

Categorizing Imaginary Objects

GUSTAVO ARROYO



Abstract

Philosophers often invite their readers to categorize imaginary objects. These objects are not only hypothetical: many of them cannot exist because of physical or technological reasons. They are unprecedented or unheard-of objects. By categorizing imaginary objects, philosophers expect to gain knowledge about our concepts. In this paper, I challenge this general assumption: not every conceivable object can be described in terms of our existing categories. Although prominent philosophers held similar views in the past, they made no effort to provide a satisfactory explanation for such impossibility. The argument that I will develop in the following pages rests mainly on three philosophical assumptions: a) that concepts whose content philosophers attempt to describe denote “monothetic classes”; b) that concept formation depends largely on “ecological salience” (a notion developed in the field of ethnobiology); c) that in any monothetic class, we can draw a proper distinction between definitional and correlated properties.

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1 Introduction: Imaginary Objects

Philosophers often invite their readers to categorize imaginary objects. These are imaginary not only in the sense of being hypothetical: many of them cannot exist because of physical or technological reasons. They are unprecedented or unheard-of objects. They are objects whose existence would surprise or amaze us. Philosophers are generally interested in the way such objects are to be classified or categorized. Let us say that a “categorization question” is a question about how an object (imaginary or not) should be classified or categorized. “What would you call that?”, “Is that an x ?”, “Would you say that this object is an x ?” are a few different ways to formulate categorization questions. To begin with, I

will list a few examples of imaginary objects and categorization questions associated with them, taken from philosophical literature. These will help the reader who is not familiarized with this type of philosophical exercise to get an idea of the sort of construction being referred to.

1. A fugue written for a synthesizer whose lowest note is at 30,000 hertz, i.e., above the range of human hearing. Is it a musical work? [8, p. 11]
2. A piece that has a tempo indicated as ‘crotchet = five years’. The opening sixteen-bar theme lasts for more than three centuries. Is it a musical work? [8, p. 11]
3. A person who enters a futuristic machine that has the capacity of gathering information about the person’s structure. The machine reduces her to disconnected atoms, which it stores. Later, using the information thus gathered, it reassembles the components it has stored, just as they were before. Is the person dead or alive during the period between disassembly and reassembly? [21, p. 44]
4. Wilbur’s body. It has been cryogenically preserved immediately after its vital functions have ceased. If future medical developments enable restoring it to life, should we say that he was dead or alive during the period in which he was deep frozen? [29, p. 9]
5. The nerves in Brown’s brain have been connected to the nerves in Robinson’s body. There is a person with Robinson’s body but in character, memories, and personality, that person is quite indistinguishable from Brown. Should we say that this person is Brown or Robinson? [26, p. 4]
6. In Jean Paul Sartre’s short story *The Wall*, the republican Pablo Ibbieta is taken prisoner and interrogated as to the whereabouts of the leader of the resistance, Ramon Gris. Ibbieta won’t betray his leader for anything in the world. He believes that Gris is hiding out at his cousins’ and therefore tells the guards that Gris is hiding in the cemetery. Unbeknownst to Ibbieta, Gris has moved from his cousins’ house to the cemetery. Gris is captured, and Ibbieta is released. Did he *lie* to the guards? Was he truthful to them? [22, p. 219]

A characteristic trait of such questions, in contrast to categorization questions relative to more prosaic objects, is that either we are not certain about how such questions should be answered or, if we are, the

answers that we give typically do not agree with the answers that other people are inclined to give. This is the first thesis in this paper: many imaginary objects resist categorization. I appeal not only to the way I am inclined to react to such questions, but also to what I have often experienced about other people's reactions. The belief that our concepts can fail us when it comes to classifying uncommon or unprecedented situations was supported also by eminent philosophers in the past. In a passage of *An Essay Concerning Human Understanding*, after expressing his doubts about the possibility to say whether some of the creatures imagined by Licetus in *De Monstris* are to be considered men or animals, Locke writes:

If any of these creatures had lived, and could have spoken, it would have increased the difficulty. Had the upper part to the middle been of human shape, and all below swine, had it been murder to destroy it? Or must the bishop have been consulted; whether it were man enough to be admitted to the font or no? [20, Bk. 111, ch. vi, sect. 27]

John Austin made a similar point in his classical "A Plea for Excuses". Austin imagines a "goldfinch" that suddenly does something outrageous: "(explodes, quotes Mrs. Woolf, or what not)". Should we say that it was a goldfinch? Austin's answer: "We don't say we were wrong to say it was a goldfinch, we don't know what to say" [2, p. 88]. Isaiah Berlin recalls that Austin referred in his seminars to Gregor Samsa, the famous character from Kafka's *Metamorphosis*, a traveler who wakes one morning to find that he has been transformed into a cockroach, although he retains clear memories of his life as an ordinary human being. Should we regard Gregor Samsa as a man with the body of a cockroach, or a cockroach with the memories and consciousness of a man?

"Neither," Austin declared. "In such cases, we should not know what to say. This is when we say 'words fail us' and mean this literally. We should need new words. The old ones just would not fit. They aren't meant to cover this kind of case." [3, p. 169]

Another famous transformation case is mentioned by Wittgenstein in *The Blue Book*: the novel *Dr. Jekyll and Mr. Hyde*, by Robert Louis Stevenson, in which a man (Dr. Jekyll), with the help of a potion, transforms himself periodically into a deformed monster (Mr. Hyde). "Were Dr. Jekyll and Mr. Hyde two persons or were they the same

person who merely changed?” Wittgenstein’s answer is that “we can say whichever we like” [37, p. 62], implying, I think, that there is neither “right” nor “wrong” in this case.

Another philosopher who defended the “we-should-not-know-what-to-say”-position was Frederick Waismann. He imagines a piece of metal that has all the phenomenological properties of gold but does not pass the spectroscopic test:

The notion of gold seems to be defined with absolute precision, say by the spectrum of gold with its characteristic lines. Now what would you say if a substance was discovered that looked like gold, satisfied all the chemical tests for gold, whilst it emitted a new sort of radiation? ”But such things do not happen.” Quite so; but they might happen, and that is enough to show that we can never exclude altogether the possibility of some unforeseen situation arising in which we shall have to modify our definition. Try as we may, no concept is limited in such a way that there is no room for any doubt [34, pp. 122-123].

Waismann tried to make his point plausible appealing to our intuitions about several hypothetical examples, and coined a term to designate this phenomenon (“open texture”), but he did not attempt to explain its origin. In particular, he did nothing to dispel the air of irrationality that seems to lurk in the concept “open texture”. Let us take Waismann’s example: the “precise definition” of “gold” established only one condition for something to be called “gold” (that the metal emit a certain type of radiation), but the imaginary case did not satisfy it. Why then should we be reluctant to exclude it from the category of gold? Waismann says that the reason is that, although it does not satisfy the defining conditions, the hypothetical metal looks like gold and satisfies all chemical tests for gold. But such properties are not part of the “precise definition”. Similarly we do not consider conditions *not* included in the definition of “prime number” when we have to decide whether a natural number is a prime or not. So, *prima facie*, the hesitation to exclude the strange metal from the category of gold seems to be completely unjustified.¹

Unlike Locke, Austin, Wittgenstein, and Waismann, I will not limit myself to record the fact that for some imaginary objects there is no such certainty. We will attempt to provide an explanation for it, namely, an account showing that the impossibility to categorize certain objects like those mentioned above is a foreseeable trait of natural languages given

certain philosophical assumptions. A possible explanation consists in assuming that the classes denoted by ordinary concepts are not monothetic. As we know, “monothetic classes” are those whose members share a set of attributes that are individually necessary and collectively sufficient for class membership. The class of “prime number” is a typical example of a monothetic class: no natural number can be a prime unless it is greater than 1 and has no positive divisors other than 1 and itself. The classical theory on concepts maintains that the classes denoted by most scientific and ordinary categories are monothetic [25]. Influenced by Wittgenstein’s analysis of “family resemblance”, nonetheless, many theorists since the 1960’s have challenged this classical picture: some scientific and ordinary concepts could also denote polythetic classes. Members of polythetic classes share a set of attributes, but it is not necessary that all the attributes be possessed by every member of the class in order to be a member of it. The classical example of a polythetic class is the class of games, which Wittgenstein analyses in a famous passage of his *Philosophical Investigations* [38, § 66-67].

A recent development of this general view—the so-called “prototype theory”—maintains that polythetic classes are usually built on a core group of paradigmatic examples which instantiate all the distinctive properties of the class ([27], [28], [31]). Non-paradigmatic instances are included in the class inasmuch as they possess “a good number” of these properties. Because “a good number” is intrinsically vague, polythetic classes admit the possibility of borderline cases. With this in mind, it is easy to see how a prototype theorist would handle the difficulties in categorizing imaginary objects: she would maintain that the impossibility to tell whether a work that could not be heard or played would be a musical work, or whether a bird that looked exactly like a goldfinch but recited Virginia Woolf would be a goldfinch, reflects simply the fact that “musical work” and “goldfinch” are polythetic classes and that we have imagined borderline cases of these classes, cases about which we cannot tell with certainty whether they are similar enough to the paradigmatic instances.²

If natural language-concepts fail us when it comes to categorizing imaginary objects, that can have dramatic consequences for the practice of philosophical analysis.³ If our concepts do not have unlimited descriptive powers, then the use of fictional scenarios as a tool to gain knowledge about their content is misguided. Our answers to categorization questions would not arise from the latent meaning of our concepts. They would reveal mere psychological inclinations. Because of that,

many philosophers (from the past and present) would resist the above account. They would deny that all the classes denoted by ordinary concepts are polythetic and would argue that at least the classes denoted by concepts that are philosophical appealing are monothetic in nature. At first sight, the classical view seems to offer a firmer ground for rational participation in radical thought experiments. Given the principle of excluded middle, any object either satisfies the defining conditions of a given class or it does not.

In what follows, I will try to show that this impression is wrong, assuming for the sake of argument (as Waismann did in relation to “gold”) that concepts like “lying”, “death”, and “musical work” denote monothetic classes, and showing that even in that case they should fail us when it comes to categorizing radical unprecedented imaginary objects.

2 Non-Exhaustive Conceptual Systems

We must recall, to begin with, that natural languages do not even have a suitable category for many existing objects. This is a fact that anthropologists have often witnessed in the process of reconstructing and explaining the category systems of non-Western cultures. For example, when they ask their informants to name different plants and organisms that inhabit their environment, they usually find that the informants simply do not know what the pointed plant or organism is called. Sometimes the failure is due to imperfect knowledge. For example, Ellen [9, p. 111] points out that, in the Nuaulu culture, men are normally unable to identify mollusks because mollusk gathering is a task done by women. But quite often the failure is due to the absence of a suitable category in the mother tongue.

The above raises the question of the origin of such conceptual gaps. A brief review of the answers that anthropologists have traditionally provided to such questions can help us understand why we do not have a category for every object we may conceive. Let me summarize some common factors determining conceptual formation that have been identified in recent anthropological literature. The first intervening factor has to do with the frequency with which an object appears in the experience of a language community. The ethnobiologist Susan Gal points that “the less common (an) animal, the more peripheral the position in a category, the less informants agree on its identification or classification” [15, p. 206]. The anthropologist Eugene Hunn coined the term “ecological salience” to designate the frequency with which a language community interacts

with a certain object or organism [17]. For example, “nocturnal animals or animals that are secretive will be less ecological salient than diurnal and confiding species of equal abundance for most human communities” [17, p. 48]. He agrees with Gal that “more abundant and more widely distributed organisms [that is, organisms with high ecological salience] are more likely to be noticed than those less abundant and less widely distributed, other things being equal” [17, p. 48].

In consequence, if a language community lacks a category for a certain object, the gap could be convincingly explained if we can establish that the object has low ecological salience in that community. Many imaginary objects in philosophical literature have no ecological salience at all. Let me illustrate this point introducing an imaginary object that is similar to the one Waismann analyses in his paper. Let us imagine a piece of metal that has all the perceptible qualities of gold except that it corrodes in contact with the air. This is a clear case in which “we should not know what to say”. We do not have a category for a metal of this type. It is not what we call “gold” (standard definitions of “gold” agree in that it is a practically non-corrosive substance), but it is not either any of the metals of our current metal taxonomy. We have categories for different corrodible metals, but none of them has the property of being yellow. Why do we not have a category for this imaginary metal? The reason is that we never found an instance of such an object in the course of our explorations of the world, nor do we believe that such an object could exist. Our categories only recognize objects that have a minimum of ecological salience, and such a metal has none.

Following the same principle, if an anthropologist were to discover a culture whose language had a concept for a metal possessing all the perceptible qualities of gold except that it corrodes in contact with the air, she would conclude that the strange metal exists in the environment of these people. Let us imagine a culture which has a category for this strange metal in its metal taxonomy. They call it “flox”. The majority of the informants in this society can perfectly tell what “flox” is. They can enumerate its essential properties. But let us imagine now that when we ask them to show us an instance of “flox”, they answer, in a very natural tone, that such a metal does not exist. We first suppose that “flox” must denote a fictional metal associated to some mythology or folkloric narrative. But it is not. There are no tales about “flox” in this culture. The reason why they have the “flox” category, as they finally tell us, is that they cannot exclude the possibility that such a metal exists and they think it is advisable to have a conceptual provision in

case that metal were found. This answer sounds absurd because these people seem to behave in a very irrational way, more like some character of Lewis Carroll than real human beings. If they coined a category for this metal, why did they not also coin categories for so many other strange metals that could be imagined? Besides, why make the effort to memorize all these categories when it would be more economical to wait and see whether such a metal crops up, and only then stipulate what must be said about it?

Before going on, let me make a brief comment on the *ceteris paribus* proviso of the principle of ecological salience formulated by Hunn. From the mere fact that any two objects are equally abundant it would be incorrect to conclude that both will be linguistically recognizable. We have concepts for many plants in our surroundings, but many others, which are equally salient, are just “weeds”. That means that other factors must play a role in the process of conceptual recognition. One of them is doubtlessly what Hunn calls “cultural salience” (ibid.) and it has to do with the importance or value of certain types of objects in the culture that elaborates the taxonomy. The more important or valuable an object is, the likelier it is that it will be noticed. We can expect even that a high cultural salience can attract conceptual recognition for objects whose ecological salience is very low. The fact that gold is categorized in many societies in which it is very rare is perhaps an example of this situation. The extent to which the cultural preferences and practical interests of a speech community determine its system of distinctions is a topic of discussion in contemporary anthropology. But this point needs not be discussed in the present context.

Returning to our imaginary exotic society, its members behave in a way not expected of human beings. In real linguistic communities, distinctions are normally established post-hoc; they do not anticipate facts. The concept of biological “motherhood” gives us an historical example. Before technologies of gestational surrogacy emerged, we recognized only two possible ways in which a woman could be related to a child from the point of view of procreation. Either she was his mother or she was not. It was an “all or nothing” distinction. Why did men of past generations not have categories to allocate other forms of relationships (gestational carriers, genetic mothers)? Because these types of relationships had no ecological salience before the 1980s. In that context, the categories “mother”/“no-mother” were exhaustive because there was only one form of procreation. Every woman could be allocated in one of these dichotomous categories.

Suppose that we could travel in time and ask Europeans of the 19th century how they would categorize a woman who is related to a child in the following way: she gave birth to a child who grew in her womb from an egg that belonged to another woman. We invite the hypothetical 19th-century Europeans to imagine that in the future a technology will exist to fertilize an egg of a woman and implant the resulting embryo in the body of another woman, in order that the latter bears the fetus in her uterus until birth. How would they call that kind of relationship? Many would probably say that they do not know how to categorize this “strange” relationship and it would be, I think, the most reasonable answer. The mother who gives birth to a child after such a process has no place in their “all-or-nothing” categorization. And it is equally clear that whoever says that one of the two women is the mother is not using, in fact, the concept “mother” with the meaning that the term had for them. Indeed, they would be extending the meaning of the concept in a certain direction. As we know, the solution to the categorization dilemma that prevailed in the real historical process was different. We created two new categories (“genetic mother” and “surrogate mother”) to allocate these new types of relationship.⁴

The new types of relationships had certainly a *resemblance* to what we call a “mother”. Undeniably, the strange metal that we mentioned earlier also had a certain resemblance to the metal we call “gold”. And this is what usually happens when new objects appear. They are the type of object that we are inclined to describe with the phrase “it is a kind of...” People would have recognized a gestational woman as a kind of mother when there was no *in vitro* fertilization. The same may be said of the imaginary objects that we introduced at the beginning of the text. What Ramon Gris said to the guard can be described as a *kind of* lie, and a fugue written for a synthesizer whose lowest note is at 30,000 hertz is certainly a *kind of* musical work. It is difficult to conceive objects so radically new that they have no similarity with objects of an existing category.

That is what led Waismann to think the problem in terms of the notion of “vagueness”. A concept is vague if there are cases in which there is no definite answer as to whether the term applies, because these cases have similarities with objects belonging to several categories. Gestational mothers resemble traditional mothers and traditional no-mothers as well. Waismann would have said that the concept “mother” was precise until the 1980s (before that time, every woman could be assigned to one of the two antithetic categories “mother”/“no-mother”). He would

have said, in addition, that before this date the concept was also potentially vague (“open textured”) and that the breaking of gestational pregnancy technologies highlighted precisely that. But today gestational pregnancy is not considered to be a borderline case of traditional motherhood. Gestational pregnancy led to a revision of the existing conceptual distinction and to the creation of new precise categories. What Waismann described as a case of potential vagueness can be better captured by the notion of “exhaustiveness”. A conceptual distinction is said to be exhaustive if every item can be assigned to one of the classes involved. We can differentiate now between conceptual distinctions that are absolutely exhaustive and conceptual distinctions that are exhaustive with respect to a certain context. The distinction between prime numbers and composite numbers is absolutely exhaustive. But the majority of our conceptual distinctions are exhaustive with respect to a certain context.

Before going on, I would like to suggest that not only exhaustiveness but also mutual exclusiveness can depend on the context. Categories are said to be mutually exclusive if there is no item that could be allocated to more than one of them. Many distinctions must satisfy this requirement in order to be informative and non-redundant. As in the case of exhaustiveness, we could differentiate categories that are mutually exclusive in an absolute way from categories that are mutually exclusive by virtue of certain empirical conditions. The distinction “composite number”/“prime number” belongs to the first group: no natural number can be composite *and* prime. By contrast, the distinction between wholesalers and retailers, used in a context where legislation bans having both licenses, belongs to the second group. It might be argued that the problem of “not knowing what to say” does not arise in this second type of categories. If, for example, the legislation changed and allowed a firm to have both licenses, it would still be clear how the new sort of undertaking should be categorized: both as a wholesaler *and* as a retailer. But let us suppose that the inclusion of an object in one of the existing categories had inconsistent consequences. We can imagine, for example, that a company pays different taxes depending on whether it is a wholesaler or a retailer. In such a case, it would be natural to say that it is not clear how the new type of object should be categorized although it matches the definition of both classes.

In a passage from the text cited at the beginning of this text, Austin draws a distinction that is perhaps a real and philosophically interesting example of the case just discussed; it is the distinction between a justifi-

fication and an excuse. If we are accused of having done something, the accusers think we have done something wrong and that we are responsible for that. We can try to defend our conduct in two different ways: “we take responsibility but deny it was wrong” or “we admit it was wrong but don’t take full responsibility for the deed; indeed we don’t take any responsibility” [1, p. 2]. In the first case, we admit responsibility but argue that the conduct was not wrongful or impermissible. In the second case, we admit that the action was wrongful or impermissible, but we argue that it was not under our control: we were under somebody’s influence, or it was unintentional, or it was somebody else’s deed, etc. In legal terminology, the first type of response is called a *justification*; the second is called an *excuse*. Many theorists think that justified and excused conducts are, from a legal and a moral perspective, mutually exclusive and irreconcilable.⁵ But let us imagine now the following scenario: a person is threatened with serious bodily harm unless he inflicts harm on the next person who walks into his office. By chance, the next person to walk in happens to be a personal enemy of the subject, who begins attacking him. In this case, there are reasons to consider the conduct of the subject both as justified (it was self-defense) and excused (duress is generally categorized as an excuse).⁶ If we admit that there are legal and practical reasons to resist the inclusion of the conduct in both categories, should we conclude that the distinction is ineffective and useless? Not necessarily. If such cases have null or low ecological salience, the imagined scenario would show only that the distinction between justifications and excuses is not mutually exclusive in absolute terms, but that would not prevent the distinction to be effective when applied in real contexts.

3 *Correlated Properties*

Returning to exhaustiveness, another case will be considered in which “we should not know what to say”. What is curious about this case is that, although the unusual object matches the definition of an existing category, we are nevertheless reluctant to assign the object to that category. This is blatantly not a case of vagueness, because vagueness is, by definition, a case in which an instance satisfies only some conditions of different categories. Consider the following additional example that Waismann mentions in his paper: “Suppose I come across a being that looks like a man, speaks like a man, behaves like a man, and is only one span tall—shall I say it is a man?” [34, p. 122]. The description that

Waismann gives clearly suggests that this being meets all the conditions included in any definition of “man” that we could have formulated before this curious being appeared. Austin’s goldfinch matches also the definition of “goldfinch”. If prior to the occurrence of the strange episode someone would have asked us for a definition of “goldfinch”, we would probably have said something such as “a small bird with a red, white, and black head, and yellow and black wings”, and the bird in question would have satisfied such conditions (“we have made sure it’s a goldfinch”). Why, then, are we disinclined to consider these creatures as a “man” or a “goldfinch”, respectively? Are we not being irrational in refusing to apply the concept to these cases?

So as to understand why that might seem irrational at first sight, let us consider this parallel case: mathematicians have defined that any natural number greater than 1 which has no positive divisors other than 1 and itself is a “prime number”. Can we imagine a situation in which people would not know whether a certain number is a prime number? That situation might arise if they found a number about which they did not know if it has no positive divisors other than 1 and itself (supposing that they did not know the algorithms). But if they knew, the question “is it a prime number?” would have no meaning at all. These people would be like a man who knows that “bachelor” means “unmarried man” but asks “is this unmarried man a bachelor?” We would not understand what their doubt amounts to. Similarly, if we have stipulated to call “goldfinch” a bird with such and such properties, and we are sure that a certain animal satisfies these properties, how could we legitimately doubt if this animal is “really” a goldfinch?

Again, I think ecological salience can explain why our reaction to such scenarios is not irrational. Let us consider one more time as an example the case of “gold”. John Emsley, in his classical book on the elements, defines the concept in the following way: a “soft metal with characteristic yellow color. Highest malleability and ductility of any element. Unaffected by air, water, acids (except $\text{HNO}_3\text{-HCl}$) and alkalis” [13, p. 80]. These are the definitional properties of “gold”. But gold has other properties that are not included in this definition. For example, gold is an excellent conductor of electricity and is not magnetic. I will coin the term “correlated properties” to refer to this second set of properties. Correlated properties are those which are regularly conjoined with definitional properties. If a metal satisfies the first set of properties, then, as a matter of fact, it satisfies also the second set (the reverse does not hold: that a metal is a good conductor of electricity does not mean

that it is gold). A class can have an indefinite number of correlated properties.

Because nature never showed us an exemption to this regular conjunction, nor do we have reasons to expect an exemption, we have never considered the question of how to categorize a metal that passes the test of gold but does not pass the test of electricity. On another note, the answer to the question “should we call “gold” a metal that passes current tests of gold but does not conduct electricity?” will surely hang on the cultural salience of this finding. Conductivity being a very useful property of gold, the answer would probably be negative. But let us suppose that we found a piece of “gold” that did not melt at 1.064°C . If the melting point of this strange metal were not quite divergent, then the answer would probably be affirmative.⁷

What holds for “gold” also holds for other classes. We could imagine the case of a patient who exhibits all the traits of an acute case of scarlet fever (GAS infection, fever, bright red rash, etc.), but who professes to feel as if in perfect health. Should we categorize this as a case of “scarlet fever”? Certain people should be inclined to answer the question with an emphatic “yes”. After all, current definitions of “scarlet fever” state nothing about the experiences of the patient who has the disease. That is true. But the reason for not mentioning that is not necessarily that physicians consider “to feel bad” as completely irrelevant for applying the concept. It could be a sign that the question about its logical status (precisely in virtue of its permanent correlation with scarlet fever) never arose. We do not waste time in deciding about situations that we believe we cannot obtain. Because of that, in this imaginary case, it would be wrong to say that the patient has scarlet fever and wrong to say that the patient does not have scarlet fever.

The term “correlated properties” encompasses more than law-like generalizations. For example, no definition of “musical work” establishes that musical works must be within the hearing range. “Musical works are audible by normal human ears” does not express a logical truth. It is also not a logical truth that musical works have a length that permits that they be played by human beings. These and many other characteristics of musical works fall under my concept of “correlated properties”. They are not dictated by nature, but by our human interests. Such compositions would be pointless. The fact that they are correlated properties implies that the questions posed by Davies in the passages quoted at the beginning of the text (“would a piece whose lowest note is at 30,000 hertz be a musical work?”; “would a piece whose sixteen-bar theme lasts

for more than three centuries be a musical work?") cannot be answered with either "yes" or "no".

The existence of correlated properties that are "taken for granted" also explains our difficulties in categorizing the statement of Ibbieta in Sartre's story. Ibbieta said something that he believed to be false with the intention of deceiving his captors. But what he said turned to be true. Was it a lie? The difficulty arises from the fact that we lack any stipulation about statements that a speaker believes to be false and that he asserts with the intention of deceiving an interlocutor, though they prove to be true in the end. In most cases, "lies" are false statements. That is because many real lies logically exclude the possibility of an error or make it highly improbable. Let us think about the paradigmatic instances of lies: lies about intentions and wishes or lies about events that the speaker has experienced. *The Guardian* published an article about a man who for years claimed to have survived Auschwitz and later admitted that he had lied. When he publicly said that he had been a prisoner in Auschwitz, his intention was to make his listeners believe a statement which he did not believe. Might he have been wrong all these years in believing he never was in Auschwitz? We do not think a normal person could be mistaken in such a case. It is true that not every lie excludes the possibility of error, but when that is the case, speakers usually have reasons to believe that the proposition is false. If I say to John that Mary will come to the party with the intention of making him believe something I do not, it would be odd that I did not have some evidence to think that she will not come. This serves to exemplify how statements made with the intention of deceiving but that turn to be true are relatively rare.

I think that the trait we are discussing about definitions is characteristic of normative propositions in general. Let us consider briefly the case of legal norms. For every legal norm, it is possible to imagine circumstances that fit the literal meaning of the hypothesis of the norm (the part that sets forth the conditions under which a person should be guided by it), but in which it would be rational to doubt if the disposition (the part that states what we should do under these circumstances) applies. A traffic statute provides that all vehicles must stop at the red traffic light. But what if the red light is stuck? What if the red and the green light malfunction and turn on and off simultaneously? What if the traffic light pole is crooked and it is not possible to see from the motorists' position that the light is red? It is far from clear that it is compulsory for us to stop at the intersection in such cases. If someone

would argue that norms are to be followed and it is not incumbent upon us to decide *when* they are to be followed or not, it would be sensible to answer that to follow the statute in such circumstances would have consequences opposed to the purpose of the norm (for example, to make vehicular traffic more fluid). But why, then, are not the exempting conditions included in the text of the norm in order to avoid arbitrariness? Because the number of possible exempting conditions is too large, and most of them have null or little ecological salience. Should some of them occur, normal people are expected to be able to make a sensible decision about what to do in such cases. Therefore, the presence of an exemption clause in a norm may suggest that lawmakers believed that the referred exempting conditions could occur and that “common sense” would not suffice to make a decision in such case. In the same way, we could think that there are “exempting” conditions for any definition. They are not mentioned because they are too large in number, because we do not think they have any chance to occur and, should that happen, a sensible decision could be made in relation to the applicability of the concept.

4 *Concluding Remarks*

How does my account stand in relation to the contemporary debate in the philosophy of classification between constructivists and realists? Constructivism in the philosophy of classification is the view that “the world does not come to us already dissected into discrete objects; rather, it is we who, by adopting particular criteria for what is to count as being presented with the same object as before, slice it up into objects in one manner rather than another” [10, p. 458]. Constructivists typically consider that the ultimate reason why we choose certain properties and not others for defining natural classes is that these properties have a social relevance (the makers of classification systems find it profitable to select these properties and not others). Constructivists also consider that, in principle, there is not only one correct ordering of the world and, for that reason, constructivism is intrinsically relativistic. The problem with “awkward” classifications systems—like the one imagined by the writer Jorge Luis Borges [5]—is not that they are objectively incorrect, but that they are unsuitable to efficiently accomplish the many tasks that classifications are created to serve (to transmit useful information, to make useful predictions, etc.). In contrast, realism—a position that dates back to Plato’s *Dialogues*—considers that “the furniture of the world comes predivided into a unique and objective set of natural kinds” [11, p. 83].

In contrast to Plato, contemporary realists do not believe that such kinds could be discovered by using *a priori* methods exclusively. They assign modern science a leading role in revealing the underlying objective structure of reality; a typical example is “H₂O”, which to realists represents the discovery of an objective natural kind [4].

As a constructivist, I do not believe that science can reveal to us the “true classification” of the world. Science’s classifications just pursue other interests as those that motivate folk-classifications. If metallurgists classify metals by their atomic numbers, this is because this criterion is useful, among other things, for making more precise law-like generalizations. Nevertheless, I do not believe that the above account is incompatible with a realistic perspective about classes. The notion of “ecological salience”, which is the basis of my explanation about why we lack suitable categories for many imaginary objects, is compatible with a realist as well as with a constructivist ontology. In particular, it is not contrary to a realist ontology because to maintain that we have a class for every conceivable object would imply that our classification systems are immutable and that empirical science has no role to play in superseding imperfect classifications systems.

I claimed further that classification problems raised by new empirical conditions should be settled ultimately by their cultural salience. I suggested, for example, that men would decide on the question whether a being that looks like a man, speaks like a man, behaves like a man, and is only one span tall *is* a man attending to the social relevance of this property. But recognizing the relevance of cultural salience is not incompatible with a realist perspective. Furthermore, a realist needs cultural salience to explain why men have created non-natural kinds (e.g., “weed”, “pets” and many others) and, more importantly, why natural classes are sometimes defined differently by the scientist and the plain man. The latter tends to group things by similarities that are important for practical concerns. So, it would not be incompatible with realism to believe that the plain man would tend to decide the question whether the strange creature imagined by Waismann is a man attending to the cultural salience of being one span tall. The realist needs only to make a proviso: biologists are the ones who have the last word on the issue (attending for example to the being’s DNA). In relation to the case of gold discussed above, he can take the same attitude. I claimed that the decision to define as “gold” a metal that lacked a certain property usually correlated with gold would be based on the cultural salience of this property. He can accept that claim and add that we are dealing with

the *nominal definition* of “gold”—which takes into account phenomenological properties of gold that are known to the plain man—and not its chemical *real definition*—which takes into account its atomic number and which he considers the only correct one [35, p. 29].

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Notes

- 1 I do not see that any real explanatory progress has been made in more recent literature addressing Waismann’s notion of “open texture” (Cf. [12], [23], [30]).
- 2 Coleman and Kay [7] offer a good example of this strategy applied to the concept of “lying”. Lakoff [19, p. 83] offers a similar analysis about the concept of “motherhood”.
- 3 For additional comments on this point, see [36] and [16].
- 4 For good surveys on the history of the categorization problems that produced the use of new procreation technologies, see [32] and [33].
- 5 See for example [24, p. 334] and [6, p. 176].
- 6 I adapted this example from [18, p. 298].
- 7 These considerations about cultural salience apply also to the other examples mentioned above. Jonathan Swift has no qualms in describing as “humans” creatures that are very similar to that imagined by Waismann. But if those creatures really existed and lived among us, the decision would be, I think, more difficult. If they were accepted in the class of human beings, a good part of the expectations that we are entitled to raise from the assertion that x is human should be revised.

Gustavo Arroyo
Universidad Nacional de
General Sarmiento
Juan Manuel Gutierrez 1150,
CP 1613, Los Polvorines
Buenos Aires, Argentina
<gjarroyo@yahoo.com.ar>

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