

# Permissives and Epistemic Modals

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## 1. Lewis's problem about permission

This paper presents a solution to David Lewis's "problem about permission" outlined in his (1975). That problem makes best sense against the background of a certain general theory about conversational pragmatics that is due to Stalnaker (1978) and Lewis (1979) and has been subsequently developed by many others. In this section, I briefly sketch this background, and Lewis's problem. The following two sections of this paper describe a solution.

The background is this: at any time, any conversation has a state, and the effect of a participant's contribution is to change that state, in a way that depends both on the initial state of the conversation and on the force and content of what is said. One aspect of the state of a conversation is what is *presupposed* in that conversation at that time, and this is often modeled by a set of possible worlds<sup>1</sup> called the *context set* or *presupposition set*. The most studied kind of contribution to a conversation is *assertion*, which is what normally happens when a participant utters a declarative sentence in a conversation. The characteristic effect of an assertion is to make the content asserted presupposed, and that happens in the following way. Suppose that the content of a declarative sentence is the set of worlds at which that sentence is true. The effect of asserting that sentence is to shrink the context set by removing from it all worlds that which the sentence is false (i.e. the new context set is the intersection of the old with the content asserted).<sup>2</sup> For example, if in some conversation, I say "It will rain on Tuesday", and no-one objects, then all worlds at which it does not rain on Tuesday are removed from the context set. In the new state of the conversation it rains on Tuesday in every world in the context set, so the effect of my contribution has been to make it presupposed that it will rain on Tuesday.

This conception of assertions goes with a certain picture of the purpose of assertion, and of conversation in general. As social creatures endowed with a belief-desire psychology, it is of benefit to humans to share our doxastic resources. Conversation accomplishes this by giving us a method for pooling and coordinating our beliefs.

Lewis's problem grows from an attempt to generalise this kind of account to include *imperative* sentences, as well as declaratives. Where declaratives are used to make assertions, imperatives

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1 We should not get too hung up on what the members of a context set are. I will call them "worlds" throughout, but for some applications, it may be better to regard them as part of worlds, tuples of a world, a position, a time and a speaker, or tuples of any of the above. All that matters is that these items carry enough information to map the content of any declarative sentence to a truth value.

2 Actually, there's a bit more to it than that – for an assertion to have its effect, the other speakers must accept it; and we should also take into account the effects of any conventional implicatures of the sentence asserted. But this cartoon view will suffice for our purposes.

are used to make *commands*. Closely connected with imperatives and commands are *permissives* – sentences such as “You may take the day off.”, where this is construed not as an assertion concerning what you are permitted to do, but as an act of permission that brings it about that you are permitted to do something.<sup>1</sup>

Imperatives are often regarded as analogous to declaratives in the following way. Where declaratives may be true or false; imperatives may be complied with or not complied with. Where the content of a declarative may be regarded as its truth-conditions (i.e. the set of worlds at which it is true) the content of an imperative may be regarded as its compliance-conditions (the set of worlds at which it is complied with).

This suggests an analogy with the concepts of presupposition, context set, and assertion. One of aspect of the state of a conversation is what is *commanded* within that conversation. This can be modelled by the set of worlds in which all that is commanded within the conversation comes about (or to put it another, in which nothing that is impermissible comes about); following Lewis, let us call this set the *sphere of permissibility*. The characteristic effect of an *imperative* is to make its content commanded, and that comes about in the following way: commanding an imperatives shrinks the sphere of permissibility in a way analogous to the way that an assertion shrinks the presupposition set. If I say “Work all day on Tuesday” and you do not object, then all worlds at which you do not work all day on Tuesday are removed from the sphere of permissibility. Subsequently no world in which you do not work all day on Tuesday can be a world at which all that is commanded within our conversation comes about – i.e. the content of my imperative has been commanded within our conversation.<sup>2</sup>

So far so good. But what about permissives, such as “you may take Tuesday off”? Well, if an imperative shrinks the sphere of permissibility in a way dependent on the content of that imperative, making what was previously permissible impermissible, then by parity of reasoning, a permissive should expand the sphere, making, or ensuring that, something is permissible. Lewis's problem about permission consists in a failed search for a method of expanding the sphere of permissibility in response to an arbitrary permissive.

To see why it's hard, consider the most obvious approach. Let the effect of a permissive be to make the new sphere of permissibility the *union* of the old sphere with the content of the permissive (giving permissives and imperatives a pleasing set-theoretic duality). So, for example, the effect of “You may take Tuesday off” is to add all the possible worlds at which you take Tuesday off to the sphere of permissibility. The problem with this is that it expands the sphere way too much to be plausible. Among the worlds in which you take Tuesday off are worlds in which you do all manner of things, including worlds in which you fail to comply with all kinds of commands that we would normally see as consistent with the permissive “You may take

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1 It's a characteristic feature of Lewis's own version of this theory that he doubts the distinction I have just drawn between a speech act of Xing and an assertion concerning what one has Xed (for X in “permit”, “command”, “name after a dictator”, etc). I'm a defender of the mainstream speech act theoretic tradition against Lewis on that point (Parsons 2012) but it doesn't matter to the material under discussion here.

2 Lewis (1975) is the locus classicus of this conversational analysis of imperatives. For my own version of it, see (Parsons 2013, sec. 3.5).

Tuesday off". For example, suppose that you are currently commanded not to kill me under any circumstances (perhaps I have just said "Don't kill me under any circumstances!"); among the worlds in which you take Tuesday off are worlds in which you kill me (on Tuesday perhaps, or even on any other day). So, on this view my, telling you to take Tuesday off has the effect of revoking the unrelated command not to kill me! In general, it has the effect of revoking every command the non-compliance with which is consistent with your taking the day off on Tuesday. That is absurd; so by reductio, permissives do not expand the sphere of permissibility in the way described.

Lewis considers and rejects several alternatives to the simple "permission as union" approach described above. I won't go into the details, as I couldn't possibly present the arguments any more clearly than he does. I will present an alternative conversational approach to permissives on which they do not expand the sphere of permissibility at all.

Before I proceed to that, a word about Lewis's examples. Lewis sets up his example by talking about an idealized conversational setting involving three characters: Master, Slave, and Kibitzer. Master gives Slave commands, and Slave always accepts them. Kibitzer can talk to Master and Slave about what Slave is commanded to do. The advantage of this setup is that it idealizes away from issues about Master's authority to give commands (he is assumed to have it) and Slave's willingness to accept them (he always does). But it has the disadvantage of giving us a distorted and narrow picture of the role of imperatives and permissives in natural conversations. Imperatives are not always used to make military-style commands, which if issued by someone in authority, must be obeyed on pain of sanction. I prefer to think of imperatives and permissives as a means of pooling and coordinating our intentions and plans in an analogous way to the way that declaratives allow us share our belief.

...I would prefer to think of the language game in a more symmetrical way - rather than as a game of commanding in a narrow military sense, as a game of coordinating shared intentions (analogous to the assertion game of coordinating shared beliefs). Refer to simplified language game with Authority and Gullible.

## 2. A solution.

The solution I propose is not a straight one. I begin by supposing that Lewis has not overlooked any plausible recipe for expanding the sphere of permissibility – that in fact there is no plausible recipe for so expanding the sphere that takes as input only the content of a permissive. Lewis's problem started from a false premise – the illocutionary effect of a permissive is *not* to expand the sphere of permissibility.

What is it then? My suggestion is that permissives have no illocutionary effect on the sphere of permissibility at all; rather, their only function is to *fail* if they are inconsistent with what is currently permitted. By "fail" here, I mean what normally happens when an imperative is uttered which is inconsistent with the current sphere of permissibility (or, for that matter, when an assertion is made that is inconsistent with what is currently presupposed). We can think, as

before, of the content of a permissive as a set of possible worlds (e.g. the content of “You may take Tuesday off” is the set of worlds in which you take Tuesday off); but the illocutionary effect of the permissive is not to add those worlds to the sphere of permissibility – it is to fail if those worlds are disjoint with the sphere of permissibility.

The effect of a permissive is thus similar to, but strictly weaker than, the effect of an imperative with the same content. The imperative “Take Tuesday off!” has as its content the set of worlds in which you take Tuesday off (the same as the content of “You may take Tuesday off”) and its effect is make the sphere of permissibility shrink to be the intersection of that set with the current sphere of permissibility. If the result is the empty set (that is, if the content is disjoint with the current sphere of permissibility) then it must fail because what is being commanded is already impermissible. The effect of the permissive is exactly like this, except that it doesn't shrink the sphere.

It seems to me that permissives stand to imperatives as epistemic modals stand to declaratives. An ordinary assertion, such as “It will rain each day this week” shrinks the context set in such a way that it becomes presupposed that it will rain each day this week. An epistemic modal, such as “It might not rain on Tuesday”, seems to somehow have a reverse effect, ensuring that it is not presupposed that it will rain on Tuesday. The analogue of my suggestion about permissives is that an epistemic modal does not effect the context set, but fails if its content is disjoint with the current context set. Thus “It might not rain on Tuesday” fails unless the context set contains at least one world in which it rains on Tuesday.

### **How does this solve the problem?**

It's not yet clear how the theory suggested above solves Lewis's problem. Let's just think about what it predicts. Suppose that, starting in a conversational state in which Slave is required to work each day, Master says “You may take Tuesday off”. On my view, Master has simply contradicted himself (or, more carefully, what he has done is the imperatival analogue of asserting something that contradicts the existing presuppositions of the conversation). That places the conversation in an inconsistent state (not, contra Lewis's assumptions, a state in which it is permitted that Slave take Tuesday off).

This is however, no disaster – conversations can end up in an inconsistent state easily. Participants change their minds, or realize that they'd allowed something to be presupposed earlier that they hadn't realized was inconsistent with something else that they or other participants believe. What generally happens in these circumstances is what we may call “backtracking”: participants try to find an earlier state of the conversation that is consistent from which they can continue without reaching the inconsistency. It is the this backtracking process, I claim, that is responsible for setting the conversational state to a state in which Slave is not required to work on Tuesday.

I'll say more about the mechanism of backtracking later. For now, I note that this escapes Lewis's problem because it does not involve any general procedure for expanding the sphere of permissibility that takes as input the content of a permissive. Permissives don't do that – the

sphere expands not (directly) because of the permissive, but because the conversational state has become inconsistent. There is no general procedure for backtracking – participants must simply do as best they can in the circumstances.

... refer to answer 4?

### **3 further morals:**

DKL's problem could occur without a permissive. Suppose master says "tomorrow, take the day off!" Note that Lewis conceives of this situation differently: he thinks that Master must have implicitly permitted Slave to take the day off before commanding him to do so, in order to avoid contradiction!

Or without imperatival speech acts of any kind. Suppose Authority says to Gullible "It will not rain this week" and later "It is going to rain on Tuesday".

Permissives seem analogous to epistemic modals. Lewis's original case is analogous to Authority saying to Gullible "It will not rain this week" and then later "It might rain on Tuesday".

### **3. What happens during backtracking**

The solution to Lewis's problem suggested above hangs heavily on what happens during backtracking. It is the process of backtracking, not the illocutionary contribution of a permissive, that expands the sphere of permissibility. To fully answer Lewis's challenge we must explain how this process works.

At a first approximation, the process is something like this. 1. (*Rewinding*) We find a previous state of the conversation to rewind to, in which the conversational contribution that failed could be uttered without failing. 2. (*Reasserting*) We update the conversational state in the way that we normally would if the failed conversational contribution had been uttered in that state. The result of doing this is the new state of the conversation.

In a case of simple retraction this will suffice. Suppose Authority says "It will rain each day this week" and then says "On second thoughts, no it won't." The obvious previous state of the conversation is the one just before Authority spoke for the first time. In that state, it is not presupposed that it will rain each day. The new state of the conversation is the result of updating that state in the same way that we would if Authority had uttered his second contribution in that state. This gives us a conversational state in which it is presupposed that it will not rain on some day (and not presupposed that it will rain on any day – assuming that this was not presupposed before Authority spoke for the first time).

There are however, two difficulties in applying this recipe to more complicated cases. First, we need to know which previous state should we backtrack to, as it won't always be obvious. Second, in some cases the recipe leads to a state in which implausibly little is presupposed. I tackle these in turn.

## Finding the right past state to rewind to

The simple retraction case is easy because rewinding the conversation by only a single step will reach a state in which the failed contribution would not fail. What if that's not the case? Perhaps we should rewind the conversation, step by step, until we reach a point at which the failed contribution wouldn't fail. There are two problems with this. First, it's impractical: participants won't remember the previous states of the conversation well enough. Second, it might not rewind far enough. Suppose that two detectives are having a conversation about a murder case in the course of which they assert first that A's alibi is sound; second that B's alibi is sound; and third that either A or B must have committed the murder. The third of these assertions will fail, and according to the current proposal, the conversational state must rewind to the point at which it is presupposed that A's alibi is sound, but not that B's is. That is surely an irrational procedure: one of the alibis must be unsound but there is no good reason to suppose that it is B's rather than A's. What the detectives ought to do is reconsider every suspect's alibi, in the face of their evidence that one must be unsound. They should rewind to a point before it was asserted that A's alibi is sound.

We should not be too surprised that there is no easy way to finding the correct point to rewind to. If there were, it would be easy to come up with a procedure for updating conversational state as the illocutionary effect of a permissive, and Lewis has shown that that is not the case.<sup>1</sup> Instead, conversants must muddle by as best they can, and there are several heuristics that we can and do use.

1. *Retraction*. When a speaker explicitly retracts something they've said, they flag the fact that they want to rewind to the point just before the contribution they want to retract. Saying things like “on second thoughts...” or “I didn't to say that...” can flag this intention, and help the other participants to coordinate on a position to rewind to.
2. *Supposing*. There are a whole host of ways that we can flag a position in a conversation as a suitable point to rewind to, should a later contribution fail. “Suppose...” and its analogues often do this.
3. *Negotiation*. If neither of the above are possible, sometimes we just have to rewind the conversation “far enough” or even right back to the beginning, and then explicitly reassert statements that had previously been presupposed.

## Too little presupposed?

Suppose that Authority says “It will rain each day this week” and then says “On second thoughts, it won't rain on Tuesday”. There is no problem here finding the past state to rewind to – it is the state of the conversation before Authority spoke for the first time. If we now update the

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<sup>1</sup> Such a procedure would be a variant on Lewis's “Answer 5”, in which the sphere of permissibility is replaced by a sequence of commands, in this case the commands that have taken place so far in the conversation in the order in which they occurred. The effect of a permissive would be to “strike out” the shortest subsequence of commands starting from the end of the sequence, such that the permissive is consistent with the remaining commands. Lewis could reply to such an answer with a variant on the arguments given in the text.

conversation state in the way we would if Authority had uttered his second contribution in the rewind state, we end up with a conversational state in which it is presupposed that it won't rain on Tuesday, and in which nothing is presupposed about the weather on other days of the week. This is wrong! Intuitively, Authority's second utterance didn't fully retract his first: the state after backtracking should be one in which it is presupposed that it will rain on the days this week other than Tuesday.

Lewis's examples also easily generate cases of this kind. Suppose that Master says "Spend every day working!" and then "On second thoughts, have Tuesday off." If we follow the recipe above we get the result that Slave is permitted not to work on, say, Wednesday (supposing that that was permitted before Master's first utterance).

It is tempting to suppose that what we need here is a theory of "partial retraction" – a procedure that, taking as input the content of Authority's (or Master's) first and second utterances, gives as output the content still presupposed after the first utterance has been partially retracted. Any such procedure, however, would be subject to Lewis's objections, so it may seem we have made no progress.

The right solution, however, is to resist this temptation. Authority's (and Master's) first utterances have been fully retracted. How then, does it become presupposed that it will rain on days other than Tuesday (/commanded that Slave is to work on days other than Tuesday)? My suggestion is that these are Gricean conversational implicatures of Authority's (/Master's) *second* utterance.

Suppose that Authority had changed his mind, not just about whether it would rain on Tuesday, but about whether it would rain on any day of the week. He could have said sincerely said "On second thoughts, it will not rain on any day of the week" or "On second thoughts, it might not rain on any day of the week", both of which would have conveyed more, and equally relevant, information. From this, together with Grices' Maxim of Quantity, Gullible can infer that Authority has not changed his mind. So it is a conversational implicature of Authority's second contribution that it will rain on days other than Tuesday, and this duly becomes presupposed as part of the reassertion step of backtracking.

The situation is similar for Master and Slave...

## Bibliography

- Lewis, David. 1979. "Scorekeeping in a Language Game." *Journal of Philosophical Logic* 8 (1) (January 1): 339–359.
- . 1975. "A Problem About Permission." In *Papers in Ethics and Social Philosophy*, 20–33. Cambridge University Press.
- Parsons, Josh. 2012. "Cognitivism About Imperatives." *Analysis* 72 (1) (January 1): 49–54. doi:10.1093/analys/anr132.
- . 2013. "Command and Consequence." *Philosophical Studies* 164 (1) (May 1): 61–92. doi:10.1007/s11098-013-0094-x.
- Stalnaker, Robert. 1978. "Assertion." In *Context and Content: Essays on Intentionality in Speech and Thought*, 78–95. Oxford University Press, USA.