




Conceptual cartography

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ABSTRACT

Certain features of our conceptual scheme seem necessary for subjects with our basic nature: we cannot imagine humans accomplishing their basic projects without having a conceptual scheme with these features. Other aspects of our conceptual scheme seem more contingent: we can imagine communities effectively using a somewhat different conceptual scheme. *Conceptual cartography* is the project of investigating the necessity and contingency of the various features of conceptual schemes. The project of conceptual cartography has not received much explicit methodological attention. But in this paper, I argue that conceptual cartography has important implications for the study of *conceptual engineering*. I also provide a general framework for thinking about conceptual cartography.



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1. Introduction

Consider the concept *true*. This concept may initially seem like a redundant part of our conceptual scheme; after all, the sentence ‘Grass is green is true’ seems to say the same thing as ‘Grass is green’. But now consider the sentence ‘Everything John said at the conference yesterday was true’. It is easier to use this sentence than to try to list every specific claim John made the day before. So we might say that the concept *true* is a necessary part of our conceptual scheme in the following sense: without this concept, a community (with our expressive needs) would be worse off.

By contrast, certain features of our conceptual scheme seem contingent. For example, imagine a community that uses a concept that is similar to but not identical to our concept *game*; we might imagine that members of this community classify soccer, chess, and bridge as games,

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but they never call an activity with only one participant a game. There is nothing obviously defective with using this alternative concept. So we might say that our concept *game* is *contingent* in the following sense: a community (sharing our same general interests) could just as well have used some alternative concept.

I will call the project of determining the necessity and contingency of the various features of conceptual schemes *conceptual cartography*.¹

When engaged in conceptual cartography, we are mapping the space of possible conceptual schemes with respect to their suitability for different possible linguistic communities. Conceptual cartography has not received much explicit methodological attention. But as I discuss below, conceptual cartography has important implications for the study of *conceptual engineering* (as well as many other topics in metaphysics and epistemology).

I will develop a framework for conceptual cartography in section 3 before considering specific examples of this project in sections 5–6. But first, I will discuss why we should care about cartography in the first place.

2. The significance of cartography

Hirsch (1993, viii) claims that ‘the nature of the constraints on lexicons is a fundamental question for philosophy’. In this section, I will explain why philosophers should care about these constraints.

Conceptual engineering: Conceptual engineering addresses the question of which conceptual scheme we *ought* to use.² For example, notwithstanding how the terms ‘race’ and ‘gender’ are actually used, how ought we to use these terms in order to promote social justice? Notwithstanding how the term ‘true’ is actually used, how ought we to use this term in order to avoid certain types of paradox and inconsistency?

There are important connections between engineering and cartography. Assuming that ‘ought’ implies ‘can,’ arguments about the necessity/contingency of aspects of our conceptual scheme are relevant to the very possibility of revising concepts in a given domain.³ For example, if intentional concepts turned out to be (in some sense⁴) *necessary* features

¹For now, I leave the relevant notions of necessity and contingency intuitive. I clarify how these notions should be understood in 3.4.

²For discussion, see, e.g., Burgess (2013), Burgess and Plunkett (2013), Eklund (2015), Plunkett (2015, 2016), Cappelen (2018), and Cappelen and Plunkett (2020). I will clarify the different ways in which philosophers understand the project of conceptual engineering in section 4.

of our conceptual scheme, it would tell against any proposal to eliminate intentional explanations in favour of neuroscientific explanations.⁵

Contrariwise, arguments for conceptual contingency may *support* the possibility of revising concepts in a certain area. In section 6, I will present an argument to the effect that our specific concept of causation is contingent (i.e. that there are different causal concepts that are well suited for human communities). Having recognized this contingency, we can ask: what causal concept *ought* physicists to use? Is it the same causal concept that biologists ought to use? Is it the same causal concept that people should use in everyday life?

There are other connections between cartography and engineering, but I will postpone discussing these issues until after I have presented the framework for conceptual cartography in section 3. I will return to the topic of conceptual engineering in section 4.

Metaphysical caution: It can be tempting to view features of our conceptual scheme as corresponding to natural features of the mind-independent world. For example, the fact that our conceptual scheme contains a certain concept X may tempt us to assume that X is a natural property. But now suppose we come to recognize that this feature is contingent: we could have used a language where X is replaced by a concept with somewhat different application conditions. This should undermine our confidence that X is a natural property.

For example, many philosophers believe that the term ‘cause’ expresses a natural relation. But in section 6, I consider an argument to the effect that our causal concept is contingent: there are different (although similar) causal concepts that are well suited for human use. If this is so, it may undermine the claim that there is anything natural about our *actual* term ‘cause’ (and the property it expresses).

Deflationary implications: For any philosophically interesting item X, there are many competing theories regarding the nature of X. For example, philosophers have offered dozens of analyses of knowledge, of free will, of dispositions, and so on. But now suppose we realize that our community could just as well have used some term ‘knowledge*’ that is similar to but not identical to ‘knowledge’. Then why care about giving our *actual* term ‘knowledge’ (or the property it expresses) a precise analysis?⁶

³For related discussion, see Cappelen (2018, ch. 18), Cappelen and Plunkett (2020, section 3), and Eklund (2020) on ‘conceptual fixed points’. I return to this issue in 4.1 below.

⁴I clarify the relevant notion(s) of necessity in 3.4.

⁵For related discussion, see, e.g., Churchland (1981), Hornsby (2001), and D’Oro (2012).

Revisionary theories: Arguments for conceptual necessity may help deflect certain types of revisionary philosophical conclusions. For example, some philosophers of physics have claimed that results from fundamental physics undermine our ordinary belief in the existence of space.⁷

But suppose that spatial concepts are necessary features of our conceptual scheme. Then we might doubt that results from fundamental physics are able to undermine our ordinary belief in the existence of space. We might instead conclude that our ordinary conceptual scheme must be different from the conceptual scheme operative in fundamental physics.⁸

Sceptical arguments: Conceptual contingency can help motivate various sceptical problems. For example, in section 6, I will consider an argument to the effect that the projectibility of the predicate 'green' is a contingent feature of our language. This amounts to the claim that there are no compelling reasons for preferring our favoured inductive inferences over the ones favoured by grue-speakers. Similarly, if our normative concepts are contingent, this might support moral relativism (see Eklund (2015) for related discussion). Contrariwise, arguments for the necessity of certain conceptual features can support anti-sceptical and anti-relativist conclusions.

3. A framework

To this point, I have relied on several intuitive examples to motivate the project of conceptual cartography. In this section, I will provide a framework that will help to identify, taxonomize, and analyse the many examples of conceptual cartography presented in sections 5–6.

Conceptual cartographers map the features of a conceptual scheme that are necessary or contingent for a given linguistic community. To provide a framework for this project, I will describe the relevant ways in which both conceptual schemes and linguistic communities may differ from one another.

3.1. Conceptual features

Here are examples of some of the features that may distinguish one conceptual scheme from another:

⁶Of course, it may still be interesting to learn about the specific contours of a community's actual conceptual scheme. But it no longer seems pressing to provide an analysis that avoids every possible counterexample.

⁷See, e.g., Ney (2012).

⁸See Smithson (2018) for related discussion.

- (i) *Concept inclusion*: Perhaps the most obvious way in which conceptual schemes differ is by including different concepts. For example: English in the year 1800 did not have terms expressing concepts such as *automobile*, *the internet*, or *sexual harassment*, but English today does.
- (ii) *Inference rules*: Within typical languages, there are rules for moving from some assertible sentences to others. For example, there are deductive rules of inference associated with each of English's logical expressions.⁹ Similarly, certain inductive inferences are considered permissible (e.g. 'The Sun has risen every day in the past, and therefore the sun will rise tomorrow'). There is no need to provide a precise account of these rules; I simply assume that these rules are one way two conceptual schemes may differ.
- (iii) *Conceptual primitives*: In English, the term 'grue' is semantically derivative from terms like 'green', 'blue', and so on. By contrast, it is commonly supposed that, in the 'grue-language,' terms like 'green' are semantically derivative from terms like 'grue' and 'bleen'. So schemes can differ in their relations of semantic priority.¹⁰
- (iv) *Logical form*: On a more abstract level, conceptual schemes can differ in logical form. For example, English contains sentences of the form *Fa*, where *a* is a proper name. But in a predicate-functor language (see Quine (1971)), there are no terms that serve as proper names. Similarly, we might distinguish schemes with (only) objectual quantification from schemes with (only) substitutional quantification, schemes with descriptivist analyses of proper names from schemes with Millian treatments of proper names, and so on.

The above list is not meant to be exhaustive. Nor is it put forth as the one 'correct' way of taxonomizing conceptual features. How we should taxonomize conceptual features will instead depend on the specific area of conceptual cartography that interests us.¹¹

⁹We might think of deductive inference rules as following from the inferential roles of the logical concepts. If so, then deductive inference rules are already addressed with (i).

¹⁰While the grue example involves terms with explicit definitions, there may also be relations of semantic priority that do not involve explicit definition. For example, Chalmers (2012) argues that the concept *knows* is semantically derivative from concepts like *believes*, *true*, and so on, even though *knows* probably has no explicit definition.

¹¹Here are two notable absences from the above list.

- (1) *Orthography and phonology*: These features are not usually relevant to conceptual cartography. For this reason, I typically use the term 'conceptual scheme' rather than 'language' throughout this paper.
- (2) *History/genealogy*: Historical/genealogical differences between languages are certainly relevant to conceptual cartography. But as it happens, I plan to subsume issues relating to history and genealogy within one of the 'community features' of 3.2. Of course, other taxonomies are possible.

3.2. Community features

I next present several *community features*: features that distinguish linguistic communities from one another.

- (i) *Interests/projects/values*: I use the term 'interest' broadly to subsume anything that members of a given community care about. A scientific community may have interests in making predictions, manipulating nature, developing vaccines, and so on. An activist community may have interests in promoting social justice, creating a more equal society, and so on. Humans, as a general community, typically have interests such as exploring their environment, learning, living morally, surviving and reproducing, acquiring an objective conception of the world, creating art, wondering about life after death, and so on. I will refer to this last set as *characteristically human interests*.
- (ii) *Environment/context*: I use the term 'environment' broadly to include a community's physical environment, history, social location, and anything else external to the subject that may be relevant to the suitability of a conceptual scheme. For example, environments/contexts might include planet earth, a philosophy conference on ontology, a political rally, and so on. Which environment/context a community inhabits will affect which features of their conceptual scheme are necessary vs. contingent. For a simple example, the concept *snow* may be necessary for communities in cold environments but unnecessary for communities in hot environments.

The above examples show that both interests and environments can be individuated in more or less fine-grained ways. This corresponds to the fact that, when engaged in conceptual cartography, we are sometimes interested in very general communities (e.g. the human community, the community of all possible language users) and sometimes interested in very specific communities (e.g. academic philosophers, one's immediate family).

- (iii) *Affective states*: I use the term 'affective states' to include all feelings and emotions as well as all dispositions to enter these states. Under this heading, we might include: a feeling of resentment towards a negligent doctor, a feeling of inspiration when reading Dostoevsky, the intuitive feeling that green objects are more similar than grue objects, the intuitive feeling that cars are more natural than Hirsch's (1993, 26) incars and outcars, and so on. Of course, we can imagine subjects (perhaps aliens) who feel differently.

(iv) *Faculties*: Humans have certain cognitive limitations: limitations on their memory, limitations on the complexity of their thoughts, limitations on the number of concepts they can possess, and so on. We can imagine subjects where these limitations are more or less severe. Human cognition also involves certain specific forms of judgments, such as subject-predicate judgments. I will subsume these types of features under the heading of ‘cognitive faculties’. It seems possible that certain communities (aliens?) could have different cognitive faculties.

Communities may differ in their sensory faculties as well. Humans have certain types of spatial experiences, temporal experiences, proprioceptive experiences, and so on, while bats have, e.g. echolocation experiences. These faculties are sometimes relevant to the necessity/contingency of a certain feature of a community’s conceptual scheme.

Just as before, the above list is not meant to be exhaustive or the uniquely ‘correct’ way of taxonomizing community factors. How we should taxonomize those factors will depend on our interests.

3.3: The space of communities

Having distinguished various features of communities, I represent the space of possible linguistic communities in [Figure 1](#). From this diagram, we see that communities overlap and intersect in many ways. At the most general level, we have the set of all possible linguistic communities. One level down, there are communities whose members share certain sensory faculties, certain cognitive faculties, and so on.

The organization in this diagram is to some extent arbitrary. But one advantage of the [Figure 1](#) carving is that a certain particularly interesting set of communities – human communities – are grouped together. So we can easily ‘zoom in’ on that section ([Figure 2](#)).

The central region in [Figure 2](#) is the space of human communities. I represent these communities as sharing four features: human cognitive faculties, human sensory faculties, human interests, and human affective states. For example, the ellipse labelled ‘human sensory faculties’ contains communities whose members have the same types of sensory experiences that humans do (e.g. object-directed experiences, 3D spatial experiences). Similarly, the ellipse labelled ‘human affective states’ contains communities whose members have the same feelings of disgust and the same

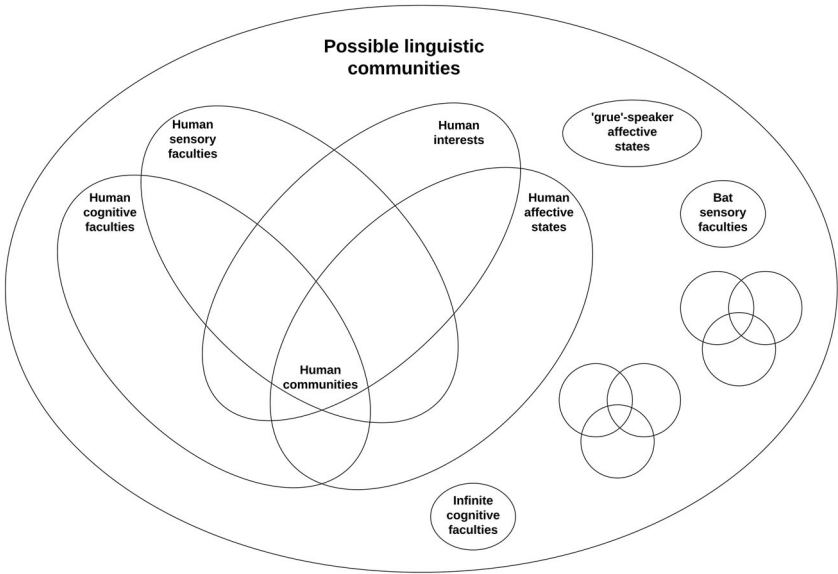


Figure 1. The space of possible linguistic communities.

feelings about similarity classes that humans do. Similarly, the ellipse labelled 'human interests' contains communities whose members share the characteristically human interests mentioned in 3.2.

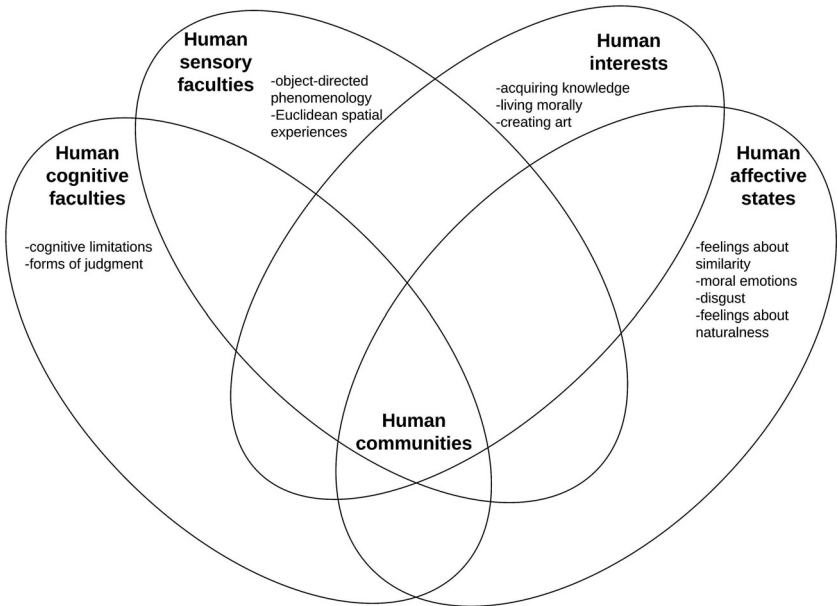


Figure 2. Communities sharing features of human communities.

As discussed in section 6, many examples of conceptual cartography involve comparing humans to subjects who differ from humans along one of the above dimensions. But for now, I will focus on the space of human communities itself (Figure 3).

There are certain interests shared by all or most humans. But people also have contingent interests that vary from context to context, and these contingent interests may influence the conceptual scheme that is appropriate for them to use. For example, some ontologists (e.g. Sider 2014) have claimed that we ought to use the 'joint-carving' quantifiers of 'Ontologies' when studying fundamental ontology, even if such quantifiers are impractical in everyday life. To capture this kind of case, Figure 3 breaks down the set of human communities into regions corresponding to the different *contingent* interests humans might have. We can distinguish contingent interests in more or less fine-grained ways, depending on the case.¹²

Although any community will have some contingent interest or other, I have left a gap surrounding the ellipses in Figure 3. This is a representational convenience: it allows me to locate conceptual features that are necessary for *any* human in the gap region. I will discuss this point in 3.5.

Descending one more time (Figure 4), we reach the level of specific human communities (in this case: specific scientific communities). This level represents the different environments where humans might find

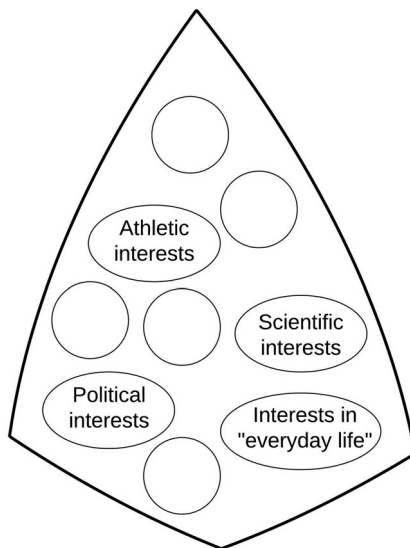


Figure 3. The space of human communities.

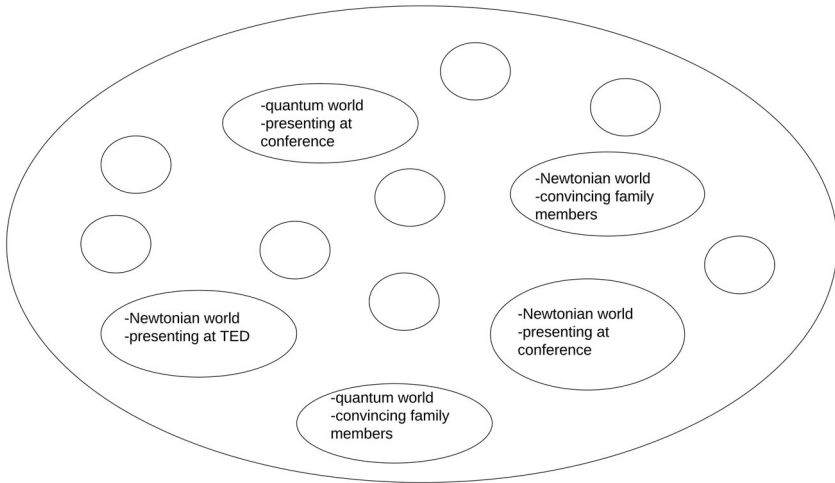


Figure 4. The space of human scientific communities.

themselves. For example, the language suitable for a scientist may differ depending on whether she is giving a conference paper, a public lecture, or a talk with family members. It may also differ depending on the world's microphysical structure. (For the same reason just mentioned, I have left a gap around the ellipses in [Figure 4.](#))

3.4. The relevant notions of necessity/contingency

With community maps, we can interpret conceptual cartography as the project of locating conceptual features within the space of communities according to their *necessity and contingency* for those communities. But what kind of necessity and contingency? So far, I have left this matter intuitive, but I will now clarify how to understand these notions.

In fact, there are different types of necessity/contingency relevant to conceptual cartography. In this section, I will describe three major types: *psychological*, *linguistic*, and *pragmatic*.

Psychological necessity/contingency: In some cases, a subject's psychological makeup will constrain the conceptual schemes available to them. For example, it is plausible that, given our own psychological makeup, humans must employ conceptual schemes containing sentences with subject-predicate form. It is difficult to imagine a (psychologically realistic)

¹²Of course, the boundaries between communities are often fuzzy. So community maps involve a certain amount of idealization.

human community employing, e.g. a predicate-functor language in everyday life.

Under the broad heading of psychological necessity/contingent, we can distinguish narrower species. For example, certain conceptual features may be necessary/contingent for communities sharing a certain type of *cognitive* faculty. Similarly, certain conceptual features may be necessary/contingent for communities sharing a certain *biological* makeup.

Linguistic necessity/contingency: There may also be conceptual features that are a part of *any possible language whatsoever*. Intuitively, these conceptual necessities follow from (or are implicit in) the very nature of a language itself. For example, consider Davidson's (1974) argument that it is a condition on regarding a system X as a language at all that X be translatable into our language. If Davidson is correct, then such intertranslatability will be a necessary conceptual feature for *any* linguistic community.

We can also distinguish narrower species of linguistic necessity. These will apply to conceptual features that must be a part of any conceptual scheme meeting some further condition. For example, let C be the condition: having the expressive power to talk freely about its own expressions. Let F be the (negative) feature: lacking the power to express both the classical truth functions and the property *being true* (here conceived of as a property satisfying the T-schema). Then, on the present framework, Tarski's Theorem asserts that F is linguistically necessary for any community employing a language satisfying C.¹³

(One further benefit of focusing on narrower types of linguistic necessity is that it may help prevent terminological disputes over precisely which systems count as languages. For example, do honeybee dance communication systems count as languages?)

Pragmatic necessity/contingency: There is also a sense in which a community's *values and projects* (see 3.2) constrain the conceptual schemes available to it. To motivate this idea, I will begin with the natural suggestion that a given conceptual feature is more or less suitable for a given community to the extent that it helps the community promote its values (or succeed in its projects).

The conceptual features suitable for a given community will of course depend on that community's specific values and projects. For example, Burgess and Plunkett (2013) mention a variety of goods we might wish to promote through our choice of language: knowledge, social justice,

¹³See Eklund (2017, section 1) for discussion of this example.

ideological parsimony, honesty, etc. We can divide these examples into various classes: epistemic goods, moral goods, political goods, and so on.

Accordingly, we can say that a given scheme is *epistemically best suited* for a certain community iff no other scheme better promotes epistemic goods for that community. Similarly, a scheme is *morally best suited* for a certain community iff no other scheme better promotes moral goods for that community. (If there is no uniquely best scheme, then multiple schemes will count as best suited in this sense.)

In some cases, these values may compete. Burgess and Plunkett (2013, 1105) present the case of a politician whose political ambitions would be better served by using the established concepts of race and gender, even though using more reflective concepts would better promote social justice. In this case, there is a potential conflict between prudential and moral goods. So we might allow for a given scheme's being *all-things-considered* best suited for a certain community as well.

I now turn from conceptual schemes to the features characterizing them. Let F be a certain conceptual feature. Then we can say:

F is *pragmatically*¹⁴ (*epistemically, morally, ...*) *necessary* for a community iff all (*epistemically, morally, ...*) best suited languages for that community contain F.

F is *pragmatically* (*epistemically, morally, ...*) *contingent* for a community iff some but not all (*epistemically, morally, ...*) best suited languages for that community contain F.

For example, it is not psychologically necessary for scientists to employ the concept *law of nature*. But perhaps it is *epistemically necessary* for them to do so, in the sense that it best enables them to accomplish certain epistemic goals implicit in scientific inquiry.

Summary: I have described three senses in which a given conceptual feature might be necessary/contingent for a community with certain features. As in earlier sections, the above list is not meant to be exhaustive. But the above categories cover the various examples of conceptual cartography I discuss in sections 5 and 6.

3.5. Conventions

I now return to the community maps from 3.3, introducing some conventions for representing conceptual necessity and contingency on these maps. If a feature F is labelled within the 'gap space' of a region R, then

¹⁴Here, I use the term '*pragmatic necessity*' because, roughly, F is a feature that C requires in its conceptual scheme in order to best achieve its goals (whatever those goals turn out to be).

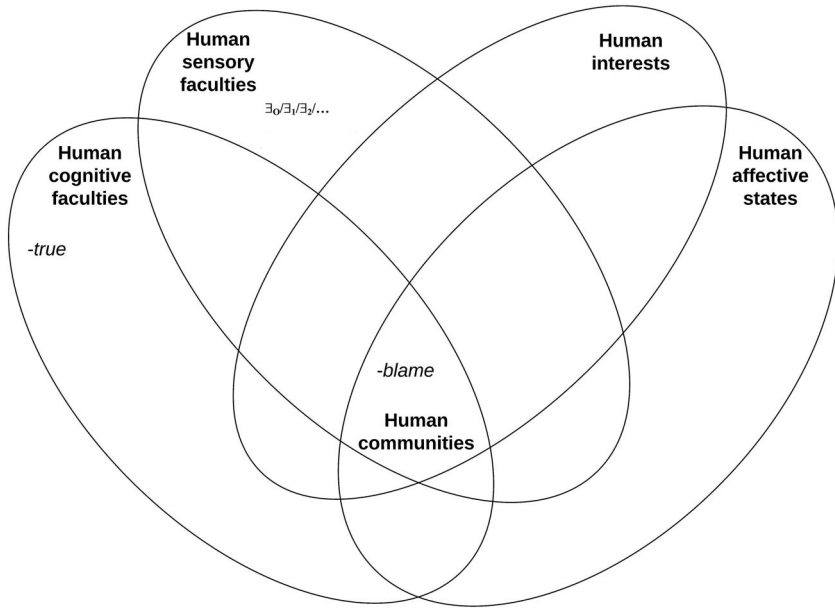


Figure 5. Conventions for community maps.

this means that *F* is necessary for *R*-communities (including the sub-regions of *R*). So, for example: in [Figure 5](#), the concept *true* is represented as necessary for communities sharing human cognitive faculties. (This is merely an illustration, not a substantive philosophical claim.)

There are two conventions for representing contingency. First: if *F* is included within a sub-region *R**, then *F* is contingent for regions encompassing *R**. For example, in [Figure 5](#), the concept *blame* is represented as contingent for the community of subjects sharing human cognitive faculties.

Second: if features separated by slashes are included in region *R*, then those features are contingent for *R*-communities. For example, in [Figure 5](#), I have depicted the existential quantifier \exists_0 (the one we use in ordinary language) as contingent for communities sharing human sensible faculties. (Here, \exists_1 , \exists_2 , ... are alternative quantifiers that we might have used instead). With this second convention, we can represent contingent features without locating them in some more specific community.

4. Conceptual cartography and conceptual engineering

Using the above framework, I will now explain the relevance of conceptual cartography to the project of *conceptual engineering*.

In the recent literature, philosophers have understood the project of conceptual engineering¹⁵ in many ways.¹⁶ For example, on one usage, ‘conceptual engineering’ refers to the *prescriptive* project of changing, negotiating, or revising how a community uses their concepts (or linguistic expressions).¹⁷ On a second usage, ‘conceptual engineering’ refers to the *normative* project of evaluating concepts (or linguistic expressions) along various dimensions.¹⁸

But in order to remain neutral on the many questions over which conceptual engineers disagree, I will instead adopt Cappelen and Plunkett’s (2020) ‘broad tent’ usage on which conceptual engineering subsumes any of the general cluster of issues intuitively related to the assessment and improvement of our representational devices.¹⁹ Below, I outline some of the important connections between cartography and conceptual engineering in this broad sense.

4.1: Conceptual fixed points

One central question for conceptual engineers is whether there are *conceptual fixed points*: concepts or terms that are impossible to revise or adjust.²⁰ If there are such fixed points, there is no point in trying to improve the concepts in question. According to Cappelen and Plunkett (2020, section 3), philosophers who appeal to such ‘bedrock concepts’ face a central challenge: ‘to identify in a principled way the bedrock concepts and explain what makes them more fixed than those that can be engineered’.

Conceptual cartography provides a framework for considering this challenge. On this framework, conceptual fixed points are concepts that are (in some sense) necessary for a given linguistic community.²¹ But as seen in 3.4,

¹⁵Some philosophers distinguish conceptual engineering from *conceptual ethics*, while others use these labels interchangeably. I agree with Cappelen and Plunkett (2020, section 1) that one can translate back and forth between different ways of using these labels. So, for simplicity, I will just use the label ‘conceptual engineering’ in the discussion below.

¹⁶I thank an anonymous referee for recommending clarification on this point. For a useful overview of the clusters of issues discussed under the banners of conceptual engineering, see Cappelen (2018), Cappelen and Plunkett (2020), and Eklund (2020).

¹⁷For example, Richard (2020), Sawyer (2020), Sterken (2020), and Thomasson (2020) seem to use the term ‘conceptual engineering’ in this way. Philosophers have offered different views on how such change occurs (e.g., by eliminating and replacing concepts, or by changing their extension, or by changing the community’s conception of the item in question, etc.). For relevant discussion, see the issues listed under ‘Cluster 1’ in Cappelen and Plunkett (2020, section 3).

¹⁸This is roughly how Burgess and Plunkett (2013) and McPherson and Plunkett (2020) use the label ‘conceptual ethics’. Eklund (2017) explicitly distinguishes between the prescriptive and normative versions of conceptual engineering.

¹⁹Relatedly, Cappelen and Plunkett (2020, section 2) offer a ‘bottom-up’ characterization of conceptual engineering via providing a list of paradigmatic examples of the project; this characterization is helpful because of its theoretical neutrality.

²⁰For discussion, see Cappelen (2018, ch. 18), Cappelen and Plunkett (2020, section 3), and Eklund (2020).

there are different *types* of conceptual necessity. For example, one kind of fixed point would be a conceptual feature that is *psychologically necessary* (i.e. necessary for any community with our same psychological makeup). A second kind of fixed point would be a conceptual feature that is *linguistically necessary* (i.e. necessary for any system to count as a language at all).²²

The current framework shows that we can make other fine-grained distinctions as well. A certain conceptual feature may be necessary for a community with certain features but not for others. Or a certain conceptual feature may be (conditionally) necessary for languages of a certain type, but not for others (consider, e.g. the truth predicate example discussed in 3.4). The flexibility offered by these fine-grained distinctions should be useful to philosophers studying conceptual fixed points.

As for how to identify bedrock concepts: I will discuss several forms of argument establishing conceptual necessity in section 5. This discussion will suggest some methods for approaching the question of identifying bedrock concepts in a principled way.

4.2: Pragmatic necessity and conceptual engineering

Next, I will consider the connection between conceptual engineering and *pragmatic necessity*. Suppose we want to promote (say) moral value with our choice of language. Then it seems we ought to choose a language with whatever conceptual features best promote moral value. But this, roughly speaking, is just what it means for a conceptual feature to be *morally (pragmatically) necessary* for our community (see 3.4). So, generalizing, the question of which concepts a community ought to use is (roughly²³) equivalent to the question of which conceptual features are pragmatically necessary for that community.

²¹Although, it should be said, the current framework also allows for conceptual features other than concepts—see 3.1.

²²By contrast, pragmatically necessary concepts need not (in general) be ‘fixed’ in the current sense; I discuss the connection between conceptual engineering and pragmatic necessity in 4.2.

²³The reason for this qualification is that, as Eklund (2020, section 2) observes, there is a difference between the ‘activist’ project of trying to improve our concepts and the ‘theoretical’ project of evaluating our concepts (along various dimensions). He offers the following example: ‘one can think that consequentialist normative concepts are the ones that get at the features that really matter normatively, while at the same time—and on consequentialist grounds—think that it would be bad if agents making decisions about how to act deployed consequentialist concepts’.

Does the fact that conceptual feature F is the best (along some dimension) for a community imply that this community must (i.e., ought to) use a language with F? (I thank an anonymous referee for raising this question.) The present discussion shows that the answer is ‘no’; for example, Eklund’s case is one where consequentialist normative concepts are best (along a certain dimension of evaluation) but we ought not use a language with these concepts. More generally, the pragmatic necessity of a certain conceptual feature does not imply that it is normatively necessary for a community to adopt a language with that feature.

Given this connection, the framework of section 3 has several benefits for the study of conceptual engineering. First, it suggests that conceptual engineering – considered here as a general philosophical method – may have wider scope than has previously been recognized.²⁴ Unsurprisingly, discussions of conceptual engineering have tended to focus on which concepts are best for *actual human communities*. For example, no conceptual engineer would ever recommend that we adopt a language foregoing subject-predicate logical form, or a language containing terms like ‘grue’ and ‘bleen’. But perhaps such features are pragmatically necessary for other *possible* linguistic communities, and the framework of section 3 is flexible enough to allow us to analyse such cases. While these cases have no practical relevance for our own choice of conceptual scheme, these features still interest philosophers because of their relevance to topics like scepticism and deflationism (see section 2 for discussion). So these topics may have connections to conceptual engineering that have not received much attention.

Second, proponents of conceptual engineering can use the framework of community maps (see section 3.3) to make fine-grained claims about what concepts a community ought to use *given the specific features had by that community*.²⁵ For example, instead of merely claiming that we ought to use a truth predicate, we can further claim that the predicate ‘true’ is pragmatically necessary for any community with our expressive needs and cognitive limitations (see section 1 for this example).

Finally, the connection between conceptual engineering and pragmatic necessity suggests models for how one might defend or critique specific proposals for engineering our concepts. For example, the types of arguments philosophers have used to establish conceptual necessity can serve as models for how to *defend* proposals in conceptual engineering. I discuss these types of arguments in section 5. Similarly, the types of arguments philosophers have used to establish conceptual contingency (see section 6) can serve as models for how to *critique* proposals in conceptual engineering.

For example, section 6 will address how *genealogical arguments* can be used to establish conceptual necessity/contingency. So, in turn, this discussion will reveal ways in which genealogy is relevant to conceptual engineering.²⁶

²⁴Cf. Cappelen and Plunkett’s (2020, section 3) discussion of the interpretative question of how often philosophers are *already* engaged in conceptual engineering.

²⁵See Cappelen and Plunkett’s (2020, section 3) remarks on the *scope* of conceptual engineering claims for related discussion.

4.3. Summary

To this point, I have provided a framework for conceptual cartography and have explained some of the connections between this project and conceptual engineering. My aim in the next two sections will be to describe some of the many philosophical projects that can be interpreted using this framework. Section 5 presents arguments for conceptual necessity, while section 6 presents arguments for contingency.

Of course, I do not claim that conceptual cartography is the *only* useful way to interpret the examples below. Nor do I claim that the philosophers mentioned below conceive of themselves as engaged in conceptual cartography. I only claim that conceptual cartography provides a useful, unifying framework for thinking about many of the projects that interest philosophers.

5. Arguments for necessity

Here are three common ways to establish the necessity of a conceptual feature.

Transcendental arguments: In the current context, a transcendental argument is an argument to the effect that a community could not have a certain feature that it has without employing a *language* with a certain kind of feature.²⁷

Perhaps the most famous examples of transcendental arguments (in the current sense) are from Kant's (1998) *Critique of Pure Reason*. In the Metaphysical Deduction (A66–83, B92–116), Kant derives certain *a priori* concepts from the specific logical forms of thoughts that humans can entertain. For example, Kant argues that it is a condition on the possibility of forming hypothetical judgments (that is, judgments of the form *if A, then B*) that subjects have a certain *a priori* concept of causation.²⁸ So we might interpret Kant as arguing that the concept of causation is necessary for any subject with human cognitive faculties.

Davidson (1974) argues that it is a condition on the possibility of a community being a linguistic community *at all* that its language be translatable into our language. Davidson claims that this is a necessary condition for our being able to interpret that community as even *having* a language.

²⁶See Plunkett (2016) and Cappelen and Plunkett (2020, section 3) for discussion.

²⁷Under this label, we might also include arguments to the effect that a given *language* could not have a certain feature that it has without also having some *other* feature (see, e.g., the truth-predicate example in the discussion of linguistic necessity in 3.4).

²⁸See Longuenesse (1998, 346ff) for discussion.

Within the current framework, Davidson is arguing that the feature of *inter-translatability with our language* is (linguistically) necessary for the entire set of linguistic communities.

Strawson (1962) argues that the concept *free* is tightly bound to the reactive attitudes of gratitude, anger, sympathy, and resentment. In addition, these attitudes themselves are natural and inescapable for human persons. Putting these points together, Strawson can be viewed as giving an argument for a certain type of necessity for the concept *free* (and related concepts involving moral responsibility). According to Strawson, the appropriateness of such concepts does not depend, e.g. on whether our environment is deterministic. Rather, they are necessary for any subjects with our affective states (including our reactive attitudes).

Pragmatic arguments: In a pragmatic argument for conceptual necessity, a philosopher starts with some claim about a project or value that is important to a certain community. It is then argued that a certain linguistic feature is necessary for accomplishing those projects or promoting those values.

For example, advocates of the deflationary theory of truth (see, e.g. Horwich (1990)) have observed that we need a truth predicate in situations where we can only indirectly express a proposition. For example, we might say 'What Rachel said at the conference was true' in situations where we do not remember what exactly Rachel said. Similarly, we need a truth predicate in situations where we need to generalize over propositions (e.g. 'Everything that Rachel said at the conference was true'). These arguments suggest that there is a certain type of necessity for the concept *true*: any community with our expressive interests (and cognitive limitations) requires a truth concept.

Enoch and Schechter (2008) discuss basic belief-forming methods: methods that support our use of other belief-forming methods but that are not in turns supported by any other methods. They argue that such methods – for example, inference to the best explanation (IBE) – can be justified pragmatically:

Consider the explanatory project, the project of understanding and explaining the world around us. This project is of fundamental importance to us. Indeed, it seems that engaging in this project is central to rationality; a thinker who does not inquire about the world around him is intuitively doing something wrong. This counts in favour of employing whatever methods are necessary for successfully engaging in the explanatory project. It is plausible that employing IBE (or a close relative) is needed for successfully engaging in the

explanatory project. And this explains why we are justified in employing IBE as a basic rule in our thought.²⁹ (549)

Enoch and Schechter's pragmatic argument suggests a certain type of necessity for the inference rule of IBE: any community interested in the explanatory project of understanding the world will have to rely on this form of inference.³⁰

Counterfactual arguments: In a counterfactual argument, a philosopher considers what a community would be like if they started using a language *without* a certain feature. If they would be worse off (or more concretely: if they would revert to the original language), this helps support the claim that the feature in question is necessary for that community.

Roberts (2016, 348–349) considers a possible world where – according to the non-Humean – the real laws of nature diverge from the ‘ideally apparent laws’ (i.e. the regularities that scientists would in principle pick out as the laws if they were magically afforded a God’s eye glimpse of the entire Humean base). Roberts argues that, in this case, we would not care about the ‘real laws’ and would instead re-appropriate the term ‘laws of nature’ for the ideally apparent laws. This is because the ideally apparent laws are the ones that serve us best for ‘all purposes of prediction, manipulation of nature, building better engines, building better telescopes, curing disease, finding explanations that give satisfaction to our feelings of curiosity,’ and so on (348–349). If Roberts is correct, it suggests a certain (pragmatic) necessity for the Humean concept of lawhood: languages with this concept are necessary for any community sharing our scientific interests.

In Smithson (2018), I consider a thought experiment where subjects become convinced by arguments from the philosophy of physics to the effect that ordinary objects and ordinary space do not exist. For this reason, the subjects in question temporarily abandon their ordinary judgments about objects and space. But I argue that these subjects would revert to talking about objects and space whenever they returned to the business of everyday life. If this argument is correct, it suggests a certain necessity for concepts like *space* and *object*: these concepts are necessary

²⁹This passage suggests a transcendental element to the argument as well. Enoch and Schechter recognize that the project of explaining the world around us is not merely a project that humans contingently happen to have (in the way, e.g., that a person might happen to have the project of running marathons). Instead, this project is ‘central to rationality’. So, we might also interpret Enoch and Schechter as giving the following transcendental justification for IBE: it is condition on a subject’s being rational that they (attempt to) employ the inference rule of IBE. So IBE will be necessary for any community with rational cognitive faculties.

³⁰See also Schechter and Enoch (2006), who provide an analogous pragmatic argument for the necessity of *modus ponens*.

for any community with our everyday experiences and interests (even if that community lives in a physical environment where it is difficult to fit objects and space into the scientific image).

I represent the above (alleged) necessities in [Figure 6](#).

6 Arguments for contingency

Turning now to arguments for conceptual contingency, I will again group the examples under three main headings:

Argument by example: The simplest way to show that a conceptual feature is contingent for a community is simply to identify or imagine a scheme that seems well suited for the community but that does not contain the feature in question. For example, Wittgenstein (1953) repeatedly asks his reader to imagine language games that are different from the ones that we find in everyday life; we can view such examples as showing the contingency of many aspects of our conceptual scheme. Similarly, in the Blue Book, Wittgenstein (1958, 61) argues that features of our conceptual scheme relating to personal identity have a certain contingency: these features would not be included in schemes well suited for communities in different environments than our actual community.³¹

Next, consider Hirsch's (1993) argumentative strategy in *Dividing Reality*. Hirsch asks (3): what makes our classificatory practices 'more correct or rational' than alternative practices we can imagine? To investigate this question, he imagines various 'strange languages,' such as one using the concepts *incar* and *outcar*. An *incar* is a car (or part of a car) that is in a garage, while an *outcar* is a car (or part of a car) that is out of a garage. So backing a car out of a garage gradually erases an *incar* while creating an *outcar*. While this seems strange, Hirsch argues that a community using the *incar/outcar* language is no worse off with respect to such projects as gaining knowledge, learning languages, making predictions, and describing the world. We can interpret this as an argument for a certain type of contingency for the concept *car*: communities sharing many of our epistemic projects and interests would be no worse off using the *incar/outcar* alternative.

³¹Says Wittgenstein (1958, 61): 'Or imagine that it were usual for human beings to have two characters, in this way: People's shape, size and characteristics of behaviour periodically undergo a complete change. It is the usual thing for a man to have two such states, and he lapses suddenly from one into the other. It is very likely that in such a society we should be inclined to christen every man with two names, and perhaps to talk of the pair of persons in his body. Now were Dr. Jekyll and Mr. Hyde two persons or were they the same person who merely changed? We can say whichever we like. We are not forced to talk of a double personality'.

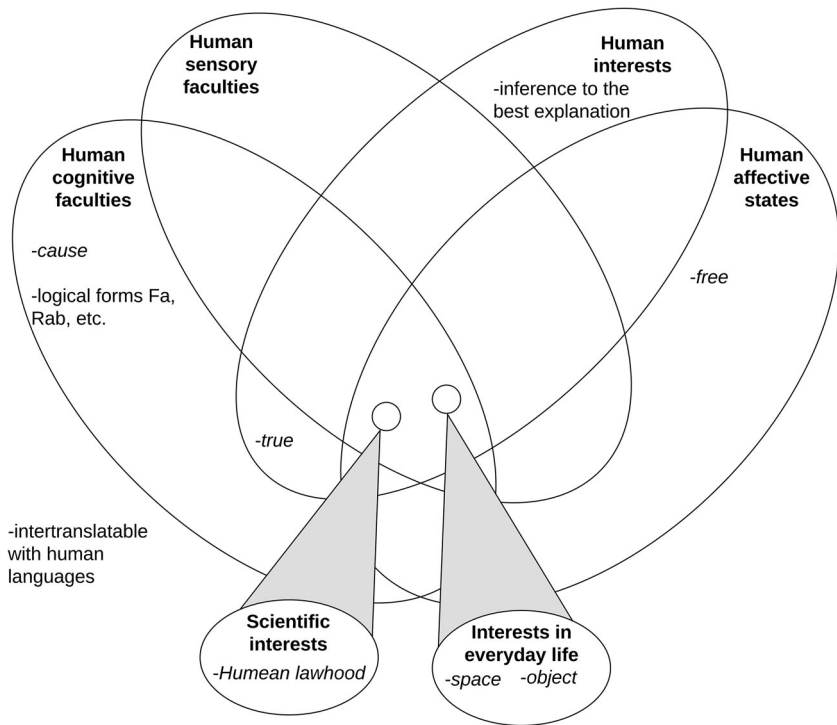


Figure 6. Conceptual necessities.

Next, consider causal pluralism. As I use the term, causal pluralism is the view that there are different types of relations that might deserve the name ‘causation’. For example, Hitchcock (2003, 10) considers the following case: ‘Two assassins, Captain and Assistant, are on a mission to kill Victim. Upon spotting Victim, Captain yells “fire!”, and Assistant fires. Overhearing the order, Victim ducks and survives unscathed’. In this case, we have conflicting intuitions about whether Captain’s order caused Victim’s survival. According to Hitchcock, the best explanation of these conflicting intuitions is that the term ‘cause’ expresses different types of causal relations. If this is correct, this argument shows a certain contingency (at the level of human communities) in our causal concepts: there might be different causal concepts that are well suited for human use.

Other examples come from feminist philosophy, where philosophers have resisted certain dualisms in our ordinary conceptual scheme. For example, it may be the case that many people today use a conceptual scheme where sex is binary: one is either male or female and there are no other options. But feminist philosophers have noted that there are *other* ways we might use such terms. For example, we could use a

scheme that includes *intersex* and other categories. One can interpret this argument as demonstrating a certain contingency in our concepts relating to sex, gender, and race: a community similar to ours in many respects (but, perhaps, more concerned with equity) could use concepts of sex, gender, and race differently than how they are currently used by default in our society.³²

Genealogical arguments: In a genealogical argument, a philosopher traces the historical development of a conceptual feature. Such an investigation may reveal that said feature is necessary: we cannot imagine a community developing without that feature. But it may also reveal that said feature is contingent: we can imagine communities (perhaps with similar interests, or perhaps with somewhat different but still intelligible interests) developing language in other ways. In the latter case, such an investigation provides an argument for contingency: if our history had been somewhat different, we would have employed different conceptual features.

Blanchette (2017) traces the genealogy of the contemporary logical concepts *independence* and *model* from antecedent concepts found in nineteenth-century geometry. Blanchette argues that our contemporary concepts are not mere refinements of the older geometric concepts. Instead, she argues that newer concepts are substantively different in ways that reflect the divergent interests of contemporary logicians and nineteenth-century mathematicians. Indeed, Blanchette argues that changes to the concepts *model* and *independence* have sometimes been the result of largely contingent choices by the mathematical community. This genealogy in turn suggests that there is a sense in which the concepts *independence* and *model* are contingent (within the set of communities interested in mathematics).

Mark Wilson's (2006) book *Wandering Significance* is an extended exercise in conceptual genealogy. Wilson traces the historical development of concepts such as *limit*, *derivative*, and *line*. In each of these cases, he argues that our mathematical concepts have a certain contingency: the concepts we have today are the result of historical developments that, at times, reflect the contingent pragmatic interests of the mathematical community.

One might interpret Nietzsche (1887) as providing a genealogical argument for the contingency of our moral concepts.³³ Under this interpretive

³²For general discussion, see Haslanger (2000).

³³See Plunkett (2016) for related discussion.

lens, Nietzsche argues that contemporary moral concepts historically developed as part of an attempt by one community to seek vengeance on another. This genealogy reveals the contingency of our moral concepts. Perhaps there are other moral concepts possible for humans to use that would – according to Nietzsche – better promote human flourishing.

Symmetry arguments: Philosophers sometimes argue for the contingency of a conceptual feature by imagining a linguistic community with different normative standards than our own. A certain feature of the rival community's conceptual scheme may seem defective by our lights, but the analogous feature in our scheme seems defective by the rival community's lights. The symmetry of the situation supports the contingency of the features in question.

One prominent example of this strategy is Goodman's (1955) *grue* community. Goodman argues that a language employing and projecting the predicate 'grue' is not internally criticizable. We might say that the predicate 'grue' is unnatural, but the *grue*-speakers can symmetrically claim that 'green' is unnatural. We might say that the definition of the predicate 'grue' involves illicit reference to a specific moment in time, but the *grue* community can symmetrically claim that the definition of the predicate 'green' involves illicit reference to a specific moment in time. Goodman's ultimate conclusion is that our use of the term 'green' (rather than 'grue') is not driven by any 'rational considerations'; instead, it is a result of historical developments about which concepts are entrenched (roughly: used more often in projection in the past) in our epistemic community. This can be viewed as an argument for conceptual contingency: a community with different affective states (e.g. a community that felt that *grue* things are more similar than green things) would use *grue* instead of *green*.

I represent the above (alleged) contingencies in [Figure 7](#), with the (alleged) alternative concepts our community might adopt labelled with asterisks.

7 Conclusion

In this paper, I have explained the project of conceptual cartography and discussed its connections to conceptual engineering. When engaged in conceptual cartography, we are interested in mapping the features of a conceptual scheme that are necessary or contingent for a given linguistic community. To provide a framework for this project, I first described some of the relevant ways in which both conceptual schemes and linguistic communities might

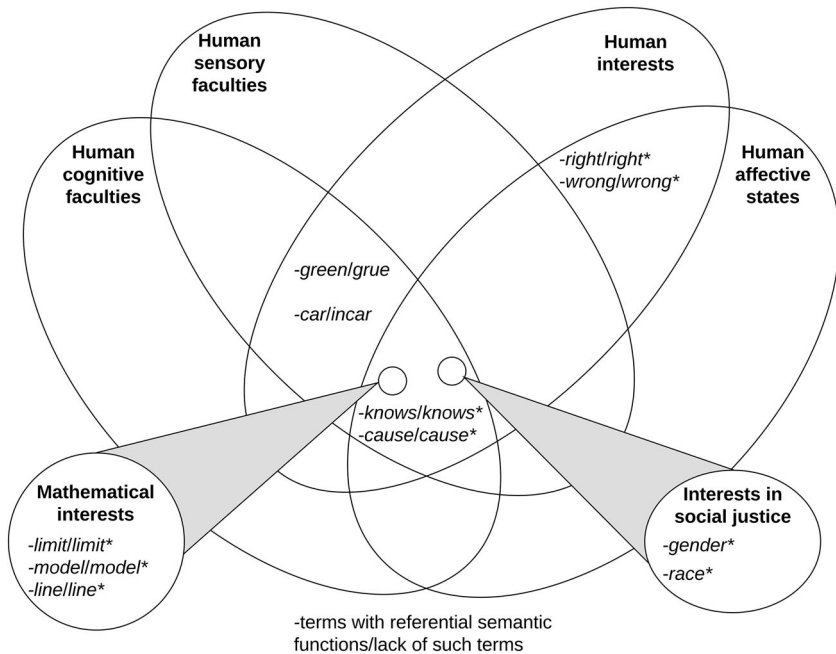


Figure 7. Conceptual contingencies.

differ from one another. I then interpreted conceptual cartography as the project of locating conceptual features within the space of possible linguistic communities according to their necessity/contingency for those communities. In the final two sections of the paper, I discussed some common methods for establishing conceptual necessity and conceptual contingency.

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