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An example of the “synthetic a priori”: On how it helps us to widen our philosophical horizons

Abstract: A putative example (not Kant-style) of the “synthetic a priori” is examined with a view to, not establishing whether or not it truly belongs to that category but to drawing a philosophical lesson from the fact that it, or a similar proposition, is no longer indisputably empirically true. The example is “No surface is at the same time and for the same observer red all over and green.” An example is provided of how philosophy could deal with such recalcitrant evidence as may crop up and contradict such seemingly self-evident “synthetic a priori.”

Keywords: meaning; synthetic a priori; analytic chromatology; the concept of evidence; analytical philosophy; ideality

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1 Introduction

In this paper I shall examine an example – or putative example – of a “synthetic a priori” sentence. From this examination, as I shall suggest, certain semantical, epistemological (and perhaps ontological, too) “morals” can be drawn, and I will leave it to the reader to draw them himself.¹ The sentence that will serve as an example of the controversial category of the “synthetic a priori” is not important (at least not philosophically) in its own right.² It is a piece of naive chromatology: “No surface is at the same time and for the same observer red all over and green.”³

1 Throughout this essay, inclusive language is used, i. e. “he” shall include “she,” etc., in contexts like the above.

2 It is a philosophical model, very much like the Angler in Plato’s *Sophist*. For more examples of the synthetic a priori, not all as toy-like as ours, see Wang (1974: 260–261).

3 I take this to mean that the surface in question has, at least spot-wise, two distinct colors, not one color that is, in a sense, both red and green. For why this should be important see Section 2.2.4.

Note that the scope of “all over” is supposed to be “red” only; it is not necessary to extend it to “green.”

Now this sentence – let us call it “Synap-1” for short – is not a classical example of the synthetic a priori in the Kantian understanding of that category. It better fits the Husserlian idea of the synthetic a priori: “Each pure law, which includes material concepts, so as to not to permit of a formalization of these concepts *salva veritate* – each such law, i.e., that is not analytically necessary – is a *synthetic a priori* law” (Husserl 1970 [1900–1901]: 458).⁴

Arguably, the Kantian and the Husserlian (linked by the Bolzanian)⁵ concepts of the synthetic a priori are not merely homonymously called “synthetic a priori.” On the contrary, they are closely interconnected and interdependent; as are those by Frege and Carnap (a putative improvement on Frege’s), both accepted and still current in the analytic tradition.⁶ Otherwise there would not have been so many controversies as to whether certain sentences (or any sentences) belong in that category. (Here I feel obliged to explain that this essay will not produce conclusive results as to whether Synap-1 does or does not belong in the category of the synthetic a priori. Nor am I here interested in the Kantian question of how synthetic a priori propositions are possible.) Such historical questions will not, however, occupy us here;⁷ instead, a major part of this essay will consist in trying to explain in what sense Synap-1 can (though need not) be considered, whether rightly or not, synthetic a priori; the rest will be the philosophical “morals” to be derived from whatever these attempts will have resulted in.

⁴ For German see Husserl (1984 [1900–1901]: 260; A 258/B 256). Husserl’s own example is “This red is different from this green” (Husserl 1970 [1900–1901]: 458), characteristically different from Synap-1. This definition (if such it be) of the synthetic a priori can, of course, become intelligible only in the context of the whole theory of the synthetic and the analytic, which Husserl sets forth in his III *Logical Investigation*, from §10 onwards. As examples of the analytic, Husserl quotes such propositions as “[a] whole cannot exist without parts,” “[t]here cannot be a king (master, father) without subjects (servants, children)” (Husserl 1970 [1900–1901]: 456). On why these examples are questionable see Żelaniec (1992). Also, while I do not know of any kings subjectless *per se*, there seem to have been kings without a country (and hence, too, without subjects), in various senses of this expression, such as Christoffer II of Denmark (1276–1332) or Stanisław I Leszczyński of Poland (1677–1766). The idea that a king without subjects cannot be *imagined* (which is different from its being ontologically impossible) appears in an anonymous Huguenot tract *Vindiciae contra tyrannos* published in the late sixteenth century (Question 3, section 2).

⁵ For the relevance of Bolzano in this context see, for instance, Benoist (1997: 65–76) and Lapointe (2007: 232–233).

⁶ I am simplifying things enormously here. For a sophisticated discussion of various types of analyticity see Margolis and Laurence (2001) and the literature quoted there.

⁷ For Kant, let me refer the reader to De Jong (1995, 2010) and Rood (2005).

2 An analysis of Synap-1

2.1 The aprioricity

For one thing, Synap-1 seems to be a priori in the sense that one is ready to believe it (in fact, most of us would probably say that they have always believed it without even thinking of it) prior to much empirical, still less inductive, research. In fact, a naive subject would think of the very idea of checking Synap-1 inductively as of a philosophical folly, belonging much rather to the Swiftian island of Laputa than to the sphere of serious academic occupations. Yet, it is worth noting that while being a priori in this sense, Synap-1 is not a priori in the much stronger sense of not presupposing at least *some* empirical familiarity with colors; one has to have seen a green thing and a red thing at least once in order to assert Synap-1 or to find it self-evident, as an overwhelming majority of us do.

Or so it would seem. For there is still the other issue, namely, that of the syntheticity (or analyticity) of Synap-1. It is not quite independent from that of the aprioricity of Synap-1.⁸ Those who claim that Synap-1 is analytic would probably contend that it is sufficient to know the meanings of the words of which it is composed (only the meanings of “red” and “green” seem critically important here) to know, prior to *any*, be it ever so episodic, experience, that Synap-1 is true.

2.2 The syntheticity

Why should anyone hold, then, that Synap-1 is synthetic?

2.2.1 Analyticity as truth in virtue of meaning and the diverse meanings of meaning

Let me have my point of departure in a frank concession: It is not difficult to admit that in a sense Synap-1 is true *ex vi terminorum*⁹ or in virtue of the meanings of its constituent terms (and hence analytic in a sense close to Kant’s and even closer

⁸ We are sometimes reminded that “a priori-a posteriori” and “analytic-synthetic” are distinctions belonging to different orders and lying within the domains of different philosophical disciplines: the former belongs to epistemology, the latter to semantics; see, for instance, Casullo (1992, 2002). This is undeniably correct; yet it is equally true that meaning (semantics) moulds cognition (epistemology), so the dimensions are not quite orthogonal to one another. See once again Margolis and Laurence (2001) for a discussion of such things as “metaphysical analyticity” and “epistemic analyticity.”

⁹ To speak with Sellars (1953).

to Frege's), in particular of "red" and of "green." For the concept *meaning* is itself notoriously difficult, hence titles of learned treatises like "The meaning of meaning," so abundant in various languages and stylistical variations. It is, therefore, always possible to find such a "meaning of meaning" as convincingly bears out the thesis that Synap-1 is true in virtue of the meanings of its constituent terms, and thereby, analytic.

2.2.2 Meaning as (actual) use and why it does not explain all

For instance, if we consult large text corpora, such as that of American English (<http://www.americancorpus.org/>) or that of the modern Danish language (<http://ordnet.dk/korpusdk>), we shall see that most contexts in which the word "red" (or its counterparts in other languages, such as *rød* in Danish) occurs (*qua* a color-word) suggest that the things described in them as red are not green at the same time, neither all over nor even locally or spot-wise. It would also be a challenge to find a report or a work of fiction in which a person informed that such-and-such object was red all over seriously asked whether it was not, at the same time, at least spot-wise green (and did not thereby make a fool of himself).

However, with regard to this concept of meaning the question is justified if Synap-1 owes its self-evidence¹⁰ only and exclusively to the meanings (so conceived) of the color-words involved, or only (if at all) in part; in the latter case it could be that the meanings are what they are in virtue of the self-evidence of Synap-1; this self-evidence itself would then remain, at least in part, unaccounted-for in terms of meaning and thereby analyticity.

Here is what I mean: It is a well-known fact that words change as well as acquire their meaning under the influence of what their designata are frequently observed to be. Things called "X" are thus-and-so, typically, they typically are a bundle of properties; the connotation of "X" encompasses several properties of these things; after a time, under the influence of the observation revealing that some of them go or fail to go together with some others, initially included or not in that connotation, some properties will be added and/or some others excluded from the connotation of "X" and this will be reflected in the actual use of the expression "X." For instance, "sad" originally meant "satiated," "full," as etymological dictionaries tell us;¹¹ under the influence of the observation that people,

¹⁰ For what it is worth, of course, that is, whether or not Synap-1 really is true.

¹¹ Actually, the meaning of "sad" might have gone through the intermediate stages of "having had one's fill, weary, tired of something" and "grave, serious" (Little et al. 1972: 1776), for instance as in Chaucer's (*Canterbury Tales*, *The Canon's Yeoman's Tale*, 324–325): "Yet of the Art

when satiated and “full,” tend to be motionless, much like those grave or sad, the adjective stripped off the old meaning and acquired the one that it currently has. Similarly, in colloquial English, we use the words “weight” and “mass” synonymously and even measure weight in mass units (such as kilograms); everyday observations tell us that weight changes with mass and vice-versa; it took the genius of Galileo to give reasons why the words should have different meanings. Or: I have known people in whose idiolects the sentence “all monarchies are hereditary” was analytic, as they knew only hereditary monarchies.¹²

In a similar fashion (it could be suspected), influenced by the obviousness of the truth of Synap-1, we have subconsciously built in the component expressed by “non-green” into our naive “definition” (understanding) of “red” and now can naively imagine that that obviousness itself is warranted by this definition, Synap-1 becoming on its strength analytic.¹³ This is not to deny that Synap-1, in a certain sense and on a certain level of language, *is* analytic; yet it must be borne in mind that this analyticity only in (a less interesting) part explains why Synap-1 is self-evident. In the world of everyday experience “weight” and “mass” mean the same, yet the more interesting part of the explanation why a proposition like “weight changes in proportion to mass” is (in that world) obviously true has to do with gravitation forces, curvature of space and other such things; not with the way we happen to use certain words.

This may be so, someone will perhaps reply, just because we have construed “meaning” in a rather unphilosophical, trivial fashion, so as to make appear the invocation of the meaning of “red” to be of little explanatory force. We have, in fact, construed it as “use” in a downright empirical sense: just the way people talk. But it is always possible to reconstruct the meanings of these particular color-words, “red” and “green” in a more philosophically sophisticated way, so as to render Synap-1 analytic in a correspondingly more interesting sense. The

[i.e., Alchemy] they kan nat wexen sadde, ffor vnto hem it is a bitter swete” or in an anonymous quotation from 1579: “What woman nowe-a-dayes (that is sadde and wyse) will be knowne to haue the skill of dauncing?” (Little et al. 1972: 1777). *Satt* in German still means “satiated.”

12 The Roman Empire, the Holy Roman Empire of the German Nation, and Poland have been for large parts of their history, the Papacy for all of its history, non-hereditary monarchies.

13 Actually, in the realm of naive chromatology Synap-1 becomes – on the strength of that naive definition of “red” that contains “non-green” as a meaning component – only a promise of an analytic truth. For it is not certain what other components this definition of “red” should be taken to include. “Non-blue”? “Non-white”? “Non-orange”? Certainly. But is that all? Certainly not. So what else? . . . Thus, Synap-1 becomes something like “no surface is at the same time and for the same observer (dot-dot-dot) and non-green all over and green” – only a schema of a well-behaved proposition. Providing a complete definition of “red” in terms of what color a red surface is not seems to go far beyond our collective powers as naive users of the English language.

temptation is difficult to resist, given how self-evident Synap-1 is. Yet it matters to watch out for question-begging premises adopted in a reconstruction like that. In an early article, Putnam put forward a rather sophisticated argument for the analyticity of Synap-1 (or something very like it); the argument hinged essentially on the premise that to be red (of some particular tone) is to be (in color) exactly like some paradigmatic red object (Putnam 1956). Now this premise is question-begging, because, if the paradigmatic red object is not at the same time green (which it most likely is not, as we know from experience¹⁴) then the premise smuggles in the conclusion that ought first to be reached.¹⁵ Since such philosophical reconstructions of color-words are plentiful, I shall let the matter rest at this general word of warning and return to my concept of meaning as empirical use.¹⁶

2.2.3 Two objections to the claim that analyticity conceived as above does not explain all

Someone might protest that the original truth of Synap-1, i.e., that which logically and temporally preceded the meaning adjustment for “red” (that is, the inclusion of “non-green” into its connotation) that explains the present self-evidence of Synap-1, might very well have been non-a priori in the sense explained in Section 2.1, that is, it might have been empirical and inductive (similarly, only by frequent observation did the English of yore establish that persons no longer hungry tend to be still).

Another possible objection is that a parallel argument – analyticity, even if granted on a certain level of language, does not explain much, as it is due to meaning relations that are themselves possible only on the strength of what it was supposed to explain (see Żelaniec 2006) – could be employed with respect to “All bachelors are unmarried” (Bachelor), to cast doubt on its analyticity. Yet no one in his right wits would dream of classifying the Bachelor as synthetic a priori, except perhaps ironically.

14 Nothing impedes experience from confirming what we find self-evident, anyway. And if, in an act of intellectual askesis (analogous to the Husserlian *epoché*) we made abstraction from Synap-1, we would still empirically find that (to formulate it in the spirit of English understatement) most uniformly red objects hitherto seen were not even locally – still less uniformly – green.

15 See Pap (1957) and Żelaniec (1996a). The conclusion sneaks in in the form of the decision not to call a red object “red” if it were not exactly like the paradigmatic red object (in color), for instance in that it was, too, at least locally green.

16 All use is empirical, the reader may say; I am adding this adjective, however, to signal that I am using “use” in no philosophically (*à la* Wittgenstein?) reconstructed sense.

I have no answer to the first objection, having no sufficient knowledge of what the world of the English of yore was like nor what it looked like to them. (One of my suggested philosophical “morals” will, however, pertain to what one day the world might look like.)

As to the second objection, however, the correct answer that I am inclined to give is that a similar line of argument would indeed – but only up to a certain point, where it breaks down in an instructive way – be possibly applicable to the Bachelor. The English of yore saw (let us imagine) what they called “bachelors” (in a sense slightly different from ours) in their world, and they also saw that these so-called bachelors were unmarried, so after a few generations they incorporated the idea expressed by the expression “unmarried” into the meaning of “bachelor” so that we are now firmly convinced that the Bachelor is true simply *ex vi terminorum*. This parallel with Synap-1 might appear of little credibility, which is the first point of difference, but remember: we are now, as our linguistic forefathers were not, firmly in the grips of *our* current semantic intuitions concerning the meaning of “bachelor” (they were in the grips of *theirs*).

Yet, the analogy holds up to a point only, and there is another, more important difference to the Synap-1 case. For, no matter whether the story above is true or whether the meaning of “bachelor” has always been what it is now, it is possible at least to imagine (and coherently describe) a male human being who is in all relevant respects like a typical bachelor, except that he is married. I mean cases of real marriages (not just those entered into for immigration purposes or similar) where spouses, though tied with a valid marital bond, decide, for whatever reason, not to establish a common domicile, etc. Such cases are odd, to say the least, and far less likely than those – more in line with current tendencies in morals – of men who are all but undistinguishable from husbands yet *not* married; but such cases are neither illogical nor metaphysically impossible. I have personally known at least one case like that. Now it is thinkable that, if the word “bachelor” ever failed to include “unmarried” as one of its meaning-components, it might have got this component incorporated into its meaning not just due to the frequency with which unmarried bachelors were witnessed, but also in order to draw a clear borderline between the (regular) case of an unmarried bachelor and the (odd) case of a married one. And if the word “bachelor” has always meant what it means today (which seems historically more believable) the meaning of “unmarried” having always been one of its meaning components, it is understandable why a word like that has been invented and given, from the beginning, the meaning it has had and continues having: it was invented to cover all and only those cases of male human beings who are not married to a woman, independently of whether they do or do not share bed and table with one. In olden days, being unmarried went together (for a man) with not living in a marriage-like

community with a woman; nowadays, it tends to go together with doing so; if this shall ever be reflected in a corresponding semantic shift of “bachelor,” the expression “someone like a bachelor except married” could well start covering married men leading normal marital life (presumably an extremely rare case by then, so the expression even after the meaning-shift should continue having a narrow extension).

Now, note well, nothing like all of that is thinkable for Synap-1. It appears, by contrast, self-evident that – much as there can be and possibly have been individuals exactly like bachelors with the sole exception that they were married – no surface can be exactly like one that is red all over with the sole exception that it is (possibly only spot-wise) green. (There are abundant things green, but they are not “exactly like red except that they are green”; green and red are too different for that.¹⁷) Let us call this sentence Synap-2. It has no counterpart, as we have seen, in the case of the Bachelor. Its self-evidence makes all attempts to draw a borderline between things that are only-red and those that are red-and-green (in analogy to the borderline between married bachelors and unmarried bachelors) superfluous. Counterexamples to Synap-2 do not seem to be available, or imaginable, or thinkable. When Ayer says:

Thus if I say, “Nothing can be colored in different ways at the same time with respect to the same part of itself,” I am not saying anything about the properties of any actual thing; but I am not talking nonsense. I am expressing an analytic proposition, which records our determination to call a color expanse which differs in quality from a neighboring color expanse a different part of a given thing. (Ayer 1946: 74)

it is not at all clear where he thinks there is, in these matters, any room for “our determination” or decision to take and divide matters up. In the realm of things pertaining to marital status there is, by contrast, room for delineations and delimitations like that: you (as a legislator) might decide to call unwed cohabiting couples “common law marriages,” you might be bent on giving (or refusing) the name “marriage” to civil contracts entered into by homosexuals and so on: As there is some indeterminacy in these matters, there appears to be ample room for legislation, linguistic or otherwise. But in the case of differently colored expanses of a thing there simply is no choice except to call them “different parts” of the same thing. They are not “exactly like one and the same part except that they are two different colors”; they are very clearly two different parts. Their color-difference only helps to see that they are different parts; this expedient is fre-

17 This seems to have lain at the core of Hering (1964).

quently employed in map-making and the art of drawing diagrams (Stjernfelt 2007: ch. 8). Ayer was, perhaps, no lover of either maps or diagrams.

We could, thus, conclude that since a similar reasoning as that for Synap-1 could be carried out for the Bachelor, they are both synthetic or analytic, and since the Bachelor is analytic, so is Synap-1; but given that the reasoning is, as we have just seen, not exactly the same unless we gloss over Synap-2, the latter would have to be dealt with somehow. Since it looks self-evident, it is best declared analytic. But since its analyticity requires some argument no less than that of Synap-1, chances are that in the process of constructing such an argument a Synap-3 would come to light, giving rise to analogous problems, and so on. An infinite regress would be launched – or perhaps not really an infinite one, but one without a foreseeable end. The analyticity of Synap-1, at least if demonstrable along the lines traced here, would come out as a promise, a programmatic declaration, a regulative, rather than constitutive idea in Kant’s sense, at best.

2.2.4 Taking a few steps back and learning from experience

Now it is possible that at some stage in this regress a proposition like this one (call it Synap-k) would crop up: “Red and green are colors between which no color is intermediate.” Synap-k is of independent interest: it is as self-evident as were Synap-1 and Synap-2, it is about colors only, not colors covering a surface (in this it differs both from Synap-1 and Synap-2) and it involves a new, not hitherto employed, concept from naive chromatology, that of “intermediate color.” This concept cannot be defined but it can be made accessible by means of such examples as: Orange is intermediate between yellow and red (Reinach 1921: 395, 1989: 543); purple is intermediate between red and blue; turquoise is intermediate between blue and green. Now it seems self-evident – again, not to someone who has never seen samples of these colors, so this self-evidence is a priori in the above-mentioned weak sense – that between green and red there is simply no intermediate color in this sense. In the additive color system yellow is the “addition result” of green and red, but we do not perceive it as intermediate between red and green in the same sense in which we perceive purple as intermediate between red and blue. Still less do we perceive so the ugly dark brown that results from mixing red and blue in the subtractive color system. By contrast, green is itself the “subtraction result” of yellow and blue, but green is not intermediate (in the sense here intended) between the two.

Yet, despite all this, scientific experiments have demonstrated that under suitable circumstances some observers can see a “reddish green” (Thompson

1995: 269),¹⁸ strictly speaking a surface (a “field” [Crane and Piantanida 1983: 1079]) that is uniform in color (so it would be not a counterexample do Synap-1¹⁹), and whose color is, in a sense,²⁰ intermediate between red and green.²¹

This result, if we should take it at face value, shows that reality, even if it is just reality manufactured in a laboratory, can belie even our most entrenched, most (seemingly) self-evident beliefs. In this sense, it significantly widens our epistemological horizons. This shows that it is imprudent to set too much store with apriority, which must be regarded in many cases as revisable (Smith 1996), and still more imprudent to erect high walls of analyticity around propositions that might just reflect our linguistic habits formed not just by convention but in a significant part by the way the world has so far appeared to us.

3 Conceptual instruments for a widened horizon

Now for Synap-1, as distinct from Synap-k, there is no such horizon-widening available as yet. Should it be forthcoming, at some stage in the future, it would be philosophically important to “make sense” of it conceptually, tell a coherent story of what we are seeing when we see a surface that is on one hand uniformly red but on the other, too, at least spot-wise green.²² I have argued (Żelaniec 1996b)²³ that this is exactly what we cannot, at the current stage: We can say “here is a surface that is on one hand uniformly red but on the other, too, at least spot-wise green,” and while this is a grammatically²⁴ correct English sentence with no contradiction in it, we cannot further describe this surface. The thought-experiment remains sterile.

18 Thomson refers to Crane and Piantanida (1983). For a later development see Billock et al. (2001).

19 Hardin says in the context of Crane and Piantanida (1983): “it is conceptually possible that something should look red and green all over” (Hardin 1988: 125) but he means “red and green all over” not in the sense of Synap-1 but in a sense analogous to that of something like “this uniformly turquoise surface is blue and green all over.”

20 For precision: I do not know if exactly in the same sense in which orange is intermediate between yellow and red. Nida-Rümelin and Suarez (2009) seem to think not. In any event, the formulation “reddish green” seems strongly suggestive of a kindred, if not exactly the same, sense.

21 “[S]ingle unitary color composed of both red and green” (Crane and Piantanida 1983: 1079).

22 But Crane and Piantanida do try to tell such a coherent story for the case of reddish-green surfaces, see Crane and Piantanida (1983: 1079).

23 Three important sources of inspiration for this work have been: Pap (1958), Delius (1963), and Smith (1992).

24 In the grammarian’s, not the philosopher’s, sense.

But suppose we *have* seen a surface like that: Are there any ontological implements to accommodate such an astonishing phenomenon? Remember that the surface has two colors, not (unlike in Crane and Piantanida’s experiments) one (reddish-green). Taking a hint from Aristotle, we can, perhaps, surmise that what (ontologically) is going on here is that in this particular case there two different “first subjects” or “first recipients” as Miss Anscombe has translated it (Anscombe 1963: 36) for the two colors. Aristotle employed, at different places in his work, the concept of “first” or “primary subject” (*hupokeimenon proton*) of a quality, that is, of that subject that is the bearer of the quality *not* because it itself inheres²⁵ in some other subject. Aristotle’s favorite example is “white” (quality) and “surface” (subject).²⁶ The concept is not without complications, both intrinsic to the Aristotelian system²⁷ and independent of it,²⁸ not the least because of the difficulty of the concept of “inhering in a subject.” But at a certain level the idea is intelligible. Now, it could be that in the particular case of our hypothetical red and green surface there are two “infra-surfaces” (for lack of a better word), inhering in the surface, and insulating as it were the two different colors against one another. This is, for the time being, philosophical fiction, nothing more, but so is our hypothetical surface. The “infra-surfaces” are just a philosophical means of making sense of a hypothetical counterexample to Synap-1 (which, no more expectedly than that by Crane and Piantanida to Synap-k, may one day be found, or manufactured).

It is perhaps interesting, in this context, to note that we are exploiting the fact that Synap-1, unlike Synap-k, has three protagonists: two colors and their (presumed) common primary bearer, a surface. The incompatibility of colors which Synap-1 expresses, is not just their difference (“green is different from red,” a self-evident truth itself) but their incapability of occurring in the same subject. As Sir David Ross pointed out, an analogous type of incompatibility had been noted by Plato, in his *Phaedrus*, where we learn that

[s]now is not identical with coldness; yet snow can no more, while remaining snow, become hot than coldness can become hot . . . not only is “the odd” always odd, but the number

25 On the rather difficult Aristotelian notion of “inherence” (not in the sense of physical parts) see Owen (1965).

26 See, e.g., *Categories* VI, 5b 6–8, *Physics* VII, iv, 248b 22–23, *Metaphysics* V, xvi, 1022a 20. In *Physics*, Aristotle employs the concept to explain, not quite successfully, why certain qualities as instantiated by specifically different subjects, are comparable. E.g., it is possible, he says, to compare the whiteness of this horse with that of this dog, because the “primary recipient,” i.e., surface, is the same (specifically), 248b 24–25.

27 For instance, it may look as though surfaces and other boundaries were substances, which they cannot be in Aristotle’s system (Owen 1965: 102).

28 For instance, Anscombe (1963: 10).

three, the number five, etc., are always odd; i.e., while there are subjects which can pass from one state to its contrary, there are other subjects which are so wedded to one state or quality that they cannot receive its contrary, while remaining themselves. In other words, there are Forms such that any of them compels anything which it occupies not only to have its own Form (i.e., the Form in question) but also the Form of a certain contrary. . . . The principle is restated thus: “If a Form introduces one of two contrary Forms into everything into which it enters, it never receives the contrary of that form” (105 a 1–5). (Ross 1951: 32)

But here we are surmising precisely that although surfaces are so “wedded” to their colors that they, once they have one, cannot receive a different color, they might be subjects of other subjects (the “infra-surfaces”), in an exceptional case even two of them, both “wedded” to colors in the same way, but due to their twoness, making the surface red and green at the same time.

4 General morals

As we know from the Danish Prince Hamlet “[t]here are more things in heaven and earth . . . [t]han are dreamt of in [our] philosophy” (*Hamlet* Act 1, scene 5, 165–167). It is unwise to invent philosophical instruments for fending off unexpected experience, and myopic to believe such experience metaphysically impossible, just because it appears so at the current stage of knowledge. Things we are so used to that we cannot imagine them being different may well one day take us by surprise and come out different. It is enough that we *qua* ordinary human beings cannot imagine such a course of events; it is not our business *qua* philosophers to provide sophisticated arguments for their putative metaphysical impossibility. There *are* things so impossible, due to the Law of Contradiction (see Aristotle, *Metaphysics*, book IV), for instance married bachelors (as we understand these words now); I have given an argument for thinking why this impossibility is solidly warranted by the *vis terminorum*; as distinct from the impossibility (if such it be) of a counterexample to Synap-1. To a naive mind, that of a child, say, it appears self-evident that all infinities are equal (namely, infinite); it took the genius of Bolzano, Cantor, and their successors to demonstrate that there are smaller and larger infinities; it appears, and has always appeared self-evident not only to naive minds that velocities are additive, but there came Einstein; it appears obvious that there are collisions of inert bodies; Ruder Boscovich provided us with (perhaps not quite convincing) arguments to believe that that is just an illusion; Ingvar Johansson undermines Boscovich’s arguments with a reasoning that, as a point of departure, bids adieu to another tenet of common sense: that no two physical things can occupy the same place at the same time (Johansson 1989: 189). Is that tenet’s similarity to Synap-1 merely incidental? Even if it is, the

similarity is instructive. Rather than invent tools for defending a conservative picture of the world, philosophy can better spend its resources on inventing tools for accommodating new forms and colors in that picture as may appear, even if is not certain – and far from certain – that they will appear. Polish novelist and philosopher Stanisław Lem once compared the role of the mathematician to the work of a mad tailor who keeps sewing all kinds of weird suits, with seven arms and such, hoping that one day a customer will come around whom they fit. The role of a philosopher may well, at least in part, be similar.

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Bionote

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