How the diversity of human concepts of nature affects conservation of biodiversity

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Conservation Biology

Contributed Paper

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Abstract: Protecting nature has become a global concern. However, the very idea of nature is problematic. We examined the etymological and semantic diversity of the word used to translate nature in a conservation context in 76 of the primary languages of the world to identify the different relationships between humankind and nature. Surprisingly, the number of morphemes (distinct etymological roots) used by 7 billion people was low. Different linguistic superfamilies shared the same etymon across large cultural areas that correlate with the distribution of major religions. However, we found large differences in etymological meanings among these words, echoing the semantic differences and historical ambiguity of the contemporary European concept of nature. The principal current Western meaning of nature in environmental public policy, conservation science, and environmental ethics–that which is not a human artifact–appears to be relatively rare and recent and to contradict the vision of nature in most other cultures, including those of pre-Christian Europe. To avoid implicit cultural bias and hegemony–and thus to be globally intelligible and effective–it behooves nature conservationists to take into account this semantic diversity when proposing conservation policies and implementing conservation practices.

Keywords: comparative anthropology, environmental philosophy, etymology, linguistics, nature, post-colonial studies, semantics

Cómo Afecta la Diversidad de los Conceptos Humanos de la Naturaleza a la Conservación de la Biodiversidad

Resumen: La protección de la naturaleza se ha vuelto una preocupación a nivel mundial; sin embargo, la misma idea de naturaleza es problemática. Examinamos la diversidad etimológica y semántica de la palabra que se utiliza para traducir la palabra *nature* en un contexto de conservación en los 76 lenguajes primarios del mundo y así identificar las diferentes relaciones entre la humanidad y la naturaleza. Sorprendentemente, el número de morfemas (raíces etimológicas distintas) usado por siete mil millones de personas fue bajo. Las diferentes superfamilias lingüísticas compartieron etimologías a lo largo de grandes áreas culturales que se correlacionan con la distribución de las religiones más importantes. Sin embargo, encontramos diferencias importantes en los significados etimológicos entre estas palabras, reflejando las diferencias semánticas y la ambigüedad histórica del concepto europeo contemporáneo de naturaleza. El principal significado occidental actual de *nature* dentro de la política ambiental pública, las ciencias de la conservación y la ética ambiental — aquello que no es un artefacto humano — parece ser relativamente raro y reciente, además de que contradice la visión de la naturaleza que tienen la mayoría de las demás culturas, incluyendo a aquellas de la Europa precristiana. Para evitar el sesgo y la hegemonía cultural que vienen implícitos — y así ser mundialmente entendibles y efectivos — le conviene a los conservacionistas de la naturaleza que consideren esta diversidad semántica cuando propongan políticas de conservación e implementen las prácticas de conservación.

Palabras Clave: antropología comparativa, estudios postcoloniales, etimología, filosofía ambiental, lingüística, naturaleza, semántica

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***Article impact statement**: The idea of nature exists in most cultures, so awareness of the diversity of the concepts of nature is essential for nature conservation.*
Paper submitted May 20, 2020; revised manuscript accepted September 18, 2020.

Conservation Biology, Volume 0, No. 0, 1–10

DOI: 10.1111/cobi.13639

摘要: 自然保护已成为全球关注的话题。然而,自然这个概念本身仍存在问题。我们研究了世界上76种主要语言在环境保护的语境下对“nature”这个词的翻译的词源及语义多样性,来确定人类和自然之间的不同关系。令人惊讶的是,研究覆盖的70亿人使用的语素(独特的词根)实际上很少。不同的语言总语系在与主要宗教分布相对应的大文化区域中拥有相同的词源。然而,我们发现这些词在词源意义上却存在很大差异,与当代欧洲自然概念的语义差异和历史歧义相呼应。当前西方国家在环境公共政策、保护科学和环境伦理学中认为“自然”的主要含义是非人类创造的东西,这个理解似乎相对罕见且近期才出现,并且与大多数其他文化中对自然的看法相矛盾,包括前基督教欧洲文化。为了避免隐性的文化偏见和霸权,从而使自然的概念在全球范围内都具有可理解性和有效性,自然保护主义者在提出保护政策和实施保护实践时,有必要考虑到这种语义多样性。**【翻译: 胡怡思; 审校: 聂永刚】**

关键词: 自然, 语言学, 环境哲学, 比较人类学, 词源学, 语义学, 后殖民研究

Introduction

Protecting nature has become a widely accepted endeavor since the last quarter of the 20th century. It followed in the wake of a great loss of biological diversity (Worster 1994), amounting to a sixth mass extinction (Barnosky et al. 2011). But as Callicott and Nelson (1998) point out about the complex concept of wilderness, words are important. If nature is now considered under threat on a global scale, conservation scientists must recognize that understanding of the concept of nature itself–no less than the concept of wilderness–is not shared worldwide (Descola 2013). Ducarme and Couvet (2020) show that this word can have several very different and even contradictory meanings within Western languages, entailing very different visions of protecting nature. Moreover, even within a contemporary Western context, the North American concept of nature seems distinct from the European (Marx & William 2008). Hence, this “contested concept” (Ginn & Demeritt 2009) appears situated both historically and geographically (Demeritt 2002), requiring specification in context (Ellen 1996), which makes translating *nature* challenging (Sturtevant 1964; Youn et al. 2015).

Many studies of comparative lexicology have been published recently (Youn et al. 2015), but to our knowledge, the complex concept of nature has not been investigated using more than 3 (Berque 2014a) or 9 languages (Legendre 2013). We analyzed 76 different languages to determine the derivation of the word used to translate *nature* in a conservation context and to compare their semantic origins and associated representations. We then explored the consequences of this unexpected complexity in terms of conservation policy.

Methods

In the 21st century, there remain between 6000 (Malherbe 2010) and 7000 living languages (Evans & Levinson 2009), distributed in 135 families, that are often categorized by linguists in about 20 macro- or superfamilies, on the model of biological taxonomy and phylogeny (Trask 2000). Each one is the result of the particular historical interaction between a human group and its environment and most often is the basis of a particular culture. To study the variation of conceptions of nature around the world, we gathered the most common word used to translate *nature* in a conservation context (such as protection of nature) in 76 different languages from all continents, including the 10 most spoken languages in the world according to the Ethnologue database (including each of their various dialects and subdivisions). Along with this list of words, we gathered the etymological field and origin of the word and information on its use and context. These languages altogether accounted for 28 different linguistic families distributed in 13 of the 20 main superfamilies. This represents at least 4.6 billion native speakers and 7 billion secondary speakers thanks to widespread languages, such as English, Arabic, Chinese, Hindi, and Russian. Africa was the least represented region (4 native languages), characterized by the highest concentration of languages (along with Papua-New-Guinea) and the least known and most ancient languages for which there are few ancient written sources, which often stymies sound data collection and historical analyses (Malherbe 2010). However, most African speakers are still represented in the study through Arabic, Kiswahili, English, and French that together constitute the second language of more than half the African population.

This survey started in 2015 with the collaboration of academic speakers of each selected language (or college-educated speakers for the rarest ones). It was aided by etymological dictionaries (if they existed) and (in some case) scholarly publications (Appendix S1).

Because conceptual representations are not fixed, we used the semantic root as a comparison proxy for the oldest meaning of *nature* in each language because it also provides insight into its lexical field and related terms. Such choice allows the comparison of complex and ever-changing words in different languages and enables semantic clustering of languages on the basis of semantic affinity. We then grouped words sharing an etymological meaning, called *morphemes* or *cognats*.

One morpheme is 1 morphological root that can give birth to distinct but related words. Hence, the French *nature* and Italian *natura* are the same morpheme despite a slight graphic divergence; the Greek *phusis* has a similar meaning and is considered as its translation but constitutes a different morpheme. We refer to each morpheme in its form in the seminal language (Latin for Latin-influenced languages, Sanskrit in India, etc.).

Results

We found a total of 20 different morphemes for the 76 languages surveyed. Results were of 4 types: the language had its own word for *nature* in its lexicon; the word for *nature* was borrowed from another language (most often that of a current or historically hegemonic foreign culture); the word used to express the concept of nature had the same meaning as *world* ($n = 12$); and the language had no word for *nature* that could be identified by linguists ($n = 9$, especially from the Americas and the Pacific region) (Table 1).

Discussion

Few Words

The number of morphemes for the concept of nature was surprisingly low relative to the number of languages and even to the number of their linguistic families. Out of 67 words from 31 linguistic families, only 20 different morphemes were identified, some of them appearing in dozens of unrelated languages (details in Appendix S3). Some etymological groups partially coincided with linguistic families and superfamilies (such as Slavic languages), but most extended far beyond their linguistic boundaries. Because languages are mostly differentiated by their lexicological distance, one would not have expected fewer than 1 word per family (Evans & Levinson 2009). The word translating to *life* was used as a control, and among the 17 European languages that use the same Latin root for *nature*, we found 7 different morphemes for *life*, consistent with the 7 linguistic families among which these 17 languages were scattered. The contrast with *nature* was sharp ($p < 0.03$ Fisher exact test) and could not be explained by either linguistic phylogeny or chance because there is no known case of such widespread morphological convergence over so many languages (Greenberg 1960). Furthermore, no word translating to *life* went beyond the boundary of its linguistic superfamily, contrary, in many cases, to the word translating to *nature*.

A Religious Concept

The present geographical distribution of the *nature* morphemes fit the geographical range of the major civilizational groups, associated with the spreading of agriculture and urbanization, defined by their dominant religion (during the 1 or 2 preceding millennia), irrespective of linguistic relationships and phylogeny, as suggested by Callicott and Ames (1989). Although the distribution of *nature* morphemes (Fig. 1) was strikingly similar to the distribution of major religions, there was nearly no similarity to the distribution of linguistic clusters. Morpheme distribution actually correlated with the distribution of liturgical languages, and for all major civilizational groups the word actually appears to have been borrowed from a liturgical language (Latin, Sanskrit, Pāli, Arabic, Armenian, etc.), which is often linguistically unrelated to the local language, such as Pāli in Southeast Asia, Arabic in central Asia, and Latin in northern Europe. Hence, many of the non-Indo-European languages of Europe (e.g., Maltese and Basque) have a word derived from the Latin *natura*, just as many non-Semitic languages of Muslim regions (be they Iranian or Altaic) have a word for nature derived from Arabic. The same thing occurred for eastern Asia, where the Chinese word自然 (***Zì rán***) is used not only in the Chinese languages, but also in Japanese, Korean, and Vietnamese, although none of these languages even belong to the same superfamily.

To a lesser extent, the Slavic area and a large area of the northern Indian subcontinent are also home to a large number of languages, but they had only 1 morphological root of the word for nature. Such homogeneity from such a large sample (Evans & Levinson 2009) is surprising and, at least in Europe, the religious influence in the elaboration and evolution of the concept of nature is not in doubt (Piron 2019). This also explains why 2 different roots can coexist in some border countries, such as Poland (a Catholic but Slavic-speaking country), where the Latin-derived *Natura* and Slavic-derived *Przyroda* are both in use (with a minor semantic distinction; the former is slightly more abstract). This may also explain why the more recently Christianized countries of Europe are also the only ones with local words for *nature*, such as Hungary, Finland, and Iceland (although the latter is not in our database). The concept may have found its way to these countries from its neighbors before massive exposure to a Latinate liturgical language. In contrast, in India, Urdu and Hindi are very closely related languages, the speakers of which are differentiated mostly by their religion, and accordingly the words for *nature* share no etymological or semantic root.

Such distribution, associated with low etymological diversity, suggests a classical, rather than archaic, origin of the word, attributable to the great expansion of empires in late antiquity and the Middle Ages. The Greek word acquired its abstract sense only after its

Table 1. Morphemes (including local variants) of *nature* in 75 languages.[a].

Language	*Number of speakers (in millions)*[b]	*Morpheme*[c]	*Etymological meaning*
Latin and Latin-influenced languages: French, Italian, Spanish, Portuguese, English, German, Danish, Dutch/Afrikaans, Norwegian, Swedish, Rumanian, Albanian, Basque, Welsh, Irish, Maltese, Malagasy, Polish and their dialects	2542	*natura*	abstract phenomenon of birth
Chinese (Mandarin, Cantonese, Wu), Japanese, Korean, Vietnamese	1707	自然 (*zì rán*)	self-so, spontaneity
North Indian languages (Hindi, Nepali, Bengali, Telugu)	790	प्रकृति *(prakṛti-)*	proliferation, continued growth
Slavic languages: Russian, Belarusian, Bosnian, Bulgarian, Croatian, Macedonian, Serbian, Slovak, Czech, Ukrainian, Polish (*bis*, 2nd word)	394	Природа (*priroda*)	reproduction, generation
Urdu/Punjabi and related Muslim Indian languages	275	قدرت (*Qudrat*)	power, regularity, order
Semitic languages (Arabic, Hebrew, Aramean), Muslim-influenced Altaic (Azeri, Uzbek, Kazakh, Kyrgyz, Tadjik) and Iranian (Farsi, Pashto) languages	610	טִבְעָ / طبيعـــــة *(tiva / tabî'a)*	original mark, character (creation)
Turkish	91	*Doğa*	birth
Khmer, Thai, Lao, Burmese and other Pāli-influenced languages	125	ธรรมชาติ (*Thoammachat*)	what follows the rules of the world
Tamil	74	இயற்கை (*Iyaṟkai*)	what is possible, what can exist
Amharic	33	*Täfätro*	what gets created
Zulu and nguni languages	27	*Imvelo*	what appears
Greek	22	Φύσις *(phusis)*	abstract process of apparition and growth
Magyar	12.5	*Természet*	process of growth and budding
Finnish	5	*Luonto*	inner power
Armenian	8	Բնություն (*bnoutyun*)	original unity
Mongolian	6	Байгаль (*Baigali*)	property of the whole
Divehi	0.3	*Thimaaveshi*	environment, surroundings
Malay languages	350	*Alam*	world
Kiswahili	60	*Asili*	world, origin
Quechua (Inca), Nahuatl (Aztec), Guarani. Maya ?	13	no word	no word
Inuktitut	0.034	no word	no word
Polynesian languages (including Maori)	2.5	no word	no word
Konso	0.2	no word	no word
Wolof	11	no word	no word

[a] *Includes secondary language. See Appendices S1–S3 for further information.*
[b] *Total number of speakers: 7,158,234.*
[c] *Total number of morphemes: 20.*

use by Heraclitus (Hadot 2004) in the sixth century BCE, contemporaneous with the origins of the Chinese word (Berque 2014b). In Europe, the meaning of the Latinate word became stable during the Imperial era of Rome (Gaffiot 2000). No word for *nature* (in its present meaning) appears in either in the Bible or the Quran, although it became important in later religious writings (Tirosh-Samuelson 2001). These Greek, Chinese, and Latin words all appeared in the context of urban and literate civilizations, hence among the people who tended to be less connected to nature (Pyle 2003). Such a wide adoption of this new concept suggests that most nearby languages originally did not have any word for it (e.g., Japanese, as shown by Berque [1986]). Such an idea may not even have existed before it came to them from more urban people (Evernden 1992). The cultural influence of early continent-wide civilizations only very recently reached some peripheral regions. For example, in the Pacific and southern Indian Ocean islands and the Americas, there is still no particular word for it in most

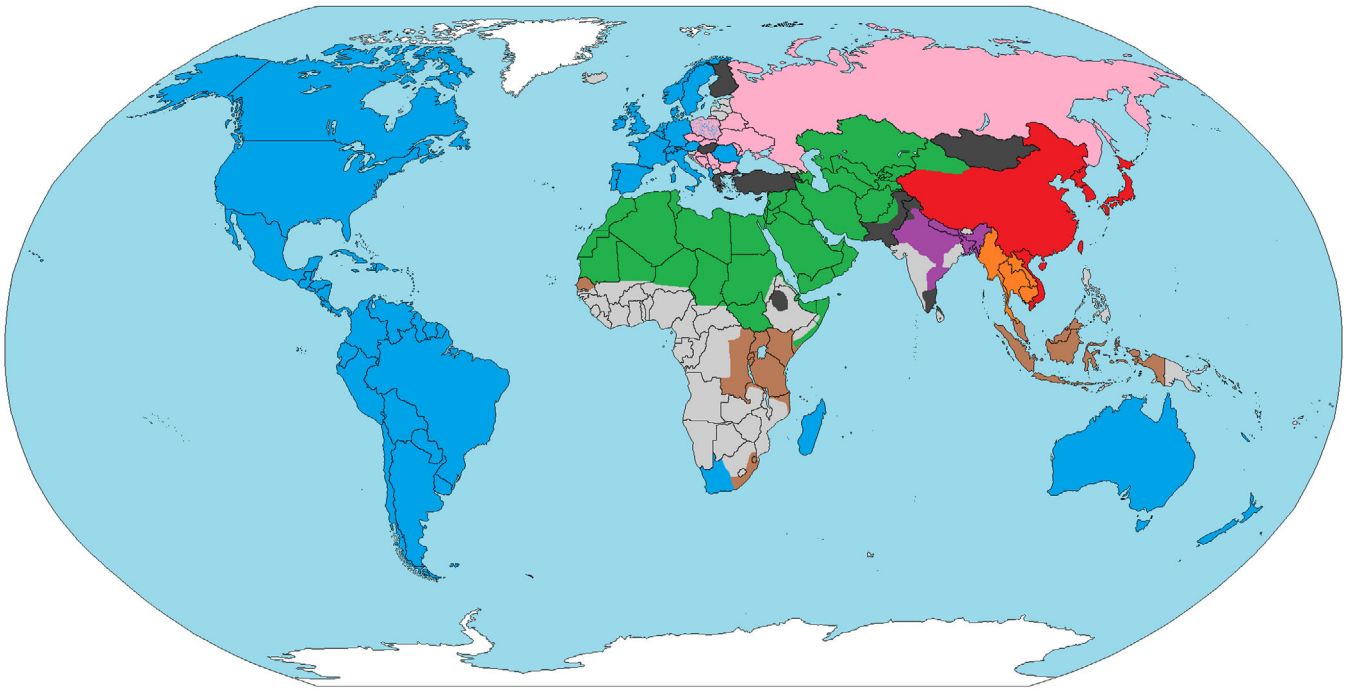

Figure 1. Distribution of the primary nature morphemes of currently dominant languages (boundaries are inclusive and indicative) (blue, natura from Latin; green, tabia from Semitic languages; pink, priroda from Slavic; red, zì rán from Chinese; purple, prakṛti from Sanskrit; orange, thammachat from Pāli; dark gray, distinct, original local morphemes; brown, languages in which the general word for nature, such as world or environment, are used; light gray, no data). In many regions, different languages overlap (e.g., pre-Columbian languages in Americas, which do not have a word), but only the dominant language is represented here for readability reasons, except for Polish, which has 2 words.

indigenous languages, although some borrowed one from another language, such as Malagasy. They were the last parts of the world to be in contact with imperialistic nations and written religions and to acculturate, urbanize, or agrarianize. This may explain why anthropologists working with small isolated indigenous populations rarely encounter a word for nature and may conclude that such an idea does not exist outside Greater Europe, as does Descola (2013), although it does have many equivalents throughout all the major urban civilizations.

Semantic Diversity

Even if the total number of morphemes translating to *nature* in non-European languages is surprisingly low, their semantic differences are important (Table 1), implying opposed representations (e.g., nature is dynamic or static and active or passive), differences already highlighted in the several definitions of *nature* in European languages (Ducarme & Couvet 2020). A common idea of all of these etymologies may be alterity, but the various modalities of this alterity indicate very different characteristics of nature (Flipo 2014). In particular, we found that the concept of nature as a static and passive set of objects was etymologically present only in Semitic languages, linked to monotheistic religions (Grésillon & Sajaloli 2015), making this group stand out from most other languages. In other words, only in languages influenced by the Abrahamic religions (Judaism, Christianity, and Islam) are humans regarded as apart from and above nature, hence supernatural (Tirosh-Samuelson 2001). The putatively innovative representations of nature as dynamic–such as those developed by Romantic-era philosophers (Mathews 2014), evolutionary biologists, and ecologists–actually appeared less original and were already widespread in most cultures.

All the terms we collected were used to translate the English word *nature* in the expression *conservation of nature*. But these translations did not entail that their respective meanings, lexical fields, associated representations, and uses perfectly matched. This is known among anthropologists as "incommensurability of languages" (Sturtevant 1964; Cassin & Wozny 2014). As noted by Ducarme and Couvet (2020), the European word *natura* underwent several radical semantic changes during its history and still embraces many different meanings, summarized as follows: nature as opposed to humans and human artifacts, nature as the cosmos, nature as the process of change, and nature as essence (Table 2). The German language, known for

Table 2. Primary and current definitions of *nature* in Western languages that have a Latin root, with associated philosophical traditions and synonyms in German (Ducarme & Couvet 2020).

Definition	*Opposing concept*	*Close philosophical tradition*[a]	*German synonym*
All of material reality, considered independent of human activity and history	culture, artifice, rational intention	romantic and postromantic philosophy (Rousseau, Marx, transcendentalism, Muir, etc.), often attributed to Christian tradition, and formulated by Mill; definition at the root of the great divide in Western academia	*Umgebung, Umwelt*
Whole universe, because it is the place, source, and result of material phenomena (including humans or at least the human body)	supernatural, unreal	Stoicism, Atomism, Epicurism, Taoism, Thomism, Descartes, Bacon, Spinoza formulated by Aristotle and Mill	*Welt, Kosmos*
Specific force at the core of life and change	inertia, fixedness, entropy	Heraclitus, Hegel, Nietzsche, Darwin, vitalism, Heidegger	*Ursprung, Lebenskraft*
Essence, inner quality, and character, all of specific physical properties of an object, live, or inert	transmutation, denaturation	alternate definition with distinct grammatical use (*nature of…*), too widespread to be assigned to specific traditions (Aristotle and Mill)	*Charakter, Wesen, Veranlagung*

[a]*Related philosophical traditions are given as examples, but their assignments are not definitive because most authors can be placed in several groups depending on the texts used as references (especially Aristotle and Hegel).*

its lexical richness, provides specific words for each of these ideas: *umwelt*, *kosmos*, *ursprung* (in Heidegger's meaning, see Berque [2016]), and *wesen*, respectively.

Quite often, only 1 or at most 2 of these ideas is present in the foreign word chosen by linguists as a translation. According to semantic affinities, we gathered the words from the database into 5 different semantic clusters: birth (Latin and European-Christian languages, Slavic languages, Turkish, Malagasy, Amharic, and maybe late Maya); proliferation (Greek, Hindi languages except Urdu, Magyar): spontaneity (Finnish, Chinese languages, Japanese, Vietnamese, Korean, Tamil); what follow rules (Pāli and Pāli-influenced Southeast Asian languages, such as Burmese, Thai, and Khmer, Islamic-influenced Indian languages such as Urdu); and original mark (Semitic languages, Muslim-influenced Iranian and Turkic languages, but not Turkish, the significance of which is discussed below in "Conserving Nature") (Fig. 2). Although they are very different ways of parsing the idea of nature, each of these clusters has some affinity with some of the contemporary European meanings we isolated in European languages (Table 2); however, they do not completely match because they have different origins. Some languages had very original semantic roots of their own that matched with no others (e.g., Armenian and Mongol) and could not be clustered. Strikingly, the 9 languages without a particular word for *nature* now use words taken from European languages, such as *nature* or *natura* in the Pacific and *natiora* in Madagascar. Some languages also created particular syncretic neologisms such as *sallqa pachata* in Quechua.

Our major finding was that in most languages of the world, the original meaning of the word for *nature* had a strongly active and dynamic meaning, referring to a property rather than a set of objects, whereas Semitic languages stood apart, expressing a passive state rather than a dynamic process. If the birth and proliferation clusters appeared close to each other, given the often organic metaphor they carry, the Semitic cluster carried a mineral metaphor and stood out for both its originality and isolation because there was no close etymology in any other language. This seems consistent with the fact that in the Semitic monotheist cosmology, nature is a passive object created by an almighty God (Tirosh-Samuelson 2001; Grésillon & Sajaloli 2015). However, this meaning contaminated European languages through Christianity (and other languages through Islam) and eventually culminated with Descartes defining nature as "matter itself" (Descartes 1664), while all processes were attributes of God's action or intention, with Humans standing between. This is the meaning of the classical philosophical opposition between the *natura naturans* (the process of nature, which is God according to the Christian tradition from Middle Ages to the 17th century [Ramond 2011]), and *natura naturata*, which is

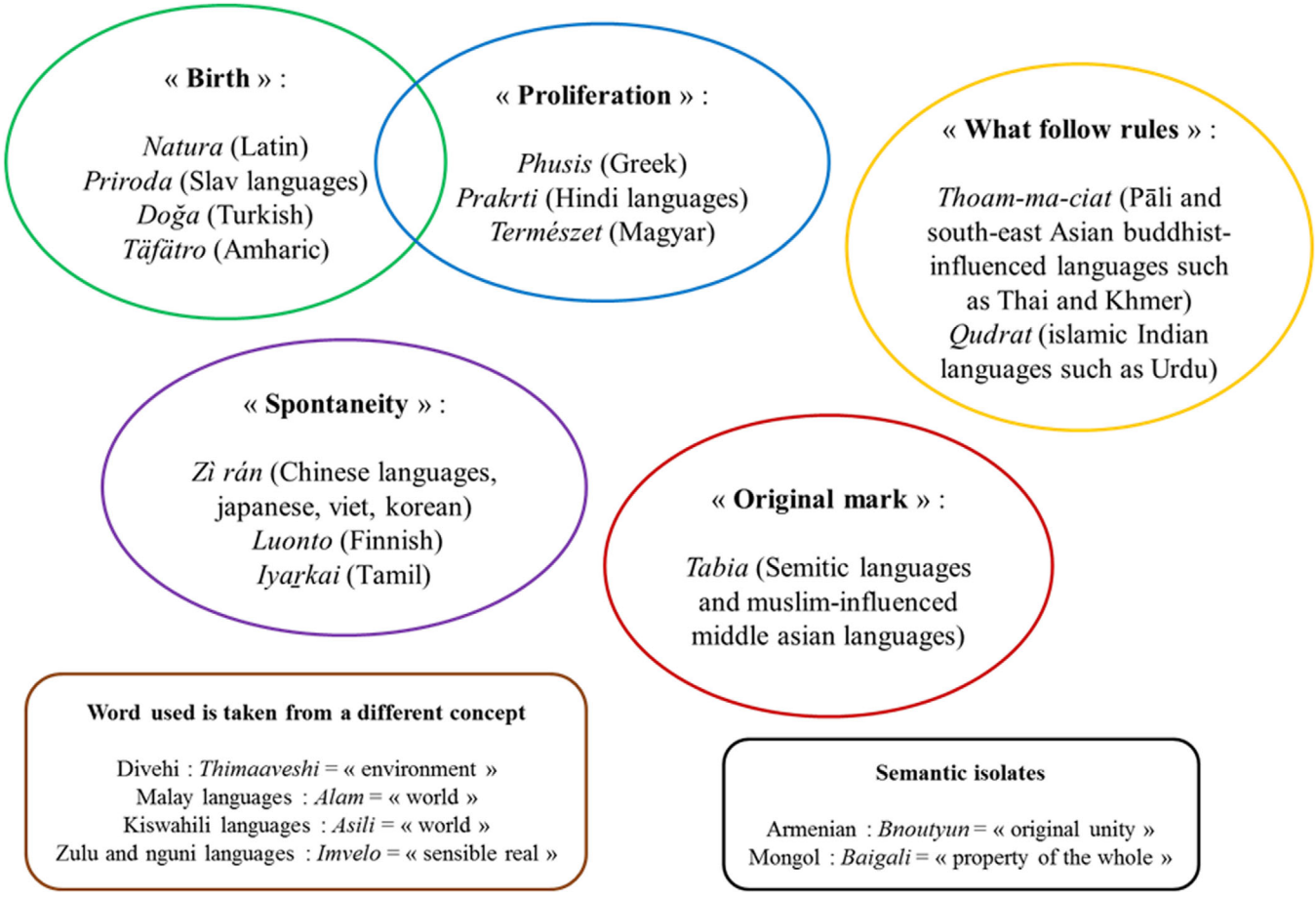

Figure 2. Primary semantic clusters of nature on the basis of etymological affinity. This etymological meaning can be different from the current primary meaning. For example, the Latin-derived word used in most European languages now has a meaning closer to the Semitic etymology. We purposely merged birth and proliferation clusters because they have important affinities.

the material result of his creation. Although this Semitic representation–called the "naturalist ontology" by Descola (2013)–became one of the most widespread with the globalization of Western civilization, that should not obscure the fact that it is an outlier compared with most of its main foreign equivalents. This notion of nature is typical only of cultures influenced by the Abrahamic religions and cannot be found elsewhere (Descola 2013). This unique concept of nature was noted previously by Morowitz (1972).

Conserving Natures

The consequences for nature preservation are quite significant, especially when examined in the light of historical semantical variations of the word *nature* in the Western world described by Ducarme and Couvet (2020). Common to nearly all western European languages, the Latin word *natura* is derived from the verb *to be born* (Pellicer 1966) and was, therefore, initially linked to a dynamic and vivid idea. Similarly, the ancient Greek *phusis* is derived from the verb *to grow*, *to proliferate*, *to appear* (Heidegger 1922; Benveniste 1948; Hadot 2004; Macé 2012). Turkish, Slavic, and some other languages share this semantic origin linked to the ideas of birth and growth. However, a significant shift in the meaning seemed to occur with the Christianization of the Roman Empire, linked to the Abrahamic idea of creation (White 1966), coming closer to the etymological meaning of the Hebrew word for nature, עֵבֶט (*teva*: "the mark of an artist on his work" [Tirosh-Samuelson 2001]). From the active meaning of getting born and flourishing, nature became static and, ironically, an artifact. Therefore, the meaning of *natura* in monotheistic cultures was no longer an idea of changing process, but a passive and static set of things in the hands of God (Gada 2014; Grésillon & Sajaloli 2015).

This phenomenon is well documented in some European languages, such as Finnish, for which Christianization even led to the substitution of one meaning by

another, more consistent with this new static and inert idea (Jämsä 1999). This modern (in fact monotheistic and idealistic) representation is thought to have led to a certain depreciation of the material world (Callicott & Ames 1989) and has been denounced as the main source of the ecological crisis by some authors (White 1966). Conservation of nature (such as initiated in the Christian United States by George Perkins Marsh and John Muir) initially concentrated mostly on objects, such as charismatic vertebrate species or scenic landscapes not visibly altered by white men (i.e., natural monuments), deeply linked to the U.S. concept of wilderness (Nash 1967), which is one of the main objects of nature conservation in the United States. The conservation of natural processes and functions appeared only later, with conservationists, such as Aldo Leopold (Worster 1994).

Current nature conservation is still rooted in this reductionistic, static, and passive vision of nature (Sarrazin & Lecomte 2016), whereas such an idea finds no purchase in most other societies, which has led to strong cultural conflicts in conservation (Guha 1989; Callicott & Nelson 1998; Snodgrass & Tiedje 2008). However, this modern, Western representation of nature as separated from humans might now have become obsolete and may soon need to be replaced by other visions (Mace 2014), given its explanatory limits and inadequacy with respect to many of today's conservation challenges. Since Darwin himself, evolutionary biology has placed humankind inside nature, and through the process-functional orientation of ecosystem ecology, nature is represented in terms of energy flows and materials cycling, as opposed to the older compositional approach of community ecology (Callicott et al. 1999). The idea that humans may positively intervene in nature does not seem absurd in most non-Western senses of nature, as in the concept of land sharing rather than land sparing (Phalan et al. 2011). As a result, proposals, such as reconciliation ecology (Rosenzweig 2003) and restoration ecology (Benayas et al. 2009), may garner more support outside the United States and Europe. As advocated by Descola (2013), maybe it is time to go beyond the very Western great divide between nature and culture.

Like biological diversity, semantic diversity is threatened. Hence, among the variety of semantic origins and associated representations among words translating to *nature*, the meaning of several is now evolving toward the Semiticized meaning of the Latinate word, as has been shown for the contemporary Chinese word (Han 2006) and historically with the Finnish word (Jämsä 1999). One may wonder how general is such a trend and ask for further explorations. This linguistic evolution could be a symptom of a more serious cultural homogenization, which has led some writers to rename the Anthropocene the *Anglocene* (Caluya 2014).

Through linguistic adulteration and acculturation, a Western, but even more specifically, a U.S. vision of the world is everywhere spreading among college-educated people, alienating them from the original cultures that linked them to their local natures (Latouche 1989; Hwang 2005). Such homogenization of the representations of nature due to Anglo-Saxon-based environmentalism was noticed and criticized as early as the 1980s (Guha 1989), and it has not slowed (Snodgrass & Tiedje 2008). Hence, this vision of nature from the United States, accompanied by the industrial exploitation of some lands and the meticulous preservation of some putatively pristine wilderness areas, continues to spread all over the world, even in countries where such a vision makes no sense, such as Europe, India, or Africa (Descola 2005; Blanc 2015). In age-old agricultural regions, such as Europe and the Middle East, the idea of pristine wilderness has no empirical grounding, and a wide part of the local biodiversity is intrinsically linked to agricultural habits. A close but distinct idea of naturalness has emerged recently in Europe, but remains seldom used (Siipi 2008; Dussault 2016). Therefore, transplanting raw U.S. environmentalism in such countries would be pointless and even potentially quite harmful (Descola 2005), as indeed it was in some East African countries (Blanc 2015). A Christianized vision of the world as a static and inert artifact posing as science may provoke opposition to conservation by local populations because they run counter to their own religious or cultural conceptions (Campbell et al. 2012). And, a homogenization of visions of nature in many of the world's cultures could increase the trend toward standardization of nature itself (Doxa et al. 2012), be it in the form of crops, agricultural techniques, or even conservation plans, whereas one of the main aims of conservation is diversity (Soulé 1985). If so, it is paramount to implement conservation measures in harmony with local cultures and traditions (Guha & Martinez Alier 2013); the recent and fast development of Indian environmentalism (initiated by Guha [1989] and followed by Nelson [1998] and Jackson [2004]) or Islamic environmental ethics (Gada 2014) may constitute good examples of culturally situated conservation of nature.

To artificially standardize one sense of *nature* in science is inadvisable, all the more because such a standard definition does not exist for the European word itself (Williams 1976; Ginn & Demeritt 2009; Ducarme & Couvet 2020) and because local representations must be taken into account (Hill et al. 2017). Descola (2019) said, "We can expect neither one particular people nor one single lifestyle to contribute to enhancing the world's intelligence, but if we acknowledge the plurality of social and cultural forms of expression, we might learn how to strike from the contrasts of these forms the sparks of a less conventional mindset about how humans create links between themselves or with other beings. It is, as well, the condition for conceiving other forms of association … that the state of the world urgently

requires" (Descola 2019). Indeed, a good dialogue of cultures needs to be backed by a sound political framework (Callicott 2001). The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services may be a promising initiative in this regard (Hill et al. 2017).

The diversity of representations of nature across languages and cultures may also help science develop richer visions of the nature at stake in conservation so that scientists and societies can develop a diversity of corresponding criteria (Karp et al. 2015), going beyond the old dilemma of advocating for utilitarian or intrinsic values of nature (Norton & Noonan 2007). Protecting nature is not only about protecting biodiversity, ecosystem services, charismatic species, wilderness, socioecosystems, or landscapes. Nature is all of this and much more, which is the reason why humanity cannot abandon the word *nature* and the words for nature in other languages, but instead should embrace its many meanings (Ducarme & Couvet 2020). Taking into account the diversity of human representations of nature, shown in anthropology by Snodgrass and Tiedje (2008), Descola (2013), and Kohn (2015) and in this study, can help develop mixed strategies, including conservation science (Soulé 1985), evolutionary conservation (Fraser & Bernatchez 2001; Sarrazin & Lecomte 2016), and adaptive management (Armitage et al. 2009), and integrating biodiversity and ecosystem services (Daily 1997; Mace 2014). In any case, scientists, and especially conservationists, must keep in mind the old lesson from Heraclitus: Φύσις κρύπτεσθαι φιλεί (nature loves to hide).

Acknowledgments

We are grateful to all the linguists who participated in this study (credited in Appendix S1), especially A. Berque, and researchers from the Institut National des Langues et Civilisations Orientales, as well as the Corpus, Traductologie, Linguistique, Société research group. We also thank I. Negrutiu, E. Bordas, C. & R. Larrère, V. Devictor, B. Bensaude-Vincent, P. Huneman, and the Centre d'Ecologie et des Sciences de la COnservation lab. This research was supported by the Muséum National d'Histoire Naturelle (Paris) and the Ecole Normale Supérieure de Lyon. We thank M. Fadel Mohamed and J. Baird Callicott for proofreading.

Supporting Information

Additional information is available online in the Supporting Information section at the end of the online article. The authors are solely responsible for the content and functionality of these materials. Queries (other than requests for the material) should be directed to the corresponding author.

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