann editions, to the former kind of accidents (i.e. what «have some conceivable Cause») belong «whatsoever is common to all Matter», i.e. the accidents common to all bodies; to the latter (i.e. the accidents «which we can conceive no Cause at all») belong the accidents «we can distinguish one Body from another by». According to Schuhmann the relationships must be inverted.

The context is known. The thirteenth paragraph distinctions come after Hobbes has affirmed, in the previous paragraph, that «the whole Method... of Demonstration is *Syntheticall*, consisting of that order of Speech, which begins from Primary or most Universall Propositions, which are manifest of themselves»⁴. These primary propositions, or «principles» are definitions, and definitions are in terms of causes, that is in terms of generations produced by simpler accidents (that is, again, ultimately in terms of motion of simpler accidents). Hobbes's definition process implies of course ultimate or first accidents (otherwise there would be an infinite regress) coinciding with their own causes; and this is the avowed case of motion. Therefore it is quite natural to think that Hobbes's distinction of

3. The sentence, in the version of all mentioned editions, is as follows (I quote only the version of 1656 ed. for the sake of brevity): «Now, such Principles are nothing but Definitions; whereof there are two sorts; one, of Names, that signifie such things as have some conceivable Cause, and another of such Names as signifie things of which we can conceive no Cause at all. Names of the former kind are, Body or Matter, Quantity or Extension, Motion, and whatsoever is common to all Matter. Of the second kind are, such a Body, such and so great Motion, so great Magnitude, such Figure, and whatsoever we can distinguish one Body from another by» (*Elements of philosophy the first section, concerning body written in Latin by Thomas Hobbes of Malmesbury; and now translated into English; to which are added Six lessons to the professors of mathematicks of the Institution of Sr. Henry Savile, in the University of Oxford*, London: Printed by R. & W. Leybourn for Andrew Crooke, 1656 (hereafter Dc 1656), VI.13, p. 59 (bold mine). Cf., also, *The English Works of Thomas Hobbes of Malmesbury*, now first collected and edited by Sir William Molesworth, Bart., London: J. Bohn, 1839-1945, I, p. 81.

4. Dc 1656, VI.13, p. 59.

definitions provides, in the chain of definitions, the existence of first, simple and universal accidents, not caused or generated (and in this sense whose causes are not known). And what follows in the paragraph seems to confirm this interpretation:

And Names of the former kind [which, according to the critical edition, are those whose cause we cannot conceive] are well enough defined, when by Speech as short as may be, we raise in the Mind of the Hearer perfect and cleer Ideas or Conceptions of the Things named, as when we Define Motion to be *the leaving of one place, and the acquiring of another continually*; for though no Thing Moved, nor any Cause of Motion be in that Definition, yet at the hearing of that Speech, there will come into the Mind of the Hearer an *Idea* of Motion cleer enough⁵.

In conclusion, since Hobbes admits that there are accidents (first: motion) whose definitions cannot be in terms of causes, but are only «Speeches» capable to «raise in the Mind of the Hearer perfect and cleer Ideas or Conceptions», it seems far more logical to identify them (contrary to all pre-critical editions) with the second kind of accidents, above defined as those «of which we can conceive no Cause at all» (as Schuhmann does), rather than with the first sort above defined as those whose causes we conceive (as all previous editions do).

From this point of view, Schuhmann's choice appears to be quite justified and defensible. It appears also quite in line with Hobbes's doctrine that these universal accidents are the natural equipment of the constitutive «manners by which» the mind conceives any body⁶.

I myself, before methodically reflecting about Hobbes's doctrine of science, had come to the same conclusion; but later I changed my mind, for many important reasons, both, so to say, historical and conceptual. The historical one is, of course, that all the editions of *De corpore* published during Hobbes's life (even though neglecting the later editions) agree on the same (so to say) *erroneous* version, and, in particular, the 1656 English translation which, though anonymous, was certainly revised by Hobbes himself.

The conceptual ones are more complex and demand a longer argument.

The interpretive problem is clearly this: whether the accidents «common to all Matter» («quae omni materiae insunt») are those which «have some conceivable Cause» («quarum causa aliqua intelligi potest»), or else are those «of which we can conceive no Cause at all» («quarum causa aliqua intelligi non potest»), as Schuhman reads.

Admittedly the matter is not one of minor importance. Firstly, we need to begin by asking whether there is some ambiguity in the expressions («things» or) «accidents» which «have / have not some conceivable Cause». In fact, this expression can have another sense than what, given the context, seemed the more logic and spontaneous to Schuhmann.

5. *Ibid.*

6. Accident is «the Manner by which any Body is conceived» (Dc 1656, VIII.2, p. 75).

Actually we cannot overlook that this couple of concepts – *accidents whose causes are conceivable* and *accidents whose causes are not conceivable* – appears in the first step of Hobbes's argument, that is in the definition of philosophy itself:

Philosophia est effectuum sive phaenomenon ex conceptis eorum causis seu generationibus, et rursus generationum quae esse possunt, ex cognitis effectibus per rectam ratiocinationem acquisita cognitio⁷.

PHILOSOPHY is such knowledge of Effects or Appearances, as we acquire by true Ratiocination from the knowledge we have first of their Causes or Generation: And again, of such Causes or Generations as may be from knowing first their Effects⁸.

Now, this definition provides (as the chap. XXV.1 shows) for two cases of acquiring philosophy (i.e. science): the first is when we can conceive the causes of accidents, the second is when we do not conceive them. In the first one we can proceed deductively from definitions in terms of conceived causes (*conceptis causis*: that is «known generations») and this is undoubtedly the domain of common accidents (that is geometry: or, better *philosophia prima* and *de rationibus motuum and magnitudinum*). In the second case we also have to proceed deductively, but starting from hypothetical definitions, that is definitions in terms of hypothetical generations built or imagined according to (as Hobbes says in chap. XXV) «such general Propositions as have been already demonstrated»⁹. And this is undoubtedly the domain of accidents that make us «distinguish one Body from another», which is as much to say: the accidents «determined» that belong to «singular things»¹⁰, that is, as we have seen, «such and so great Motion, so great Magnitude, such Figure», but also such color, such sound, such savor etc. (that is the domain that Hobbes also calls that of the «Variety of those things we perceive by Sense»¹¹. And this is certainly the domain of physics.

What can deceives us is that to this domain belong not only those accidents that are the «sensible qualities», «*qualitates sensibiles*»¹², but also the quantitative ones if they are determined («*such and so great Motion, so great Magnitude, such Figure*»), that it to say, when they have the gnoseological function of distinguishing in our perceptive activity one Body from another (they are to be understood as those that make up the actual perceptive content of the «singular thing»).

It is true that the accidents determined (by which a body is distinguished from another, or belonging to «singular things») can be explained only by hypothetical causes, or generations in terms of the common accidents (that, for the sake of simplicity, we can call *quantitative*) which being «universals» in the end cannot be defined but in terms of causes which «are manifest of themselves»¹³, but this is not

7. Dc 1999, I.2, p. 12.

8. Dc 1656, I.2, p. 2.

9. Dc 1656, XXV.1, p. 290.

10. Dc 1656, VI.4, p. 50.

11. Dc 1656, VI.5, p. 51.

12. Dc 1656, VI.6, p. 53; Dc 1999, VI.6, p. 61 and XXV.3, p. 270.

13. Dc 1656, VI.5, p. 51.

to say that they (the common ones and universal) could be identified with accidents whose causes are inconceivable (as Schuhmann does).

Schuhmann's construal, although it arises from a real ambiguity, may induce us to miss that the distinction, between accidents *whose cause is conceivable* and accidents *whose cause is not so*, concerns the fundamental cognitive status of accidents, which is the rationale of the whole Hobbes's doctrine of science. A distinction so fundamental for the role it plays in the structure of *De corpore* as to be quite appropriately comparable to the distinction between analytical and synthetic judgments in Kant's *Critique of Pure Reason*.

Like Kant's distinction, Hobbes's one actually conditions the deploying of all the argument of *De corpore* since it defines two distinct domains of science (in the proper sense of science, that is as «cognitio τοῦ διότι»¹⁴. The former can be correctly said *a priori*, because all accidents belong to it whose kinetic generations (to be used in definitions) the mind has the power to imagine (or conceive). In other words, this is the domain of the accidents whose kinetic constructions (imagined by the mind) coincide with their concepts (like a circle or a geometrical figure). The latter domain is made up of those accidents whose causes cannot be but hypothetical, because their imaginable generations (whatever they may be) no way coincide with their real concept or image (i.e. with the real perceptive content, like a color, or sound and so on)¹⁵. And the construction of all these hypotheses demands a preliminary hypothesis on the kinetic nature of the φαίνεσθαι or «Apparition it self»¹⁶. This domain is of course that of physics.

Thus Hobbes's distinction of accidents (which, as I have already observed, is implied in the first definition of philosophy) is intrinsically connected with the epistemological distinctions between geometry and physics. But there is more; it is even the same connected with the basic distinction, we come upon at the beginning of *Philosophia prima* after the annihilation hypothesis, between two preliminary «considerations» the mind can have of the *things* appearing to it, that is of its phantasmata (of course, before constructing science).

Consideration (to consider) is a fundamental word in Hobbes's vocabulary: «*considerare*, Graece λογίζεσθαι, sicut ipsum computare sive ratiocinari συλλογίζεσθαι nominant»¹⁷. To consider is the same as reasoning (or beginning to reasoning): *be bring into account* or *in rationes venire*.

The act of considering has intrinsically to do with the nominalistic (or if I may say so, *hyper-nominalistic*) way Hobbes intends the dependence (both conceptual and ontological) of accidents on the substance, that is on the body. The dependence is of course universally admitted by the early modern philosophers, but differently conceived. Now, in Hobbes's perspective (rather complex and often

14. Dc 1999, VI.2, p. 58.

15. Dc 1999, XII.3. In other words, while, by example, the conception of a circle coincides with the generation by the movement of rotation of a body, the conception of a color will never result from the description, or imagination of a movement (in order that this happens, we have to enter intentionally a hypothetical merely mechanistic world, where the perception itself is reduced to a kinetic event).

16. Dc 1656, XXV.1, p. 290.

17. Dc 1999, I.3, p. 13.

misunderstood), we have no ideas of accidents (ideas in the proper sense) – as it happens in the Cartesian, or Lockean, or Spinoza's approach. Hobbes thinks that the real or *tota* idea is always the actual perception /sensation / imagination /conception of *one* body. On the one hand, the body is not actually perceived / sensed / imagined /conceived but qua figured, white, hard, great, located etc.; namely it is conceived *in many manners* (this is the English word used in 1656 translation for *modi*) or *with* (to use the usual expression) many accidents. On the other hand, of these manners of conceiving the body, there are no real ideas but as ideas of the bodies which are endowed with them.

In other words, there is no real idea of *white*, of *three*, or of *extended*, but as ideas of a *white body*, of a *threesome of bodies*, or of *corpus simpliciter*. The cognitive operation that results in accidents is not an analytic act of logical nature, nor an analytic act of psychological nature (according to the Locke-Berkeley's line of thought), but it is precisely *to consider*. And *to consider* is already reasoning or calculating, because, put very briefly, it consists in not taking into account (then in subtracting) all or certain accidents (that is *manners of conceiving* the body) except that we are concerned in.

On the one hand, it is a basic cognitive operation, because common to all men; on the other hand, Hobbes sees in it the mind leaving an unproblematic terrain and entering in a problematic dimension characterized by the emerging of questions concerning the «cause of names» – or (which is the same) the «cause of concepts» – by the introduction of abstract names¹⁸, and by the explicit construction of propositions (without which the abstract names cannot exist)¹⁹.

We know that phantasms (or ideas) cannot be immediately identified with «accidents», if only because they are numbered as a distinct «kind» («genus») among the «four kinds» of «all things to which we give names, namely, *Bodies*, *Accidents*, *Phantasms*, and *Names* themselves»²⁰.

Phantasms – namely, apparitions, phaenomena, ideas – are defined as «*ae quae sentientibus nobis innasci perpetuo experimur*»²¹, namely things «which are perpetually generated within us whilst we make use of our Senses» or of our imagination²². Another aspect of theirs is that: «our Phantasmes or Ideas are not alwayes the same; but that new ones appear to us, and old vanish»²³.

Put briefly, sharing (in a sense) the modern skeptics's approach²⁴ to the epistemological (and gnoseological) problem, Hobbes ascribes the status of

18. Dc 1999, III.3.

19. Dc 1999, III.4.

20. Dc 1656, V.2, p. 43.

21. Dc 1655, XXV.1, p. 224.

22. Dc 1656, XXV.1, pp. 290-291. Cfr. R. Descartes, *Principia Philosophiae* I.9: «Cogitationis nomine, intelligo illa omnia, quae nobis consciis in nobis fiunt, quatenus eorum in nobis conscientia est» (*Œuvres de Descartes*, publiées par Charles Adam & Paul Tannery, nouvelle présentation, en co-édition avec le Centre National de la Recherche Scientifique, Paris: Librairie Philosophique J. Vrin, 1982-1991 (hereafter AT), VIII-1, p. 7). Cfr. anche J. Locke: «The Mind [...], reflecting also on what passes within it self [...]» (*An Essay Concerning Human Understanding*, Edited with an Introduction by Peter H. Nidditch, Oxford: Clarendon Press, 1975, II, XXI.1, p. 233).

23. Dc 1656, XXV.1, p. 291.

24. According to F. Sanchez the function of sense is essential but instrumental: «Unum cognoscens homo est. Una cognitio in omnibus his. Eadem enim mens est quae externa, et quae interna cognoscit. Sensus nil cognoscit: nil iudicat: solùm excipit quae cognitura menti offerat. Quemadmodum aër non colores, non lucem videt: quamvis hos

indubitability to the cognitive level of mere contents of conscience (that is, for him, of sensation and imagination). Though we do not «know why they are and from what Causes they proceed»²⁵, phantasms (qua what «appears» to conscience) are such as it is impossible to question their existence: «That *there be* such phantasms we know well enough *by nature*» («cognoscimus naturaliter, quod sunt»), and therefore they are «the first Beginnings of Knowledge», «Principia scientiae omnium prima»²⁶. Therefore it is from taking them into a general consideration that *Philosophia prima* (*The first grounds of philosophy*) begins. The starting point of our knowledge is to have phantasms, that is to have ideas.

From this point of view Hobbes shares also skeptics's identification of *percipere* with *intelligere* (understanding); that is as much to say that there is no perceiving (i.e. having ideas or phantasms) without understanding what we perceive. Thus perceiving is an enigmatic phenomenon characterized by the fact that 1) there is no knowledge of the object but through its *phantasma* («omnis nostra *cognitio rerum existentium est imaginatio ea, quae a rerum actione efficitur in sensoria nostra*»²⁷), 2) there is no perception of *phantasma* (or idea) but as a perception of the object which it is the image of: phantasm and its object, or idea and thing, or *cognitio* and *res*, are terms absolutely complementary (except for, as we will see, for the imaginary space).

Therefore to clear definitively the field of any ambiguous and obscure involvement of the object as something transcending its phantasm, like the concept of substance according the classical and scholastic ontologies, Hobbes introduces, at the beginning of the *philosophia prima*, the hypothesis of *annihilatio mundi* (as it is known, the hypothesis belongs to the scholastic tradition, but in Hobbes its use is totally different).

By the introduction of the hypothesis Hobbes believes he can demonstrate that there is no difference between what the «Man still remaining» after the *annihilatio mundi* does in order to acquire knowledge and what we do «though all things be still remaining in the world». Regardless of the existence and nature of the transcendent world of substances, reasoning (i.e. computing) has only to do with our phantasms.

The term *phantasm* seems to be a compromise between the skeptical term of *spectrum* and that of *phaenomenon*, and serves to stress the subjective nature of appearances, the fact that they are not to be confused (like prephilosophical attitude does) with things themselves.

Then what are phantasms? How can we problematize them, given only the certainty of their mere mental existence as appearances? We know they are, Hobbes says, and there is no perception without understanding the thing perceived. Thus the knowledge begins with understanding what we perceive. And this understanding can be only of two kinds, because there are only two manners of

excipiat visui offerendos» (Franciscus Sanchez Philosophus et Medicus Doctor, *Quod nihil scitur*, Lugduni: Ant. Gryphium, 1581, pp. 55-56).

25. Dc 1656, VI.1, p. 49.

26. *Ibid.* (Dc 1999, VI.1, p. 58).

27. Thomas Hobbes, *Critique du 'De mundo' de Thomas White*, Introduction, texte critique et notes par Jean Jacquot et Harold Whitmore Jones, Paris: Vrin-CNRS, 1973 (hereafter *De motu*), III.2, p. 117.

considering our phantasms, or, the things conceived. One is to consider them («that is, bring into account») as «species of external things»; the other is to consider them as «internal accidents of our Mind»²⁸.

The former consideration shows us that the understanding of the phantasm as species of external things (even if «not as really existing, but appearing only to exist, or to have a Being without us») demands a reference to something independent from the mind, that is bodies. That is to say that, a reference to bodies is necessary to consider phantasms as species or images. Therefore the consideration of phantasms as mere species or images or ideas belonging to the mind (or to sentient) does not allow (pace Descartes) to sever all reference to the body (even though Hobbes never defines how to conceive this reference).

The alternative is precisely when we want to sever every reference of phantasms to external things, and consider them as only concerning the mind. This is possible only considering them as «internal accidents of our Mind»²⁹. But also in this case we cannot but involve the body, because we cannot imagine nothing existing but as a body. Therefore to consider phantasms as «internal accidents of our Mind», is precisely to consider them as accidents of a peculiar body which is our brain. But, since we have no experience (i.e. idea) at all, nor can we ever have, of our phantasms (i.e. we cannot have no ideas of ideas: *omnino impossibile est cogitare se cogitare*, as Hobbes says in response to Descartes³⁰), such a consideration presupposes the assumption of the mechanical hypothesis according to which the mind is a material brain (*anima corporea*) whose accidents are movements. In other words, it is impossible to understand anything we think without a reference to body (of course not in the sense scholastic, Cartesian or Spinozan ontologies intend the reference to the their substances).

Incidentally it is noteworthy that Hobbes's distinction represents an important revision of scholastic-Cartesian distinction between objective and formal reality of ideas (a distinction that had in Descartes's *Meditationes de prima philosophia* a very important function). While species, i.e. images (of external things) correspond to what Descartes called the *objective or representative reality* of ideas, Hobbes's distinction presents a very different conceptualization of the *formal reality* of ideas, that is of the idea as act of thinking.

In the Cartesian perspective the absolute certainty of the *cogito*, that is to say of the self being a *thinking thing* or a *thinking substance*, converts the indubitability of possessing ideas in the certain knowledge that those acts of thinking are performed by the mind³¹, that is, that their formal reality is that of «modes» of a thinking substance:

28. Dc 1656, VII.1, p. 68.

29. *Ibid.*

30. Thomas Hobbes, *Objectiones tertiae in Meditationes de prima philosophia*, Ob. II, AT VII, p. 173.

31. «Nam si dicam, ego video, vel ego ambulo, ergo sum; & hoc intelligam de visione, aut ambulatione, quae corpore peragitur, conclusio non est absolute certa; quia, ut saepe sit in somnis, possum putare me videre, vel ambulare, quamvis oculos non aperiā, & loco non movear, atque etiam forte, quamvis nullum habeam corpus; Sed si intelligam de ipso sensu, sive conscientia videndi aut ambulandi, quia tunc refertur ad mentem, quae sola sentit, sive cogitat se videre aut ambulare, est plane certa» (R. Descartes, *Principia Philosophiae* I.9, AT VIII-1, p. 7).

putandum est ... talem esse naturam ipsius ideae ut nullam aliam ex se realitatem formalem exigat praeter illam quam mutuatur a cogitatione mea, cujus est modus³².

In other words, given the ontological significance of the *cogito* the formal reality of an idea has nothing problematic: it is «that which it borrows from our consciousness, of which it is but a mode», or in the French translation «seulement un mode» *de l'esprit*³³.

Hobbes makes two objections: the former is that it seems to him that Descartes's definition of ideas in terms of «modes of consciousness» is not in terms of a subject but in terms of a «faculty», «acts», or «property», while we cannot really conceive any act or mode (he says in the *Third Objections to Meditations*), «sine subiecto suo»³⁴. The latter is that, even though Descartes's definition were correctly in terms of a «subject», this subject cannot be but a body, since we can conceive nothing existing but «sub ratione corporea»³⁵, that is as a body.

But, since we have no real experience of our phantasms as accidents of a body (that is, as we have seen, we have no idea of ideas: «*impossibile est cogitare se cogitare*»), when we consider our phantasms as «internal accidents of our Mind» we are assuming a hypothesis on the corporeal nature of our minds. Therefore the formal reality of our thoughts, phantasms, ideas (or whatever other name we want to give them) can be only in terms of hypothetical movements of our brain, mechanically generated (through the organs of sense) by other hypothetical movements of external bodies. When this hypothesis is scientifically formulated, it is the only possible and hypothetical premise of physics, which precisely begins from the kinetic-mechanical hypothesis of the *φαινέσθαι*.

According to some scholars Hobbes's reduction of phantasms to «internal accidents of our mind» would give evidence for Hobbes's phenomenalism, since it is interpreted as an integral subjectification of bodies accidents; it is not exactly so, because the hypothetical reduction of the mind to a body, that is to the brain, is not an essential theoretical constituent of any form of phenomenalism. Rather, it is the consideration of accidents as «species of external things» (even though «not as really existing, but appearing onely to exist, or to have a Being without us») that generate a science concerning things totally depending on the mind.

We have seen that *considering* means «be brought into account», «in rationes venire»³⁶. To consider «species» means to consider things merely as imagined, that is merely *qua* imagined or «cognita», that is finally *by* or *juxta* the common accidents; i.e. the accidents whose causes or generations are known, that is are in power of the mind.

32. R. Descartes, *Meditatio* III, AT VII, p. 41.

33. «Mais on doit sçavoir que toute idée estant un ouvrage de l'esprit, sa nature est telle qu'elle ne demande de soy aucune autre realité formelle, que celle qu'elle reçoit & emprunte de la pensée ou de l'esprit, dont elle seulement un mode, c'est à dire une maniere ou façon de penser» (R. Descartes, *Meditation troisième*, AT IX-1, p. 32).

34. Thomas Hobbes, *Objectiones tertiae*, cit., Ob. II, AT VII, p. 173.

35. Ivi, p. 175.

36. Dc 1656, VII.1, p. 68; Dc 1999, p. 76.

The sciences concerning common accidents are the *philosophia prima* and geometry (namely, the third part of *De corpore*, the science of *Proportions of motions and magnitudes*); and, since the hypothetical science (i.e. the science deriving from the consideration of accidents «as internal accidents of the mind») is framed in terms of the «general propositions»³⁷ of the first two sciences, the consideration of accidents as «internal accidents of the mind» must be preceded by the other as species of external thing; «and this is the manner – Hobbes concludes, at the beginning of *philosophia prima* – we are now to consider them»³⁸. (In a sense Hobbes's distinction corresponds exactly to our familiar distinction between mind and brain, between perceptive contents and neuronal events of the brain).

Some scholars wondered whether Hobbes is a phenomenalist. The answer depends, of course, on the definition of phenomenism (if a consistent definition is possible without being entangled in the construction of an entire philosophy). In any case, if by phenomenism we mean to critically supersede the ingenuous and dogmatic realism, assuredly he is a phenomenalist. But a phenomenalist who could be also defined a realist because, to put it very briefly, he claims that the body (i.e. something non depending on our imagination) has an unavoidable and essential function in making comprehensible what we think or imagine. Thus to admit or not the existence of bodies – *res existentes* – does not depend on us, but it is a necessary implication and condition of thinking / understanding what we think / understand. From this point of view Hobbes's materialism has nothing to do with an *ontological* or *metaphysical* materialism and even less with a *dogmatic* one. A confirmation of this is given by the concept of imaginary space.

In spite of the above illustrated function of the body as something *existing*, we cannot conceive anything existing (i.e. independent on imagination) but «sub spatio imaginario substerni et supponi videtur» (that is: «placed in and subjected to Imaginary Space»³⁹). And that is as much to say that we cannot think anything *existing* which is not subjected to something that *does not exist*, because depends entirely on the imagination. A paradox Hobbes was completely aware of.

From this point of view it would seem that that of «spatium imaginarium» is the only idea whose conception and comprehension not only does not depend on the experience, that is on the phantasm of «singular thing» (that is it is not an accident of a singular thing, or a «Manner of our conception of Body», as the «real space», *spatium reale*, is), but precedes the experience, is the condition of the phantasm of the singular body. Hobbes had already openly admitted it in *The Motu*: «existentiam spatii [imaginarii] dependere non ab existentia corporis sed ab existentia imaginativae facultatis»⁴⁰. In terms of the four nameable things (Hobbes's categories, so to say), spatium imaginarium is a *phantasm*, but a singular, very peculiar phantasm because it is the phantasm of no singular thing of experience, but the «phantasma corporis simpliciter», that is, as he adds: «dicemus spatium esse imaginem corporis,

37. Dc 1656, XXV.1, p. 290.

38. Dc 1656, VII.1, p. 68.

39. Dc 1999, VIII.1, p. 83; Dc 1656, VIII.1, p. 75.

40. *De motu*, III.1, pp. 117.

quatenus corporis»⁴¹. Which is as much to say that the imaginary space is the real space (and real space is an accident of the body and intrinsically connected to the *existens*) *qua cognitum*, as it is known.

It seems to me that a tension here emerges between a hyper-nominalism and a form of criticism or transcendentalism; a tension which is resolved in such a way to save nominalism. In other words what Hobbes seeks to save is the process of consideration, that is of «computing or reasoning», starting from phantasms of singular things. To consider the body regardless (that is subtracting) every determination connected to the body as existent (that is regardless every its accident) does not produce the annihilation of the phantasm or sensation, but leave another phantasm (not of course any accident) of the body considered only as imagined or imaginable and this is the imaginary space. This is further confirmed by the fact that Hobbes defines a determined *imaginarium spatium* as what the mere image *is made up of* («constat»⁴²). Of course what is made up of by the *imaginativa facultas*.

I cannot understand this doctrine but as a somersault in a new philosophical terrain which has nothing to do with an Aristotelian or scholastic conceptual dimension and that, rather, can be defined as a form of transcendentalism.

All this recalls to mind the authoritative opinion on Hobbes expressed by Pierre Bayle: who, on the one hand, attributed to Hobbes «sans doute une hardiesse, ou une intrépidité d'esprit» (a boldness, or intrepidity of mind); and, on the other, considered Hobbes not much concerned in a real dialogue with philosophical tradition: «Il avoit beaucoup plus médité que lu; & il ne s'étoit jamais soucié d'une grande Bibliothèque»⁴³; and he adds: «pour un homme qui a tant vécu, sa lecture étoit peu de chose»⁴⁴. («He had much more meditated than read, and he never cared about a great library... for a man who had a so long life, reading was a little thing»).

Bayle acknowledges Hobbes's originality and novelty, but does not recognize to him a full right of citizenship in the Republic of Letters (*Respublica literaria*).

The *literati* Bayle is thinking of are actually students of humanities; but even more strong was the ostracism of the mathematicians and scientists. What it is certain is that, whether it was deserved or not, the discredit of Hobbes's geometry was very great among professional mathematicians. It is true that his interest in geometry arised from its method much more than from its content («delectatus» non «ob theoremata», but «ob artem ratiocinandi»⁴⁵); but it is precisely also from a methodological point of view that Hobbes's geometry is problematic, though geometry should offer the methodological paradigm of science.

41. *Ibid.*

42. «Jam huiusmodi imagines constant colore et figura; figura autem spatium finitum est. Cum igitur imago ipsa non est ibi ubi obiectum, neque etiam figura, ex qua constat, ibi est ubi obiectum; spatium ergo apparens solis, sive cuiuscumque alterius obiecti, non inhaeret in ipso obiecto, sed est mere imaginarium» (*De Motu*, III.1, p. 116). The *image of the body* is the *body qua imagined*, or «cognitum», i.e. *imaginary*.

43. Art. *Hobbes*, in P. Bayle, *Œuvres diverses, Volumes supplémentaires*, vol. I, 1: *Choix d'articles tirés du Dictionnaire Historique et Critique*, éd. par É. Labrousse, Hildesheim, New York, 1982, ripr. della V ed. 1740, p. 527.

44. *Ivi*, rem. O, p. 527b.

45. Cfr. *Vita in Thomae Hobbes Malmesburiensis Opera Philosophica Quae Latine Scripsit Omnia*, in unum corpus nunc primum collecta studio ed labore Guglielmi Molesworth, Londini: Richards, 1839-1845, I, p. xiv.

We have already considered the double operation involved in the process of science, and in a paradigmatic form in geometry: the former is the conception (or construction) of kinetic generations (*concepta generatio*); the latter is the deduction from propositions formulated in terms signifying these generations. Hobbes reasserts this in chapt. XX:

And seeing also, that the end of the *Analyticks*, is either the construction of such a Probleme as it is possible, or the detection of the impossibility thereof; whensoever the Probleme may be solved, the *Analyst* must not stay, till he come to those things which contain the efficient cause of that whereof he is to make construction. But he must of necessity stay when he comes to prime Propositions; and these are Definitions. These Definitions therefore must contain the efficient cause of his Construction; I say of his Construction, not of the Conclusion which he demonstrates, for the cause of the Conclusion is contained in the premised proposition; that is to say, the truth of the proposition he proves, is drawn from the propositions which prove the same. But the cause of his construction is in the thing themselves, and consists in motion, or in the concurrence of motion⁴⁶.

But, it seems that in reality, in spite of all his good intentions, Hobbes does not succeed in combining these two different processes of reasoning (that is the construction or kinetic generation and the deduction) in the orderly and clear way he claims, and he is very far from giving such a form to geometry as should belong to it by nature. Confronted with the science that he assumed as a paradigm, his method seems to find an application extremely laborious and perhaps impossible.

Why? On the one hand, in retrospect, we could answer that his conception of the *a priori* nature of geometric accidents – outcomes of our constructions – would demand more complex mediations before being operatively applied to solve problems; on the other hand it is evident the backwardness of his concepts of measure (that is determination of equality and inequality) and of equation. As for the former concept (concerning lengths or areas to be compared) he resorts to heterogeneous calculations (of motions, through «indivisibles» or «powers»). And he, in the end, affirms: «But if the question be much complicated, there cannot by any of these wayes be constituted a cartaine Rule, ... but the successe will depend upon dexterity, upon formerly acquired science, and many times upon fortune»⁴⁷. Sure he reaffirms that «the true teaching of Geometry is by *Syntesis*, according to *Euclides* method»⁴⁸; but it seems to be a confirmation merely in principle.

As for the backwardness of the latter concept (equation), this has to do with the refusal (or underestimate) of algebra. This derives from the strict nominalism of Hobbes, that is from the fact that symbols (and algebra is, according to him, «symbolic») are not – and cannot be – real «names». That is to say: since they lack in that correspondence to real ideas (i.e. ideas actually present in the mind, or in the imagination) in which the «evidence» consists (and «evidence» is the first requisite of knowledge). The «evidence», he says in *The Elements*, is «the concomitance of a

46. Dc 1656, XX.6, p. 230.

47. Dc 1656, XX.6, p. 232.

48. *Ibid.*

man's conception with the word's that signify such conception»⁴⁹. In the following works the concept of evidence seems to be absorbed in that of «truth» (of an idea), very probably in order to avoid that a distinction between «evidence» and «truth» could induce readers to believe that a knowledge could be true (in the sense of syntactically true) without being evident⁵⁰. In fact Hobbes affirms that only the names can be used which «signify» ideas really present in the mind; therefore he never was the theorist of the science as a merely linguistical or syntactical construction. By contrast, he claims a perfect one-to-one correspondence between «names» and «ideas» (it is obvious that by «name» he does not mean a singular term, or voice, but any combination of words corresponding to a certain idea).

The real existence of the idea is what grants comprehension (understanding), without which there cannot be that process which is called reasoning and demonstration.

Therefore, faithful to these assumptions, he cannot but deny the nature of true science to algebra, whose «symbols» he continues to understand as those made use of by the scholastic logic.

Even on this point the divergence from Descartes cannot be greater.

49. Thomas Hobbes, *The Elements of Law Natural and Politic*, edited with a preface and critical notes by Ferdinand Tönnies, Ph.D., Cambridge: At the University Press, 1928 (1889¹), I, VI.3, p. 19.

50. See, *Leviathan*, IV (ed. by R. Tuck, Cambridge: Cambridge University Press, 1991, p. 24 ff.).