Natural Conventions and the Semantics/Pragmatics Divide

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1. Introduction

A perennial question in the literature on linguistic semantics is whether particular associations between form and meaning are (merely) conventional or are part of the inferential component of linguistic meaning. There are hosts of clear cases: that the phonological string [dog] in English refers to a certain class of animals is obviously conventional; that an utterance of the sentence "I have to take my dog to the vet" can, in certain circumstances, convey that the speaker cannot accompany the addressee to a movie is clearly inferential. But there are controversial cases: strong differences of opinion hold regarding presupposition (Cf. Stalnaker 1974, von Fintel 2004, Simons 2001, Simons et al. 2016); scalar implicatures (Geurts 2010, Chierchia et. al 2012); and indirect speech acts (Searle 1975, Morgan 1977, Lepore and Stone 2015). In a recent book that has attracted a great deal of attention, Lepore and Stone 2015 argue that a large swath of phenomena which have been treated as inferential are in fact conventional.

In these debates, scholars treat the conventional/inferential distinction as dichotomous. One possible source of this understanding is Grice's work on conversational implicature (Grice 1975), which encourages us to sharply distinguish the conventional (expression meaning) from the calculable (typically, speaker meaning). Following Lewis (1969), we call an element of meaning conventional if (i) each speaker uses the given form with the given meaning only because everyone else in their speech community does and (ii) the association between form and meaning could have been otherwise.

This second condition suggests an equivalence between conventionality and arbitrariness. The central role of arbitrariness reinforces the Gricean distinction between the conventional and the calculable. Conventional aspects of meaning are arbitrary form/meaning associations, for which no more general account (other than historical ones) is available. These differ from non-conventional aspects of meaning, which are calculable from general principles (in combination with certain conventional meaning facts). This understanding of Grice forces a strict conventional/calculable dichotomy.

The formal analysis of Lewisian convention parallels Grice in suggesting a strict dichotomy between conventions and non-conventional behavioral regularities. In game theoretic terms, conventions

are strategies in games with multiple strict Nash equilibria. (The canonical example is represented by Table 1 below.) In contrast, non-conventional behavioral regularities are strategies in games that feature only one Nash equilibrium. (An example is provided in Table 2.) This way of defining convention is a dichotomous concept: either a game features multiple strict Nash equilibria or it doesn't.

However, as one investigates the properties of different games, one finds that the formal definition masks an underlying continuity between conventions and non-conventional regularities. In the terms that we adopt here, we find a continuum from fully *arbitrary* conventions to highly *natural* conventions. Carrying over this insight to the linguistic application allows us to see that linguistic conventions, too, come with varying degrees of arbitrariness. While some meaning conventions are highly arbitrary, others are natural in various ways and hence admit of a richer explanation than appeal to historical accident.

Recognizing degrees of naturalness in conventions resolves tensions in the characterization of linguistic phenomena. We take indirect requests, such as the request use of the question *Can you help me with this?,* as our central case study. Our approach reconciles the conventionality of indirect requests with their pragmatic motivation. By distinguishing between types of convention involved in the practice of indirect speech acts, we show that some aspects of this practice involve highly natural conventions, while other aspects involve entirely arbitrary conventions. We will compare our analysis to Morgan 1977 which, while similar in outlook to ours, lacks the benefit of a well defined notion of convention. As Morgan himself remarks at the end of his paper: "I have followed hallowed linguistic tradition in carefully avoiding saying what I meant by 'convention'... I think a clearer understanding of these matters will probably strengthen my case." The conventional nature of indirect speech acts can indeed be understood much more clearly when seen through the lens of the Lewisian notion of convention, appropriately amended with our notion of naturalness. Our approach will provide the vocabulary for asking more nuanced and hence more revealing questions about the nature of linguistic regularities.

2. Lewisian convention

Let's begin by establishing the basic Lewisian notion of convention. For a classic illustration of a non-linguistic example of convention, consider Rene and Cathy. Rene and Cathy meet one another for lunch every Friday. They've been doing this for years; no one even remembers when it started. In their small town, there are two restaurants: Fancy Foods and Golden Grill. Rene and Cathy are indifferent between the two restaurants; they like both equally. But they always go to Fancy Foods because it's what they've always done. They don't talk or make an appointment beforehand, they both just go to Fancy Foods at noon every Friday. Rene wouldn't consider going to Golden Grill on a Friday because she knows that Cathy expects her to go to Fancy Foods. The same applies to Cathy.

Rene and Cathy's situation can be modeled in the game pictured in Table 1 below. **F** represents going to Fancy Foods and **G** represents going to Golden Grill. Rene is the row player: the rows represent her choices. Cathy is the column player; the columns represent her choices.[1] Because neither player prefers one restaurant over the other and both players are happy only if they meet up, both get a payoff of 1 when they meet, and a payoff of zero otherwise.

		C	
		F	**G**
R	**F**	1,1	0, 0
	G	0, 0	1, 1

Table 1

Because Rene and Cathy are both equally happy (i.e. have the same payoffs) whether they find themselves together at Fancy Foods or at Golden Grill, the regularity of going weekly to Golden Grill is equally good as the regularity of going weekly to Fancy Foods. Hence, the actual regularity of going to Fancy Foods is a convention because there is an alternative, equally good, regularity: going to Golden Grill. In game theoretic terms, each of these combinations (Rene and Cathy both going to Fancy Foods or Rene and Cathy both going to Golden Grill) is a Nash equilibrium–neither player has a positive incentive to unilaterally deviate. The state where they both go to Fancy Foods is a Nash equilibrium because, given that one of them is going to Fancy Foods, the other has no incentive to go to Golden Grill. Symmetrically, the state where both go to Golden Grill is a Nash equilibrium. Furthermore, both outcomes are *strict* Nash equilibria because both would do strictly worse by deviating.

Conventions like these stand in contrast to non-conventional behavioral regularities (Lewis 1969). Both conventions and non-conventional regularities are universally adopted (or nearly so). But unlike conventions, behavioral regularities are adopted because they are intrinsically good ideas regardless of others' behavior. Here is an example: Consider two other acquaintances in the same town, Richard and Clark. Richard and Clark are passing acquaintances but not friends (or enemies); they neither like nor dislike one another. Coincidentally, they both love Fancy Foods and hate Golden Grill. And both enjoy a laid back Friday including lunch at their favorite restaurant. So, like Rene and Cathy, Richard and Clark can be found

[1] In the payoff pairs, the payoff for Rene, the row player, is on the left, and the payoff for Cathy is on the right.

at Fancy Foods every Friday at noon. They have been doing this a long time; like Rene and Cathy, they expect to see the other at Fancy Foods on any given Friday. However, unlike with Rene and Cathy, these expectations do not affect Richard and Clark's choices. Richard would go to Fancy Foods whether or not he expected Clark to go, and vice versa.

	F	**G**
F	1,1	1, 0
G	0, 1	0, 0

Table 2

Richard and Clark's situation is represented in a game matrix in Table 2. Here, only *one* choice of restaurants is best for them. There is no alternative regularity. Richard and Clark *could* have done otherwise in a metaphysical sense, but doing so would be ridiculous for either of them. Instead, they act identically, not because of one another, but because of their similar preferences for Fancy Foods. This renders Richard and Clark's behavior non-conventional, even though the observed behavior–the choice of restaurant–is identical to Rene and Cathy's.

Other simple examples of non-conventional regularities include things like brushing one's teeth, wearing heavy clothes in the winter, and breathing. While all these behaviors are common in most cultures, the reason for adopting them has little to do with one's expectations of others' behavior. Absent others' conformity, we would still follow the regularity.

In his seminal work on the subject, David Lewis offers an extensive definition of convention as a subspecies of behavioral regularity. Some parts of his definition are controversial, and discussing those controversies would take us far afield from our central topic. Instead, we offer this pared down set of Lewis' conditions as necessary conditions for a convention:[2]

[2] This definition is close to the definition Lewis offers on (1969: 76) except that we have omitted two of Lewis' conditions. One condition requires identical preferences over all outcomes (cf. Vanderschraaf 1998). If this condition were present, we could retain the overall structure of our argument although we could not use the examples in Table 4 and 5. The second is a set of knowledge conditions -- it must be common knowledge that many of these conditions obtain. Including this condition would substantially complicate the presentation, but would not alter any of our arguments.

Lewisian Convention

A behavioral regularity R in a recurring situation is a convention for a population of agents if and only if,

1. Everyone conforms to R
2. Everyone expects everyone else to conform to R
3. Given the set of alternative regularities ***R,*** everyone would prefer to conform to R over any other member of ***R*** on condition that everyone else conform to R.
4. Supposing that all but one person are conforming to R, everyone prefers that the one person also conform to R.
5. There is an alternative regularly R' in ***R*** that also satisfies conditions (3) and (4).

In the case of Rene and Cathy above, their regular behavior of going to Fancy Foods is a convention, because:

1. Rene and Cathy go to Fancy Foods at noon every Friday.
2. Rene expects Cathy to go to Fancy Foods. And Cathy expects Rene to do the same.
3. Given that Cathy goes to Fancy Foods, Rene prefers to go to Fancy Foods. The same is true for Cathy.
4. If Rene is going to Fancy Foods, she wants Cathy go to Fancy Foods as well. Again, the same is true for Cathy.
5. Conditions (3) and (4) are also both satisfied by going to Golden Grill.

In discussing Rene and Cathy's behavior, we hold fixed some aspects of their behavior while allowing other aspects to vary. In our story, we assume that, wherever they go, the two friends will meet on Friday at noon. We hold the time fixed and then vary the possible locations. This is the relevance of the set **R** in our definition. In our discussion we treat **R** as comprising just two options: going to Fancy Foods on Friday at noon, and going to Golden Grill on Friday at noon.

This is important because some aspects of their behavior might be non-conventional. For example, their choice of Friday at noon might not be conventional at all: perhaps they both work at jobs that don't allow them to go out for lunch any day but Friday. Given this elaboration of the story, the day of their meeting is not conventional as there are no alternative options. One aspect of their lunch-meeting regularity is conventional but other aspects are not. Thus, even for this simple case, the question "Is their behavior a convention?" requires further clarification. The question must be sharpened to a particular aspect of that behavior and a specification of the set of alternatives under consideration. In our enriched story of Rene and Cathy, we would say that their choice of restaurant is conventional while their choice of day is not.

Rene and Cathy's behavior can be called conventional, under the right framing. This will not be true of Richard and Clark. Their Friday lunches do satisfy conditions (1) and (2) : they both to go Fancy Foods every Friday and they expect the other to do so too. Richard and Clark would probably satisfy condition (3), but only in a somewhat hollow way. Since Richard prefers to go to Fancy Foods regardless of what Clark does, he would satisfy (3), and similarly for Clark. However, Richard and Clark's interaction would not satisfy (4): given that Richard is going to Fancy Foods, he does not care whether Clark is there. Finally, condition (5) also fails for Richard and Clark. There is no other restaurant that they would choose on condition that the other does the same.

Lewis' definition of convention makes being a convention an all-or-nothing affair. Lewis was, to an extent, sensitive to this issue and on pp. 76-80 explores the notion of *degrees* of conventionality. What concerns Lewis in this brief section is the possibility of minor exceptions to participation in the regularity, which should not deprive it of its conventional status. (If every once in a while, Cathy can't make it to Fancy Foods for her regular Friday lunch and winds up going to Golden Grill, which is more convenient for her, this should not render the standing arrangement non-conventional.) The central variability in conventions explored here–variability in naturalness–is tangential to Lewis' notion of degree of conventionality.

Our focus will be on another type of variability in conventions. Conventions differ from one another in terms of the properties of the underlying coordination problem to which they provide solutions and in how they came to be. For Lewis's purposes, these differences "wash out" once a particular solution becomes conventional. As he puts it on p.84, "a convention created by agreement is no…different from one created otherwise: it bears no trace of its origin." We do not dispute Lewis's claim about the important formal properties shared by all conventions. However, in the exploration of linguistic phenomena and social phenomena more generally we desire to know more about the origins and maintenance of conventions. There is much to learn in unpacking some of those differences that Lewis was at pains to smooth over.

In the sections that follow we explore three ways that conventions might vary. We pay particular attention to how convention is continuous with nonconventional behavioral regularities in important ways. In that respect, we show how distinctions between the "natural" and the "conventional" parts of language may be more difficult to tease apart than is usually supposed.

3. Naturalness in conventions: three dimensions

3.1. Variation in Alternative Quality

Lewis makes clear that in a coordination problem–the problem that underlies a convention–the various equilibria need not be equally good in terms of the payoff (see e.g. p.10). Any equilibrium point represents a possible convention, even if in some sense there are "higher quality" solutions. But in a game with equilibria of differing quality, coordination on the highest quality equilibrium is a less arbitrary, more "explicable" convention.

To illustrate, let's return to Rene and Cathy's choice of lunch meeting spots, but now let's tweak the story. Suppose now that Rene and Cathy agree that Fancy Foods is superior to Golden Grill in all respects. The inferior quality of Golden Grill is not so bad as to make their meeting unpleasant. They would prefer a meeting at the Grill to missing the meeting altogether. (This is important, because it distinguishes their choice from Richard and Clark's. If, for some reason, Rene thought that Cathy was going to the Grill, Rene would go to the Grill as well.)

Their choice remains fully conventional under Lewis' definition, because Rene and Cathy *could* have wound up with the Golden Grill as their regular meeting place. (Suppose they started out accidentally meeting at the Grill two or three times on a Friday at noon, each having gone there for lunch for no special reason. Each enjoyed the meeting, so they went to their dispreferred restaurant on a Friday at noon hoping to meet the other; and so the convention began.) More formally, the choice of restaurant remains conventional because both choices are equilibria in the underlying game, as shown in Table 3.

	F	**G**
F	1,1	0, 0
G	0, 0	*x*, *x*

Table 3

In this game, whenever $x > 0$ both **F** and **G** are strict Nash equilibria, and hence are potential conventions. But suppose x is very small, say 1/1000. **G** remains a potential convention despite it being a very unappealing alternative. Intuitively, the further x moves from 1, the more likely it is that the players would arrive at a convention to meet at Fancy Foods. Beyond our intuitions, many models of learning in game theory underwrite this intuition with mathematical proof: players are more likely to converge on F rather than G (Sandholm 2010).

The conventionality of Rene and Cathy's behavior thus has a different character depending on the value of *x*. When x is close to 1, the players' choice to make Fancy Foods their meeting place is a fully arbitrary solution. In both an intuitive and a formal sense, they could just as well have chosen the other alternative. But, as *x* gets smaller, **F** becomes a more "natural" and less arbitrary choice, one that can be explained at least in part in terms of the preferences of the agents. We characterize this feature of a convention as its *quality*.

In our terminology, if one solution S1 to a coordination problem has higher quality than a second solution S2, then a convention to do S1 is more natural than the competing convention to do S2.

3.2. Variation in Stability

Condition (3) of the definition of convention entails that all conventions are Nash equilibria. Nash equilibria are central to coordination because they exhibit a certain kind of stability, sometimes called "stability in expectations." Consider the canonical convention pictured in table 1. Suppose that Rene plans to go to Fancy Foods and Cathy plans to do the same. If we inform Rene of Cathy's plan, Rene will not alter her plan to go to Fancy Foods. Nor will Cathy if she is informed of Rene's intentions. Thus Rene's choice is stable to learning what Cathy plans to do. So, too, is Cathy's. This is one way to characterize a Nash equilibrium.

In this description of Nash equilibrium, we assume that Cathy and Rene are informed with certainty about what the other one will do. Often, though, we are uncertain about another's intended actions, and Nash equilibria can be more or less stable in the face of this uncertainty. Returning to table 1, suppose that both Rene and Cathy are planning lunch at Fancy Foods. Now imagine we introduce uncertainty into that judgment. Suppose, in particular, that Rene is uncertain about what Cathy is going to do; perhaps Rene thought she saw Cathy drive off in the wrong direction. The question of interest now is: How much uncertainty could Rene tolerate before she switches her behavior?

In the case of Table 1, even if we introduce a small degree of uncertainty in Rene's mind, she continues to want to play **F**. So long as Rene believes that Cathy will play **F** with probability of at least one-half, Rene should still play **F**. Thus **F**, in the case of Table 1, is a stable convention. Now consider the variation on our story, where **F** and **G** differ in payoffs, as shown in Table 3. As *x* approaches 0, the stability of **F** increases. Consider the case where $x = 0.5$. Given the higher payoff from coordinating on **F**, Rene should continue to go to Fancy Foods as long as she holds the probability of Cathy doing so to be at least 1/3. Rene can assign a relatively low probability to Cathy obeying the convention and still desire to continue her part of it. In this case, we see the higher quality convention is also very stable.

But not all conventions will be so stable, and stability does not always track quality. To illustrate this, we offer a third variation on the Rene and Cathy story. Let's suppose now that, for reasons no one knows, Fancy Foods makes only one dish worth eating–a cheese fondue for two. Everything else on Fancy Food's menu is terrible. In an additional mystery, the restaurant owner, refuses to make the fondue for one person; orders are only accepted for a party of two. The Golden Grill is, on the other hand, an all-around decent restaurant. Nothing on their menu is quite as good as Fancy Foods' fondue, but many dishes make for a good lunch.

As before, Rene and Cathy are friends and would like to meet for lunch on Friday. But, unlike before, they now have preferences over the outcomes if they don't meet. If they miss one another, each would rather be alone at the Grill since they can find something worth eating. Being alone at Fancy Foods would be unfortunate because they would be stuck eating a terrible lunch alone. This game is pictured in Table 4.[3]

	F	**G**
F	7,7	0, 5
G	5, 0	6, 6

Table 4

Suppose that Rene and Cathy both go to Fancy Foods every Friday and share the cheese fondue. This behavioral regularity satisfies all of our conditions for convention. The alternative convention would be for them to meet at the Golden Grill. The food would not be as good there, and therefore this convention would be worse in terms of quality. But it would be a convention nonetheless.

Unlike the case of the conventions in table 1, the Fancy Foods convention in Table 4 is relatively unstable to uncertainty. So long as Rene thinks that it is more likely than 0.75 that Cathy will go to Fancy Foods, Rene will opt to play **F**. But if her uncertainty grows and she assigns a slightly lower probability to Cathy going to Fancy Foods–0.70 will do it–Renee will opt for her safer choice of going to the Golden Grill.

The alternative convention, of Renee and Cathy going to the Golden Grill, is not unstable in this way. Suppose that Rene and Cathy have the habit of going to the Golden Grill every week. Now suppose that on one particular week, some uncertainty is introduced into Rene's mind about where Cathy is going. For some reason, she thinks that Cathy might go to Fancy Foods. Even if Rene is maximally uncertain–

3 The game pictured in table 4 is a variation on the Stag Hunt or Assurance game common in game theory.

she assigns a probability of 0.5 to Cathy following their convention–Rene will stick to the regularity and go to the Golden Grill.

In fact, we can make the convention to go to Fancy Food's more and more unstable. Consider the game pictured in Table 5 below.

	F	**G**
F	7, 7	0, 7-2*e*
G	7-2*e*, 0	7-*e*, 7-*e*

Table 5

For any $7 > e > 0$, **F** is a potential convention. But, as *e* gets smaller, the **F** convention becomes less and less stable. The degree of certainty required by Rene to go Fancy Foods grows as *e* shrinks. Once $e < 7/3$, **G** becomes more stable than **F**. As *e* approaches zero, the minimum probability in order for **F** to be rational approaches 1.[4] As the degree of certainty required for **F** to be rational increases, the stability of the convention of doing F *decreases* and the stability of the alternative convention *increases*.

So far, we have described stability in terms of uncertainty. How uncertain can Rene be about Cathy's action before she decides to abandon the convention to go to Fancy Foods? But we can express the same concern differently. Suppose a large community of people who regularly interact with one another in a circumstance is well modeled by one of these games. Every day each person will be paired with another anonymous member of the population and forced to choose a strategy in the game. How many deviants could this community support before the convention to play **F** collapsed? Note that this way of characterizing stability has more obvious bearing on the case of linguistic convention, where the conventions apply across a large population, and the central question is whether a speaker can rely on a convention in addressing a new interlocutor about whose linguistic habits she has no prior information.

Mathematically these two ways of describing the situation are equivalent.[5] A population playing the game in table 4 can tolerate up to 25% of the population deviating before the convention to play **F** collapses. Similarly, in table 5, as *e* approaches 0, the convention to play **F** requires greater adherence in order to be stable. For very small values of *e*, the convention to play **F** would require near universal adherence. Game theorists have formalized this notion in various ways (see, for example, the notion of *stochastic stability* in Foster and Young 1990).

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4 Lewis (1969:26-27) discusses the effect of uncertainty on the attainability of a given equilibrium. He notes that "we can imagine cases in which so much mutual confidence is required to achieve coordination at an equilibrium that success is impossible."

5 In both cases, the player is uncertain about what the other player will do. Under the first description, Rene was uncertain about what Cathy will do. Under the second description, the first player was uncertain who would be her partner and was therefore uncertain about that partner's action.

Conventions whose alternatives are unstable to even relatively small perturbations are unlikely to arise. When they do they are likely to collapse and to be replaced by an alternative, more stable, equilibrium (Foster and Young 1990, Sandholm 2010). We thus characterize more stable conventions as falling higher on the naturalness scale than less stable conventions.[6]

3.3. Variation in Availability

The "population interpretation" that ended the last section also points to another way in which conventions might differ: some might be easier to settle on than others. Both psychological and structural features of social situations might lead to some conventions being more available than others.

Human psychology can make people more likely to choose one convention over another. Schelling (1960) found that in situations with multiple equilibria people were nonetheless able to settle on a convention very quickly. For a classic example consider this question:

> You were told the date but not the hour of [a meeting with one other person]; the two of you must guess the exact minute of the day for meeting. At what time will you appear at [a predetermined meeting place]? (1960, 56)

Although this situation was novel for his subjects, "virtually all of them" chose noon (1960, 55). In the game described by Schelling there are 1,440 potential Nash equilibria which are all equally good in terms of payoff. This makes for 1,440 potential conventions. But in this problem, they are not all created equal; one in particular is what Schelling called a *focal point*: something about the cultural setting, and perhaps shared cognitive biases, make this particular solution uniquely salient.

The question of what makes a solution salient is a research question in its own right. For our purposes, the relevant observation is that in a repeated game where one equilibrium is a focal point, a convention which utilizes that equilibrium falls higher on our naturalness scale than any other possible convention for that game. Conventions that are focal points will arise more often than conventions which are less salient.

In addition to human psychology, structural features of conventions might make one more likely to arise than another. Some conventions are established at a particular moment: for example, when a specialist

6 As we hope we have made clear, we use the term "natural" as contrasting with "arbitrary", the intuition being that a natural convention is one where the choice among the alternatives can, to some degree, be explained. "Natural" does not, for us, necessarily mean explainable in terms of cognitive or cultural predispositions.

invents a technical term. But these circumstances are relatively rare. Most conventions arise out of a process of slow cultural evolution. Depending on the underlying situation, certain types of conventions might be more likely to emerge than others. For example, consider the example in Table 4. Not only is the convention **G** more stable to changes in expectation, it is also more likely to evolve by a process of cultural evolution.[7]

3.4 A continuum of conventionality

Each of these three dimensions characterizes conventions that run from almost-non-conventional to fully conventional and totally arbitrary. For a particular convention, the quality of the alternative can be as good as the current convention–driving on the right- or left-hand side of the road is the classic example. But, as the alternative becomes less and less attractive, the current convention will seem less and less arbitrary. One might imagine someone saying, "Yes, of course we *could* have done otherwise, but doing so would be such a bad idea."

A similar continuity exists for variations in stability. At one extreme are two potential conventions, both of which would create equally stable social arrangements. As one potential convention becomes less and less stable, it loses its plausibility as an alternative. In this way the current convention might seem far more natural. "Of course we could have done differently, but it wouldn't have lasted very long."

Finally, conventions can change in terms of their availability. Some conventions are as available to communities as their alternatives. In other situations one potential convention picks itself out as a far more obvious choice or likely outcome than its alternative. At extreme, one convention is so unavailable that one might not even imagine it as an alternative possibility. "I suppose we could have done that, but who would have ever thought of trying it?"

We are not concerned here with the technical question of explicitly ranking sets of conventions on a single scale of naturalness. Because we have identified three different ways that conventions vary, we have, formally, three different scales. When all three scales render similar verdicts, one convention is clearly "more natural" than another. However, when the properties pull in different directions–when one convention is of higher quality but is less stable than another–we would need to identify a method for weighing the different considerations. We suspect that in practice, as in the example we will develop in detail below, the three properties will often vary together. For current purposes, we'll continue to talk about a single scale of naturalness, even though we have not developed such a scale.

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7 To fully underwrite this claim, we must specify a model of the process of cultural evolution. In the replicator dynamics (Taylor and Jonker, 1978), a popular model of cultural evolution, the convention **G** (from Table 4) is three times more likely to emerge from a randomly chosen population than the convention **F**.

All of our examples discussed so far are pedestrian, non-linguistic conventions. But the same variation in quality, stability, and availability will be present in more complex conventions, including linguistic conventions. Many debates in linguistics and philosophy of language are clarified by recognizing these degrees of conventionality. To one such debate, we now turn.

4. Linguistic Applications: Indirect Speech Acts

Much of linguistic behavior is conventional. The meanings of individual terms, for instance, are clearly conventional. But this is not true of all aspects of meaning. As noted in the introduction, Grice (1975) argued that some aspects of utterance interpretation are the outcome of reasoning by a rational interpreter: this is what we call *calculated* meaning. Because this reasoning is triggered by non-conventional principles–principles purported to arise from basic rationality (Grice 1975) or from underlying cognition (Sperber and Wilson 1986)–scholars do not regard this aspect of communication as conventional. Despite broad agreement that interpretation has these two components, there remain many difficult cases where it is unclear whether the behavior should be categorized as conventional. It is here where our notions of naturalness will be most helpful.

While there are many potential domains for application of these distinctions, we will focus on the case of indirect speech acts. This debate provides fertile ground for analysis using degrees of naturalness.

4.1 Background: Calculation vs. Convention in Indirect Speech Acts

For our purposes, an Indirect Speech Act (ISA) is an utterance which accomplishes a speech act whose force is distinct from that usually associated with the linguistic form uttered. There are many potential nuances, but as our goal here is to investigate conventionality rather than to give a taxonomy of Indirect Speech Acts, we will mostly sidestep them by focusing on the case of Indirect Requests (IRs). Given that requests are a type of directive, and that imperatives are the canonical linguistic form for issuing directives, we will consider any utterance of a non-imperative form which communicates a request to be an IR.

IRs have been a locus of the debate about conventionality versus calculability because there are compelling observations on both sides. Approaching this debate armed with the notion of a natural convention, as well as a more careful framing of the debate itself, can resolve this apparent impasse in a way which accommodates all the relevant observations. Our approach to IRs is informed by three previous proposals: Searle 1975, Morgan 1977, and Clark 1979.

Searle (1975) offers what is now the canonical pragmatic approach to IRs and other indirect speech acts. According to the account, the sentences whereby indirect speech acts are performed have their usual,

literal meanings. Their use, though, can accomplish an additional speech act which is recognized through general Gricean reasoning, supplemented by knowledge of the felicity conditions on the performance of different types of speech act. The account is attractive in its simplicity. It does not require us to posit any linguistic ambiguity, which is hard to locate; and it is extremely general, allowing for parallel accounts of a wide range of indirect speech acts.

The generality of the account also constitutes its primary difficulty. The Gricean inferences that underlie ISAs on Searle's account are driven by observations about the content the speaker has expressed in a given context. Such conversational inferences are supposed to be (in Grice's terminology) *nondetachable*–that is, nondetachable from the content expressed. Expressing the same content in a different way is supposed to generate the same conversational inferences. Yet this is not quite how things work with ISAs. Searle puts the point like this:

> The single biggest problem with the foregoing analysis is this: If, as I have been arguing, the mechanisms by which indirect speech acts are meant and understood are perfectly general [pragmatic ones]...and not tied to any particular syntactical form, then why is it that some syntactical forms work better than others? Why can I ask you to do something by saying *Can you hand me that book on the top shelf?* but not, or not very easily, by saying *Is it the case that you at present have the ability to hand me that book on the top shelf?* (p.75)

Searle not only identifies the problem, but also suggests a solution, albeit sketchily:

> The theory of speech acts and the principles of conversational cooperation do, indeed, provide a framework within which indirect speech acts can be meant and understood. However, within this framework, in any given language, certain forms will tend to become conventionally established as the standard idiomatic forms for indirect speech acts. (p.49)

The apparent conventionality of certain forms underlies the alternative to Searle's pragmatic approach, which is to posit an ambiguity. On ambiguity views, when the sentence *Can you help me with this?* is used to make a request, it simply expresses that request and does not express the meaning of a question about ability. There are two variants of this view. One is proposed by Lepore and Stone (2015), who claim that "The word *can* simply has two distinct but closely related meanings, both of which English speakers must learn." (p.98).

The more standard variant of the ambiguity view is that the structure *Can you VP* has an interpretation as an idiom. (Morgan 1977 discusses this view as an alternative to Searle's but without attribution.) An idiom is a syntactically complex expression which is interpreted non-compositionally, but which may undergo syntactic modification. A standard case is *kick the bucket*, meaning "die." Clearly, no knowledge of the meanings of the component expressions will enable an interpreter to arrive at this meaning: one must simply learn that this chunk carries this meaning. The association of the meaning with

the complex expression is an arbitrary convention of meaning, just like the association of the word *bucket* with a particular kind of container. As illustrated by *kick the bucket, give X a hand, keep tabs on Y*, idioms can be syntactically incomplete, as would be the case for the *Can you…* idiom. As noted, on this account, a speaker who says *Can you help me with this?*, intending the utterance as a request, has *not* literally asked a yes/no question; just as a speaker who says *I'll give you a hand* has not literally or in any other sense said that he will give the addressee any physical object.

Both of these ambiguity views fail to explain the well known fact that it is natural and quite standard to respond (linguistically) to the question meaning as a prelude to, or while, responding in some practical way to the request. For example, one might respond to *Can you help me with this?* with *Yes, I can. Let me see what you need.* (See Clark 1979 for extensive evidence based on elicitation in conversational contexts.) Ambiguity views also have difficulty explaining why indirect requests can in fact be performed in a wide variety of ways. Table 5 gives some illustrative examples; see also Searle (1975, p.65-67).

means ↓ **form→**				
Asking about ability	Can you help me with this?	Would you be able to help me with this?	Is it at possible for you to help me with this?	Do you have a moment to help me with this?
Asking about willingness	Would you mind helping me with this?	Do you mind helping me with this?	Are you willing to help me with this?	I'm hoping you wouldn't mind helping me with this.
Assertion of appreciation	I'd be grateful if you could help me with this.	It would be nice if you would help me with this.	I would love your help with this.	Getting help with this would be great.
Asserting need/desire	I want/need some help with this.	I'd like you to help me with this.	I hope you'll help me with this.	If I had some help with this I could get it done much faster.

Table 6

In this set of forms, there is a gradation from forms which seem robustly conventional (like the *Can you…* and *Would you…* forms), to forms which seem fairly creative (*Getting help with this would be great*). It is open to the ambiguity theorist to posit that some indirect requests involve forms which have become idioms, and hence are truly ambiguous, while others are carried out using purely pragmatic reasoning of

the sort described by Searle (cf. Morgan 1977). But it would be more satisfying to have an analytic framework that accounts for the observed gradation.

Both Searle and the ambiguity theorists discuss conventionality only in relation to particular linguistic forms. Our own analysis of the status of indirect requests will utilize a distinction due to Clark (1979), between the *means* of carrying out an indirect request and the *form*.[8] Clark (1979) demonstrates that both means and form have varying degrees of standardization or conventionalization. So, any given IR (or other indirect speech act), can be evaluated for conventionality along these two different dimensions. This observation is the starting point for our exploration of the conventionality of indirect speech acts. We assume that the Searlean account provides a correct analysis of how the various Searlean strategies such as the means listed in Table 6 come to be means of performing indirect requests. We will argue, however, that this is consistent with both means and form being conventional in Lewis's sense.

4.2. Searlean strategies as natural conventions

Searle's argument is that all the means that perform indirect requests (including but not limited to those shown in table 6) can fulfill this function because of the Gricean reasoning that connects expression of the particular content in a given situation with the intended effect. Acknowledging the Gricean basis for the interpretation does not prevent us from treating these strategies as conventional, however. Admittedly, thinking of the means as conventional seems antithetical to Searle's conception: isn't the point of the pragmatic account that it makes it unnecessary to posit any established convention? What we will demonstrate here is that the adoption of Searlean strategies *is* conventional in Lewis's sense; but the pragmatic foundations of these strategies makes their use a highly *natural* convention.

In any complex regularity, linguistic or otherwise, some elements may be conventional and others not; so it is important to isolate these elements and investigate them separately. Recall from our story of Cathy and Rene and their weekly meetings on Fridays at noon that the question of the conventionality of their choice of location is independent of the question of the conventionality of their choice of meeting time. In the case of Indirect Requests, we need to investigate separately whether particular means are conventional and whether particular forms are conventional. But prior to both questions is whether the choice to use *any* Searlean strategy for the performance of an indirect speech act is conventional or not, and if so, to what degree the convention is natural. This is the question with which we begin.

As in the case of Cathy and Rene, we need to determine what regularity of behavior we are evaluating, and to identify what constitutes the alternatives to this regularity. In English, and many

[8] This distinction is already implicit in Searle 1975.

typologically and culturally distinct language communities, some Searlean strategies are standardly used to make requests, and are recognized as being so used, we begin by examining this general regularity. The alternative regularity is to avoid the adoption of any such strategies for indirect requests. To decide whether this regularity is a Lewisian convention, we must determine whether Lewis's conditions on conventionality are met. For ease of reference, we repeat those conditions here:

> **Lewisian Convention**
> A behavioral regularity R in a recurring situation is a convention for a population of agents if and only if,
> 1. Everyone conforms to R
> 2. Everyone expects everyone else to conform to R
> 3. Given the set of alternative regularities ***R***, everyone would prefer to conform to R over any other member of ***R*** on condition that everyone else conform to R.
> 4. Supposing that all but one person are conforming to R, everyone prefers that the one person also conform to R
> 5. There is an alternative regularly R' in ***R*** that also satisfies conditions (3) and (4).

Let's restrict our attention here to the use of indirect requests in English speaking communities. The recurring situation is being part of such a community. The regularity we are investigating is that of treating some Searlean strategy (or strategies) as a way of performing requests.[9] As an alternative, an individual could refrain from treating any Searlean strategies as a way of performing request. For the moment, these are the only two options in the set **R**. In subsequent sections we will consider alternative Searlean strategies compared against one another.

We now consider whether the five conditions are met. With respect to conditions (1) and (2), we will assume that they are indeed met, bearing in mind Lewis's later weakening of the conditions to allow for conventional regularities where not everyone participates.

Condition (3) is also satisfied. This condition establishes the preference for coordination. In communication, coordination is paramount. If everyone else in my language community treats certain Searlean strategies as ways of performing requests, then I prefer to do so too. If I don't, I will sometimes fail to understand requests addressed to me; and I will sometimes fail to issue requests in an appropriate way. Note, importantly, that satisfaction of Condition (3) does *not* require that my *only* reason for

[9] An alternative way of modeling the situation would be to arbitrarily choose one particular Searlean strategy and to pretend for purposes of the analysis that it is the only one available.

conforming to R is that others do. If I conform to R at least in part because R is an intrinsically good strategy, that's fine; as long as, were it to be the case that everyone else did something different, I would change my behavior (Condition 5).

If Condition (3) is met, then, we will assume, Condition (4) is also met. Assuming that all members of the language community have a preference for full mutual comprehensibility within their group, everyone wants others to conform to the same communicative choices.

Condition (5), perhaps surprisingly, is satisfied too. The alternative regularity under consideration is that of *not* treating any Searlean strategy as a way of performing indirect requests. If members of the community were observing this regularity, speakers would never utilize their addressees' pragmatic capacities in a Searlean way to make requests. (They could still use their addressees' pragmatic capacities in other situations.)

Why would individuals not want to adopt Searlean strategies if no one else in the population adopts them? Imagine, for example, a language community that refrains from using Searlean strategies to make indirect requests. (Perhaps the community already has a different set of conventional linguistic markers of politeness, respect for the addressee and so on.) If a single member were to adopt a Searlean strategy as a regular behavior–while the population does not–that single member would be harmed. Suppose Jake does just this: he regularly uses some Searlean strategy to make indirect requests, even though no other member of the population does. Because members of Jake's community are capable of pragmatic reasoning, he will usually be successful at communicating as a speaker. But when speakers use non-canonical strategies or forms in communication, they are often taken to intend something out of the ordinary, and so the possibility of miscommunication would be higher than if he made the request in the normal way. He will be seen as an odd-ball who constantly uses strange phrasing to make simple requests. This might harm Jake socially. Finally, Jake will perform incorrectly as a listener. Should another person inquire, "Jake, can you pass the salt?" (or substitute whatever Searlean strategy Jake adopts), Jake will interpret this as a request when it was not so intended. He will therefore fail to answer a direct question and instead engage in an unwanted or unnecessary behavior.

While none of these harms would be catastrophic for Jake, they are sufficiently negative to outweigh any potential gains from using a Searlean strategy in a community that otherwise never uses them. So, in this community Jake would prefer to conform to R'. Similarly, given that Jake conforms to R', he would prefer that everyone else do so as well for similar reasons as those outlined above. As a result, Lewis's condition (5) is satisfied: not using any Searlean strategy is an alternative regularity, R', that would satisfy conditions (3) and (4).

We thus arrive at what seems like a paradoxical situation. By assuming that indirect requests work in a generally Searlean way, we still find them characterizable as conventions in Lewis's sense. But what

we can now show is that this convention is a highly natural convention, in the terms developed earlier. The alternatives of using (some) Searlean strategies is more stable, more accessible, and of higher quality than avoiding the use of any such strategies.

Here is the argument for stability. Suppose our language community has adopted the regularity of avoiding the use of Searlean strategies to make requests. Nonetheless, sometimes requests will be expressed as indirect requests through normal conversational reasoning. For example, several of the Searlean strategies (questions about ability, questions about willingness, and questions about resources) involve asking about whether preparatory conditions for issuing a request are satisfied. Sometimes, there is genuine uncertainty about those conditions. (Consider the case where you want to talk with a colleague who is in their office but who, for all you know, may not have time. In such a case, asking *Do you have 10 minutes to talk?* is an actual inquiry, but one which also signals to your colleague your desire for that conversation.) Because these types of signals of requests will happen anyway, the regularity of avoiding all such strategies is likely to be unstable: we decide jointly not to use them, but wind up doing it anyway.

The alternative convention, that of treating some Searlean strategies as ways of making requests *is* stable, because it is supported by our existing pragmatic competence. This is because our pragmatic competence inclines us to "hear" a question about ability as signaling a request in certain familiar circumstances; so avoiding Searlean strategies entirely would require suppressing ordinary conversational reasoning. And of course, our pragmatic competence renders these strategies easily *available*. No specialized linguistic knowledge is needed either to generate or to comprehend a request using Searlean strategies.

Finally, using Searlean strategies is of higher quality than the alternative of not using them. The existence of a plethora of strategies for making indirect requests is plausibly related to their perceived politeness. Requests are so-called *negative face threatening acts*–acts that impose on the addressee (Brown and Levinson 1987); indirectness in requests is a means of mitigating the social threat. Now, politeness does not *require* indirectness. Politeness can also be achieved using conventional markers of politeness, such as *please*. However, a polite but direct request does not decrease the threat to face as much as an indirect request. Moreover, the rich variety of means and forms of indirect requests in English suggests that this variety is itself socially beneficial. It provides us with multiple ways of being polite, and with a great many gradations of politeness. These become available to us once we allow the utilization of Searlean strategies as a general regularity.

Table 7 represents a plausible model of the choice between Searlean and non-Searlean strategies for making requests. Here, S/~S represent the regularity of treating/not-treating some Searlean strategies as requests.

	S	**~S**
S	10,10	5, 3
~S	3, 5	8, 8

Table 7

The individual choices for numeric values are for illustration only and have no real meaning. However, the relation between the numeric values plausibly represents the situation faced by communities considering adopting Searlean strategies. Being a member of a population that uses Searlean strategies (playing S against S) is better than being a member of a population a population not using Searlean strategies (playing ~S against ~S). That S against S secures a payoff of 10 while ~S against ~S secures a payoff of 8 captures the difference in quality described above.

Furthermore, the variation in quality and stability are captured in the two "off-diagonal" payoffs. These represent the consequence of bucking the trend and adopting a strategy not in wide use by the population. In our story of Jake, we illustrated why it is sub-optimal to play S against ~S. Jake would often communicate effectively, but he would occasionally make mistakes.

In the other direction, things are far worse. Suppose that Julie is in a population that regularly utilizes the Searlean strategy, but Julie does not. Even if Julie engages her pragmatic reasoning skills as a listener, she may interpret IRs literally, failing to respond to the intended request. (This is the inverse of Jake's problem from above.) Even worse, as a speaker, Julie will be rude because she constantly makes requests using a direct form that is socially inappropriate. Her requests will be successful, but she will be insulting, demanding, or obnoxious. As a result, we think this situation is adequately captured with the payoff for S against ~S (in our case, 5) being higher than ~S against S (in our case, 3). Together these considerations render the convention S substantially more stable and more available than convention ~S.

To summarize this section: adopting Searlean means to carry out requests is conventional–we *could* have opted to do otherwise–but it is a highly natural convention by virtue of its stability, quality and availability. We now consider the conventional status of the choice of particular Searlean strategies.

4.3. Conventionality of choice of means

What Searle noted as the "single biggest problem" for his analysis was the preference for particular *forms*: for example, the preference for the *Can you…?* form over the roughly synonymous option *Do you have the*

ability to…? Searle should, though, also have noted a further, related, problem: not every imaginable strategy for performing an indirect request through Gricean reasoning is utilized, at least not routinely.

Consider, for example, assertions that people sometimes do *A*. There are imaginable circumstances where such an assertion could, through Gricean reasoning, lead the addressee to conclude that the speaker wishes her to do *A*. Suppose, say, that we are sitting and talking in a room with closed windows, and the room is a little warm. I say *People sometimes open the windows in here*. The observation is irrelevant to our current conversation, so you have to consider why I might have said it. A plausible Gricean story goes like this:

> Speaker K has asserted that people sometimes open the windows in here. I have given K no reason to think that fact interests me; so K must have a special reason for wanting me to know this. What reason might K have for wanting me to know this? Well, if I know that *others* sometimes open the windows, I know that the windows can be opened. What can be done is something I might choose to do. So maybe K wants me to open the window. Oh, and it is a little warm in here, which would be a reason for K to want me to open the window.

This reasoning seems analogous to the reasoning whereby a question about the addressee's ability to open the window comes to be recognized as a request that they do so. So assertions of this sort are equally good candidates for means of carrying out an indirect request as are questions about ability. And indeed, such assertions might *sometimes* be used to issue indirect requests. But in English speaking communities, assertions of this sort are not regularity used for this purpose.

Let's cash this out in Lewisian terms. The background we assume here is that the language community will treat *some* set of Searlean strategies as means for indirect requests. The community must chose which means to treat in this way. For simplicity, assume there are two possible alternatives. Let regularity R be the regularity actually observed by English speakers in the United States: the regularity of treating the set S of Searlean strategies as means for performing indirect requests.[10] Let R' be the alternative regularity of treating some set S'≠S of Searlean strategies as means for performing indirect requests.

Regularity R meets the conditions of Lewisian convention. Conditions (1) and (2) are straightforward: everyone (or nearly everyone) follows R; and everyone expects everyone (or nearly everyone) else to do so. Condition (3) is slightly more complicated. We'll first articulate an argument for why Condition (3) might not in fact be met; then we'll argue against it.

Let us assume that there is some fixed set of strategies that a linguistic community might use for making indirect requests. For example, in English one might request that someone do something by asking about ability, asking about willingness, by asserting a need, etc. Abstractly, we will denote each possible strategy by S1, S2, S3, … Sn. An anti-conventionalist might argue as follows. Suppose that (almost)

[10] Probably there is no one regularity among this very large group. But this characterization will do for illustrative purposes.

everyone in a given language community follows the regularity of treating Searlean strategies S1, S2 and S3 as means for issuing indirect requests. But there are a variety of other Searlean strategies, S4…S_n that are not generally recognized by the community as a normal way of making indirect requests. This is regularity R.

Although S4 … Sn are not *generally* used by the community to make indirect requests, they are *sometimes* utilized for that purpose, relying only on the general pragmatic competence of the interlocutors. Now consider an individual member of the community *i*. Even if *i* does not conform to the regularity, she will, by assumption, still be able to understand indirect requests addressed to her (by virtue of her pragmatic competence), and the requests which she issues will also be understood (by virtue of the pragmatic competence of others). So it seems that the conformity of others to R is not a definitive reason for *i* to also conform to R. If true, this argument would provide a strong argument against our view that the selection of means for carrying out indirect requests is conventional.

We do not believe that this represents the situation of actual linguistic agents, however. There is strong evidence that in face to face linguistic interactions, interlocutors have a tendency to coordinate linguistic choices, including lexical choice, selection of referring expressions, and syntactic choices (Brennan & Clark 1996, Niederhoffer & Pennebaker 2002). If a speaker, in repeated interactions, continues to encounter the same linguistic choices by her interlocutors, that speaker will almost certainly come to adopt the same choices as her normal preference. Repeated encounters with speakers who utilize questions about ability as a means to express indirect requests simply do, as a matter of fact, lead to adoption of this strategy. So although it is possible, in the abstract, for a member of a language community to "resist" the regularity, it is not how language users in general behave. Members of a language community simply do prefer to adopt the regularities in the linguistic behavior of the community. Condition (3) is just an encapsulation of linguistic fact. As before, we assume that if Condition (3) is met, then so is Condition (4).

That some strategy is not included in the set S which makes up the regularity does not prevent language users from utilizing that strategy to make an indirect request. Only, in doing so, they are relying entirely on their and their addressee's pragmatic competence, and not on familiarity with any convention. This is consistent with intuition. To continue with the example above, we can make sense of a situation in which saying *People sometimes open the windows in here* can be used to request that the windows be opened; but this request makes no use of any standing request-making conventions. This way of issuing the request seems extremely indirect; much more so that asking *Can we open the windows?*

Satisfaction of Condition (5) is precisely the point illustrated at the beginning of this section. If my language community happened to utilize a different set of Searlean strategies than I currently do, then I would prefer to switch and adopt their Searlean strategies. This claim is supported by the many observations about cross linguistic variation in strategies used for indirect speech acts: not all language communities use

the same set of means, and where there is overlap, communities may differ with respect to which means are most frequent or ordinary, which are considered most polite, and so on (Blum-Kulka 1989).

Despite this variation, the cross linguistic literature suggests some commonalities across languages. In particular, the regularity of treating questions about ability as signals of an indirect request is observed in a number of languages, some of which are typologically unrelated, including British English; American English; French; Argentinian Spanish; Hebrew; German; Telugu (Dravidian); Farsi; and Turkish.[11]

These observations lead to the following conclusions: As we have already observed, the regularity of treating *some* Searlean strategy (or set of strategies) to signal indirect requests is itself conventional, but is a highly natural convention. The choice *among* Searlean strategies is also conventional, but it is a more arbitrary convention. However, to the extent that we find some particular Searlean strategy to be prevalent across language communities, we might conclude that this strategy is more accessible than other Searlean alternatives. The most plausible type of explanation for such a finding would be that there is something particularly salient, in the sense of Schelling 1960, about that strategy: we might expect to find cognitive or cultural reasons why that strategy is available for selection as a regular means of performing indirect requests. Whether any such conclusion is warranted requires extensive cross linguistic investigation, and lies outside the scope of our current project.

4.4. Conventionality of Form

We have not exhausted all the conventional choices of a community by considering whether they adopt Searlean strategies and the conventional choice of means. Even if a community has settled on the use of questions of ability as the means, there remain many forms available to the speaker. A speaker can use the locution "can you...?" or "are you able to...?" or even "is it consistent with the laws of physics that you...?"

We have already seen that there is consensus across the literature that the selection of the forms for carrying out particular speech acts involves some degree of conventionality. This is perhaps sometimes overstated: as Searle's own lists of examples show, there is a large variety of forms that are used for indirect requests, and speakers can be quite creative. The analysis given here helps us to understand this: a speaker who uses a question about ability to make a request is participating in a particular convention which she can count on her interlocutor to recognize, whatever form that question might take.

Some of the restrictions on possible forms can be explained by the idiomaticity constraint posited by Searle (1975, p.76). We have already noted that Searle observes the distinction between a. and b. below:

a. Can you hand me that book on the top shelf?

[11] Data drawn from Blum-Kulka 1989 and from informal questioning of native speakers by Author 1.

b. Is it the case that you at present have the ability to hand me that book on the top shelf?

While a. is a natural way to make the request, b. is not. Searle points out, though, that b. is also not a natural way to ask the literal question about ability. (Cf: *Can you sing high C?* vs. *Is it the case that you at present have the ability to sing high C?*) Using the unusual form suggests that one intends something unusual. As making a request by using a question about ability is usual, the unusual form suggests that something else is intended.

Nonetheless, even within the reasonably standard ways of asking questions about ability, the *can you…* and *could you…* forms seem to be the most common, least marked forms for carrying out the strategy of making a request by asking a question about ability. The related form *Are you able to…?* can be used to issue a request, but plausibly is a less standard form for doing so.[12] While details of which forms are used and with what frequency can only be established through extensive empirical investigation, our interest here is in the hypothetical: if, in fact, there were a regularity to use some particular form rather than an available alternative form as the standard form to carry out a particular Searlean strategy, would this regularity count as a convention, and if so, where would this convention fall on the natural-arbitrary scale?

As always, in order to apply the Lewis definition, we need to decide what regularity we are considering, and what its alternatives are. The proposal here is to evaluate the conventionality of forms relative to the Searlean strategies that they are used to carry out. For purposes of illustration, we focus on the strategy of making a request by means of asking a question about ability: we will call this the QAA strategy, for short. We posit that there is a regularity of treating the *Can you…?* form as the standard form

[12] Less standard, but still very much in use. A brief investigation on Google on July 6, 2017 turned up plenty of examples of *are you able to..?* used as a request..

(i) Are you able to tell me please, which end of the stadium is the Geelong end? We are coming over from Perth and want to make sure we are sitting up the right ...
(ii) Hi. Are you able to please give me the number for the new lillies quarter practice in hillcrest?
(iii) Hi, are you able to please tell when Ryan's book will be released?
(iv) Hi korina, are you able to please let me know what is going on with this order? I havent heard back from you and i have sent you a few msgs since 10/10....
(v) Hi there, are you able to please confirm the color/colour of the hat, pic looks to be black back and white ...
Note, by the way, that all of these requests are made with the politeness marker *please*. Some authors argue that *please* can be attached only to conventionalized indirect request forms, but in fact the constraints on the use of *please* seem more complicated.

for carrying out QAA. The alternatives to this regularity would be to treat some other (idiomatic) form for questions about ability as the standard form (e.g. the form *Are you able to…?*).[13]

This regularity clearly qualifies as a Lewisian convention. Everyone (or almost everyone) in the speech community follows it, and expects others to do so. Because of the general preference for coordination in linguistic choices, everyone prefers to follow the same practice as everyone else (if everyone else used *Are you able to…?* as the standard form, then I would too); and everyone prefers that others follow the same practice. (If someone else treats *Are you able to…?* as the standard form, when I treat *Can you…?* as standard, we may fail to coordinate in evaluating one another's degree of politeness.) But clearly, the form *Are you able to…?* could just as well have been the standard form for carrying out QAA.

Thus, the selection of the standard form for carrying out a particular Searlean strategy is clearly a Lewisian convention. Moreover, if the alternatives are restricted to linguistic forms which are idiomatic, standard forms for carrying out the relevant *direct* speech act, then the choice among the alternatives is an entirely arbitrary convention. This is in keeping with the observations from Searle that the pragmatic account is silent on the specific forms used to carry out indirect speech acts.

4.5. Summary: the conventionality of Indirect Requests

Our position resolves the apparently paradoxical idea that indirect requests are explicable in general pragmatic terms but are nonetheless conventional, in the Lewisian sense. We posit a hierarchy of conventions. At the top of the hierarchy is the highly natural convention of treating (some realization of) some Searlean indirect request strategy as a signal of a request. The naturalness of the convention stems from the pragmatic underpinnings of the practice. Any way of implementing the convention–any choice of a particular Searlean strategy–is equally natural and hence the choice among them is (largely) arbitrary. Thus, the choice of particular strategies as standard means for indirect requests is, as far as our current analysis shows, an arbitrary convention. However, if further investigation shows there to be certain strategies that are cross linguistically common, it would be worth investigating whether there are cognitive or cultural reasons for some strategies to be particularly available. If so, those strategies would constitute a more natural convention. Finally, given the choice of one or more strategies as the standard strategies for

[13] The word "standard" in the formulation of the regularity is required because any idiomatic way of asking a question about ability is, on this analysis, a possible way of carrying out QAA. The point of recognizing one way (or some small number of ways) as standard is that it is possible to use a non-standard way to convey that there is some special feature to the speech act – in the case of requests, this is most commonly that the request is more-than-normally polite. To accommodate the fact that for most speakers, there are multiple standard ways, we could characterize the regularity as involving a mixed strategy over a number of options. Working with a more complex version of the regularity would not change any of the conclusions drawn in the main text.

performing an indirect request, a choice may be made as to the form or forms which will count as the standard forms to be used for implementing those strategies. Here again, the choice is conventional and is arbitrarily so.

This picture aligns with the proposal in Morgan 1977, with the added clarity provided by taking a well articulated view of convention as its starting point. Morgan's own starting point is the distinction suggested by Searle 1975 between *meaning conventions* and *conventions of use*. Searle, in trying to deal with the problem of apparent conventionalization of certain indirect request forms, writes:

> It is by now uncontroversial that there is a distinction to be made between meaning and use, but what is less generally recognized is that there can be conventions of usage that are not meaning conventions (p.76).

Morgan identifies the conventions underlying indirect requests (as well as various other cases) as conventions of use.[14] He defines conventions of use as conventions which "govern the use of sentences, **with their literal meanings**, for certain purposes" (p.1; emphasis added).[15] We would characterize the intermediate level conventions in our schema (the selection of specific Searlean means) as conventions of use in this sense.

But whereas we follow Clark 1979 in distinguishing conventions of *use* (means or strategies) from conventions of *form*, Morgan and Searle conflate these. The passage quoted above from Searle continues:

> I am suggesting that *can you, could you, I want you to*, and numerous other forms are conventional ways of making requests…; certain forms naturally tend to become the conventionally polite ways of making indirect requests.[16]

As we have already noted, Searle fails to note that the strategies themselves can be conventions, and so in attempting to nail down the role of convention in indirect speech acts, he posits a direct conventional link between the preferred forms and the request meaning. We'll return to the question of whether this may be correct for certain cases. Restricting conventionality to particular forms does not allow us to acknowledge that even in using some very non-standard question about ability to carry out an indirect request (as can sometimes be done), the speaker is still engaging in a convention.

Morgan's analysis is more fine-grained. He proposes that a convention of use consists of a hierarchical specification of means. Each level of the hierarchy provides one or more specific strategies for

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[14] Morgan actually calls these conventions "conventions *about* language," distinguishing them from "conventions *of* language." We revert to (something closer to) Searle's terminology, which seems more transparent.

[15] It is an open question whether conventions of use must be conventions concerning sentences, or could be conventions governing the use of non-sentential expressions. The point doesn't arise for us.

[16] Note that when Searle here mentions conventionality, he probably doesn't mean it in the Lewis sense.

carrying out the means specified in the preceding level. Here is the one complete example which Morgan provides (with some reformulation). Roman numerals label layers in the hierarchy of means; lower case letters label alternative options at a given level.

I Upon parting, one expresses one's regard for the other person.
- IIa By expressing a concern for the welfare of the other person
  - IIIa By expressing a wish for their good health
  - IIIb By invoking the goodwill of God toward the other person
    - IVa By uttering *May God be with you*
    - IVb By uttering *God be with you*
    - IVc By uttering *I hope God will be good to you*
  - IIIc By expressing a wish for peace
- IIb By expressing a desire or intention to see the other person again.

This hierarchy is not itself a convention of use for Morgan; it is rather a menu from which multiple distinct conventions can be built. For example, there is the convention which consists of I, IIa and IIIa (with no further specification); the convention which consists of I, IIa and IIIb (again, with no further specification), and the convention which consists of I, IIa, IIIb and the further specification IVa. Because Morgan allows that a convention of use need not include a specification of the form, his framework, like ours, allows that a speaker who uses some non-standard form may nonetheless be implementing a convention. For example, the convention which consists of I, IIa and IIIb may be instantiated by an utterance of *May God shower you with blessings*.

Morgan clearly intends to apply conventions of use to indirect speech acts; this is the declared aim of the paper. However, he does not specify any convention hierarchy for any type of indirect speech act, nor does he discuss the relationship among the many different means and forms whereby indirect speech acts can be performed. He does describe informally what he thinks a satisfying account of indirect speech acts should do:

> What's needed is a description that says that in using "can you pass the salt" to make a request, one is using the sentence with its literal meaning, with the intention of conveying a request via Grice's maxims, but that in doing so one is following a convention about language use; the convention being, roughly, to request someone to do such-and-such indirectly, say the sentence "can you (do such-and-such)?", with its literal sense. (Morgan 1977, p.22)

Morgan here doesn't recognize that he has at his disposal an intermediate convention not involving a specification of form, and, like Searle, proposes that the convention should involve a direct connection

between the form and the request interpretation. This is confirmed by the second half of his footnote 4, where he says that under his analysis "it is just the use of 'can you…' that has been conventionalized as an indirect request. Synonymous expressions work as genuine implicature." This is the crux of the difference between Morgan's account and ours. On our account, a speaker who says *I find myself wondering whether that little car of yours might be able to get me up the hill to my house* is following a convention of use of English, the convention of utilizing questions about ability to issue an indirect request. The speaker has not availed themselves of the convention governing standard forms for following that convention, with certain rhetorical consequences.

Our account, like Morgan's, reconciles the pragmatic and conventional aspects of indirect speech act production and comprehension. Indirect speech acts are neither entirely a matter of pragmatics nor entirely a matter of convention: they are irreducibly both. The roots of the convention are pragmatic; but its details– the selection of particular strategies and particular forms for the implementation of the strategies–are conventional. The question of whether indirect speech acts are pragmatic or conventional thus has no simple answer.

Moreover, the question of whether indirect speech act conventions are natural or arbitrary also has no simple answer. There is not one convention but, as we have presented it, at least three. We have argued that these three conventions differ in their degree of naturalness, with the top level convention – the convention of using *some* Searlean strategy to make indirect requests – being highly natural due to its pragmatic grounding.

The idea that what begins life as a pragmatically motivated linguistic move grows up to be a linguistic convention is not new (see e.g. Traugott 2012). Nor is this surprising from a Lewisian point of view. Lepore and Stone put the point well: "Conventions are not inexplicable or unmotivated…[They] evolve from agents' spontaneous and improvised successes at acting together." Our pragmatic competence enables us to spontaneously coordinate on using questions about ability to make and understand requests; and this underlies a resulting convention to do so.

But of course, these naturally motivated conventions do not spread instantaneously in an entire language population. Throughout this discussion, we have adopted from Lewis's standard definition of convention the requirement that for a regularity to be a convention in a given population, it must be followed by the entire population. But as we noted above (see p.4), Lewis himself recognized that convention can be a matter of degree, the degree being dependent on the proportion of the population for whom the regularity is a convention. In the special case of pragmatically motivated conventions, the very same usage may be conventional for some, but involve ad hoc pragmatic reasoning for others. But given the weakened version of Lewis's definition, this can unproblematically be incorporated into the Lewis picture adopted here.

5. Conclusion: adding natural conventions to our analytic toolkit

The notion of a natural convention adds an important concept for the analysis of regularities of behavior, linguistic and otherwise. In elaborating this notion, we have identified a middle ground between the two extremes of arbitrary conventional behavior (games with multiple, equally good, Nash equilibria), on the one hand, and, on the other, behavior driven entirely by rational or cognitive requirements (games with unique Nash equilibria). In the application to semantics, the notion of a natural convention provides a middle ground between the identification of a form-meaning regularity as an arbitrary feature of the semantics of the language, and its identification as a pragmatic feature arising from general principles of communication.

This promises to resolve a quandary that faces those who advocate for pragmatic accounts of frequently occurring aspects of interpretation. Arguments for pragmatic accounts are typically based on the idea that the phenomenon in question is non-arbitrary, and is explicable in terms of underlying general principles. For theorists of a pragmatic disposition (including one of the authors of this paper), the availability of a pragmatic account of some aspect of interpretation–such as the request interpretation of questions about ability–is a strong argument to avoid an account which takes that piece of meaning to be encoded in the lexical entry of a word or directly associated with a construction. Lexical encoding is, after all, supposed to be reserved for that which is arbitrary in language. Yet pragmatic, inferential accounts seem to commit theorists to claiming that the relevant aspect of interpretation has to be worked out by the interpreter each time it is encountered (or effortfully chosen by the speaker who produces it). This is in tension with the evidence that humans are exquisitely sensitive to statistical regularities and learn complex patterns of association between form and meaning which become part of their linguistic competence. Positing natural conventions allows us to understand how an aspect of interpretation can be both explainable in pragmatic terms, and conventional.

This understanding of natural conventions as emerging from pragmatic competence has an interesting consequence for pragmatic theorizing. The standard picture has been that pragmatic theory deals with whatever is "left over" after semantics has done its job. To some extent, the border wars between semantics and pragmatics are over which phenomena each theory has jurisdiction over. The standard view, that what is conventional is arbitrary and not subject to further explanation, removes the conventional from the domain of pragmatic explanation. Our argument that linguistic conventions may be natural, emerging from pragmatic competence, suggests a new role for pragmatics: that of accounting for natural linguistic conventions.

Beyond linguistic analysis, the identification of more or less natural conventions is important for studying social behavior generally. That a cultural practice is universally adopted is taken as evidence

against its conventionality. Our identification of highly natural conventions calls this inference into question. On the other hand, discovering that a social practice is conventional does not necessary show that abandoning such a practice would be easy. If an alternative to a convention is highly unnatural, then the conventionality of a target behavior does not suggest an alternative could be easily implemented. By teasing apart arbitrariness and conventionality we have enriched the tools of analysis for social behavior–especially linguistic behavior–in a way that opens up new possibilities which helps to enrich our understanding of the social world.

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