THE PRAGMATICS OF BISCUIT CONDITIONALS

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During one of his recorded shows the American comedian Demetri Martin told the following joke, much to the amusement of his audience:

> She was amazing. I never met a woman like this before. She showed me to the dressing room. She said: "If you need anything, I'm Jill." I was like: "Oh, my God! I never met a woman before with a *conditional identity*." [Laughter] "What if I don't need anything? Who are you?" — "If you don't need anything, I'm Eugene." [More laughter]
> (Demetri Martin, *These are jokes*)

Martin's joke is possible because of a peculiarity of certain conditional sentences. Some conditional sentences relate propositions that have no conditional relationship. This is by no means contradictory or paradoxical. The sentence

(1) If you need anything, I'm Jill.

links the clauses "you need anything" and "I'm Jill" in a conditional construction, but semantically we may naturally perceive the propositions expressed by these clauses as conditionally unrelated; the name of the woman does not depend on whether the addressee needs anything or not. To humorously misapprehend such conditional sentences, as Martin does, is to pretend to see a conditional relationship where none exists.

Examples that would lend themselves to similar joking have been discussed as a special case of conditionals from a variety of angles under a variety of names. I will speak of *Biscuit Conditionals* (BCs), a term which is derived from Austin's famous example (2) (Austin 1956).

(2) There are biscuits on the sideboard if you want them.

It is widely assumed that BCs differ from standard conditionals (SCs) like (3) in that "the *if*-clauses in [BCs] specify the circumstances in which the consequent is relevant (in a vague sense, also subsuming circumstances of social appropriateness), not the circumstances in which it is true" (Iatridou 1991, p.51).

(3) a. If it does not rain, we will eat outside.
    b. If the butler has not killed the baroness, the gardener has.

In order to explain these intuitive differences, many theorists have proposed a difference in kind between SCs and BCs (e.g., recently, Siegel 2006). I argue that this is not necessary: a purely pragmatic explanation is possible based on a simple, uniform and entirely standard semantics. What needs explanation then are the following two issues:

(i) **Non-Conditional Readings of BCs:** How is it possible that the conditional surface structure in BCs does not give rise to standard conditional readings? In particular, why do BCs convey the (unconditional) truth of their consequents?

(ii) **Discourse Function of BCs:** What, then, is the reason for using a conditional construction, if it is not to restrict the truth of the consequent? In other words, what is the discourse function of BCs and, most importantly, how does it come about?

1. Non-Conditional Readings: Epistemic Independence

The idea how to explain the non-conditional readings of BCs pragmatically is very simple: since normally we would not expect the truth or falsity of propositions

you want some (P) & there are biscuits on the sideboard (Q)

to depend on one another, a speaker who asserts the conditional sentence in (2) felicitously must believe in the unconditional truth of the consequent Q. To spell out this idea we have to make precise what it means for two propositions to be independent in some appropriate sense.

I suggest that the right kind of independence of propositions is epistemic. Although in the actual world the truth values of P and Q are fixed, what matters for our concern is whether these propositions are believed to depend on one another. From this point of view we can say that P and Q are *epistemically independent* for an agent (in a given epistemic state) if learning one proposition to be true or false (where this was not decided before) is not enough evidence to decide whether the other proposition is true of false (where this was not decided before).

Here is a more formal take on the same idea. Take a set W of possible worlds, propositions $P, Q \subseteq W$ and an agent's epistemic state $\sigma \subseteq W$ of worlds held possible. We write $\overline{P}$ for $W \setminus P$, the negation of proposition P. We say that the agent holds P possible and write $\Diamond_\sigma P$ or, dropping the obvious index, $\Diamond P$ iff $\sigma \cap P \neq \emptyset$. We say that P and Q are EPISTEMICALLY INDEPENDENT (on σ) iff for all $X \in \{P, \overline{P}\}$ and all $Y \in \{Q, \overline{Q}\}$ it holds that $(\Diamond X \wedge \Diamond Y) \rightarrow \Diamond(X \cap Y)$.

We can now make our initial idea more precise. Let's assume a very simple-minded material or strict implication analysis of conditionals for both SCs and BCs, evaluated on the epistemic state σ of the speaker. So, if the speaker says 'If P, Q', we may infer that, if he spoke truthfully, his epistemic state is such that $\sigma \cap P \subseteq Q$. But if we have reason to assume that at the same time the same speaker does not believe in a conditional relationship between P and Q, we may infer even more, namely that the speaker either believes in the falsity of P or the truth of Q. This is so, because if $\Diamond P$ and $\Diamond \overline{Q}$, then by epistemic independence we have $\Diamond(P \cap \overline{Q})$ which contradicts $\sigma \cap P \subseteq Q$. Consequently, if we furthermore have reason to assume that the speaker considers it at least possible that the antecedent proposition is true, which seems uncontroversial for (indicative) BCs, we may conclude that the speaker actually believes Q.[1] Whence, I propose, the feeling of entailment: a speaker who (i) speaks truthfully in asserting 'If P, Q', (ii) considers P and Q epistemically independent and (iii) considers P at least possible *must* believe in Q.

Where does the notion of epistemic independence come from? Why is it justified to use it in the way we do? First of all, it is easy to verify that epistemic independence is the purely qualitative counterpart to standard *probabilistic independence*[2] and equivalent to Lewis 1988's notion of orthogonality of questions (see van Rooij 2007). Moreover, epistemic independence is strictly weaker than the more standard notion of *logical independence* (relativized to an epistemic state).[3] For our purposes, however, logical independence is too strong, because (belief in) logical independence of P and Q excludes that either P or Q is believed true or false. In other words, logical independence does not have a flawless 'positive fit': there are instances of intuitively independent propositions which are not logically independent on some epistemic states. Epistemic independence is weak enough to circumvent this problem.

Still, it might be objected that epistemic independence is actually too weak to capture our intuitions about independence properly, for it shares with probabilistic independence the counterintuitive trait that if a proposition P is believed true, then any proposition Q is independent of P, even P itself. In other words, epistemic independence does not have a flawless 'negative fit': there are intuitively dependent propositions which are epistemically independent on some states. This problem

[1] The same argument more concisely: (i) the speaker utters "if P, Q", so we assume $\sigma \cap P \subseteq Q$; (ii) we assume that P and Q are epistemically independent, so that in particular $\Diamond P$ and $\Diamond \overline{Q}$ entails $\Diamond(P \cap \overline{Q})$; (iii) we assume $\Diamond P$ as a presupposition of indicative conditionals; (iv) if $\Diamond \overline{Q}$ were true, we would have a contradiction between (i), (ii) and (iii); (v) we conclude that $\sigma \subseteq Q$.

[2] Propositions P and Q are PROBABILISTICALLY INDEPENDENT given a probability distribution $\Pr(\cdot)$ iff $\Pr(P \cap Q) = \Pr(P) \times \Pr(Q)$. If we equate the epistemic state σ of the agent with the support of the probability distribution $\Pr(\cdot)$ as usual and get $\sigma = \{w \in W \mid \Pr(w) \neq 0\}$, we can show that probabilistic independence entails epistemic independence. First, we establish that if $\Pr(P \cap Q) = \Pr(P) \times \Pr(Q)$, then for arbitrary $X \in \{P, \overline{P}\}$ and $Y \in \{Q, \overline{Q}\}$ it holds that $\Pr(X \cap Y) = \Pr(X) \times \Pr(Y)$. From the three arguments needed, it suffices to give just one, as the others are similar. So assume that $\Pr(P \cap Q) = \Pr(P) \times \Pr(Q)$ and derive that $\Pr(P \cap \overline{Q}) = \Pr(P) \times \Pr(\overline{Q})$: $\Pr(P \cap \overline{Q}) = \Pr(P) - \Pr(P \cap Q) = \Pr(P) - (\Pr(P) \times \Pr(Q)) = \Pr(P) \times (1 - \Pr(Q)) = \Pr(P) \times \Pr(\overline{Q})$. Next, assume that $\Pr(X \cap Y) = \Pr(X) \times \Pr(Y)$ and that $\Diamond X$ and $\Diamond Y$. That means that $\Pr(X), \Pr(Y) > 0$. Hence, $\Pr(X \cap Y) > 0$, which is just to say that $\Diamond(X \cap Y)$.
The converse, however, is not the case. Epistemic independence does not entail probabilistic independence. It may be the case that proposition P is not enough (evidence, support, information) to decide whether Q is true or false, but still learning that P is true, for instance, makes Q more or less likely.

[3] P and Q are LOGICALLY INDEPENDENT (on σ) iff for all $X \in \{P, \overline{P}\}, Y \in \{Q, \overline{Q}\}$: $\Diamond(X \cap Y)$.

could be fixed with a suitable intermediate notion.[4] But the fix is not necessary for our present purpose. For the above argument perfect 'positive fix' is all that is required: we only have to make sure that intuitively independent propositions are treated appropriately.

2. Discourse Function: Context Shifts for Optimality

What is left to be explained is why BCs are used in the first place, if their discourse effect, as far as information is concerned, is that of a simple assertion of the consequent. The received view on the matter —which is explicit in the above quote from Iatridou 1991 and implicitly endorsed also by Siegel 2006— is that a BC is used in order not to make an ill-formed utterance in case the (assertion of the) consequent alone is possibly irrelevant, infelicitous or in some other sense inappropriate *unless the antecedent is true*. However, there are good reasons for discharging the received view as flawed.

Here is why. According to the received view, whenever a BC "if P, Q" is used in a context where its antecedent P is true, (the assertion of) its consequent should be felicitous too. Yet this is not so, as the following example shows. Imagine that we want to go swimming and you are waiting for me while I am packing my bag. If I say to you —out of the blue— that there are biscuits on the sideboard (Q) it is conceivable, if not likely that you may not know what exactly I meant to tell you. (May you eat the biscuits? Do I want you to stay away from them? Must you hand them to me? Throw them into my bag?) And this may be so, even though you are in fact hungry and lust for sweets and I know it. The critical point is that it may not be intelligible *in which way* the utterance "Q" has to be understood, maybe because it is not *common ground* that you would like to eat biscuits, although this is true and known by both speaker and hearer. In contrast, the BC in (2) makes entirely clear for what reason the information Q is given.

This example suggest that rather than to speak of 'relevance conditionals' we should think of at least some BCs as '*intelligibility conditionals*': the antecedent somehow (see below) assures that the consequent is understood appropriately. This is certainly what is going on in (4a) and (4b) and plausibly also in (4c).[5]

(4) a. He's a buhubahuba, if you know what I mean.

b. If we now turn to the last point of order, fund cuts have been tremendous.

[4] A suitable intermediate notion will have to be counterfactual: we could say that P and Q are COUNTERFACTUALLY INDEPENDENT on σ iff P and Q are logically independent on σ^*, where σ^* is the agent's epistemic state obtained by minimally revising σ to incorporate P, $\overline{P}$, Q and $\overline{Q}$ as alive possibilities. What is undesirable about this intermediate option is that, normally, we would rather like to use the notion of (in-)dependence of propositions to account for belief revision, not the other way around.

[5] In example, (4c) the speaker might either worry about not being understood, about saying something ungrammatical (while still being understood), or both.

c. He trapped two mongeese, if that's how you make the plural of "mongoose". (Noh 1998)

Furthermore, it is quite clear that different antecedents may change the interpretation of the consequent dramatically. Just imagine, in relation to the first example of this paper, how amazing Jill would have been to Demetri with the conditional identity in (5): whereas with (1) Demetri might feel encouraged to ask for help, with (5) he might feel encouraged to ask for Jill's phone number (or worse).

(5) If you want to go out tonight, I'm Jill.

Taken together, at least sometimes, BCs are used in discourse to coordinate a proper reception of the consequent between conversationalists.

Are all BCs intelligibility conditionals in this discourse coordinating sense? The answer clearly should be negative. There are also BCs like (6) which relate in some fashion to communicative rules or the actual linguistic conduct of the speaker.

(6) If I may say so, you are not looking good.

All sorts of politeness hedging would file here. Witness, for instance, phrases like "if I may say so", "if you ask me" or "if I may interrupt".

So, what other discourse functions of BCs are there and how are they related? Also, can we derive the discourse functions of BCs, whatever they may be, from a reasonable standard semantics? I believe that we can and that this will also give away the relation between various conceivable discourse functions.

I believe that, in general and in the case at hand, we can gain substantial insight from explanations of language use which are based on the assumption that language use is in some sense optimized, be that by explicit reasoning within the limits of the humanly possible, or over time in the course of language change. In order to be optimal in a given context an utterance needs to fulfill a number of requirements. An exhaustive list of conditions necessary for optimality is not needed here. It is enough to note, on a fairly intuitive basis, that in certain contexts an utterance requires certain features for its optimality, amongst which intelligibility, social and circumstantial appropriateness and, perhaps, linguistic well-formedness.

A fairly standard dynamic semantics of conditional sentences squares well with this view on language use in explaining the discourse functions of BCs. The standard analysis in dynamic semantics of conditionals is to say that if c is a simple context set, i.e. a set of possible worlds, update with "if P, Q" is given as:

$$c + \text{“if } P,\ Q\text{”} = (c \cap P \cap Q) \cup (c \cap \overline{P}).$$

A slightly different way of looking at the standard analysis reveals a three-step procedure (cf. Swanson 2003, Isaacs and Rawlins 2007 for highlighting this view in the context of non-standard conditionals): firstly, the original context c is updated with the antecedent P to yield a provisional, hypothetical context $c + P$; secondly, the consequent Q is evaluated in this hypothetical context $c + P$; and lastly, the effects of the second step are merged back into the original context.

Implicit in this view of conditional sentences and crucial for the present purpose is the idea that the antecedent of a conditional changes a context into a hypothetical context in which the consequent is evaluated. That means that a conditional "if P, Q" is optimal in a context c only if (i) "Q" is optimal in $c + P$ (because that is where the consequent is interpreted) and (ii) "Q" is not optimal in c (if we assume that the conditional "if P, Q" is more costly than the use of mere "Q"). Since, as we noted above, there are plenty of ways in which an utterance "Q" can fail to be optimal in a context c, yet succeed to be optimal in context $c + P$, there are plenty of reasons to use a conditional sentence in various different contexts.[6] The view that results from these considerations is that BCs, along with SCs, are used as context-shifters to secure optimality of utterances. To contrast the present suggestion directly with the received view stated at the beginning of this section, we could say that BCs are used in cases where the consequent alone is possibly irrelevant, infelicitous or in some other sense non-optimal *unless processed in the context of the antecedent*.

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[6] Indeed, truthfulness could just as well be included here.