

# One More Step And You'll Get Pseudo-Imperatives Right

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## A new asymmetry puzzle for conditional conjunction

It is currently assumed that ‘pseudo-imperatives’ (1) are not genuine imperatives (Franke 2007, Han 1998, Russell 2007) but rather elements of a conditional construction. This accounts directly for various observations, for instance the van der Auwera asymmetry between *and* and *or* in such sentences or the possibility of NPIs in the first member.

(1) Create one more incident and I fire you

Although we adopt this perspective, we note that it cannot account for the type of data illustrated in (2). Assuming that (2a) means ‘If you break down, you call the hot-line’, none of (2b-d) naturally conveys this meaning. We observe a contrast for declaratives between paratactic and coordinated structures (2a vs. 2b) and a contrast between imperatives and declaratives (2a vs. 2c). These contrasts may vanish with a different consequent (3).

- (2) a. You break down, you call the hot-line  
b. #You break down and you call the hot-line  
c. #Break down, you call the hot-line  
d. #Break down and you call the hot-line

- (3) The gang’s car is just behind us . . .  
a. You break down (and) we are dead  
b. Break down (and) we are dead

Franke, for instance, has argued that sentences like (1) are the manifestation of a general discourse-integrating use of *and*, which combines the two conjuncts into one speech act and requires the existence of a generic (Culicover and Jackendoff 1997) or result relation between them. This analysis accounts for the oddness of Austinian pseudo-imperatives, because they resist a result interpretation (4a,b), but it does not apply to (2), see (4c).

- (4) a. (If) you are hungry, there are biscuits in the cupboard  
b. He was hungry. #As a result, there were biscuits in the cupboard  
c. He broke down. As a result he called the hot-line

In what follows, we show that one can keep the discourse-integrating analysis (and its benefits) but that the fined-grained semantics of conditional conjunction has to be significantly modified.

## An agent-sensitive semantics for conditional conjunction

It has been suggested by Bolinger (1977) that, in *A and B* conditionals, the *A*-eventuality must be a sufficient condition for the *B*-eventuality. Von Stechow and Iatridou (2006) make a similar remark for conjunctions of the form ‘You only have to do *A* and you’ll get *B*’. However, this does not account for the (2)-(3) contrast. In both cases, given the intentions of the agents, the result is determined if no unexpected event intervenes. The real difference is that, in (2) but not in (3), the existence of some action by the addressee or patient is relevant. In (3), whatever they do, the victims (patients) cannot escape their fate. In (2), minimally, the addressee has to call the hot-line. Symmetrically, in (5), the addressee does not need to do anything more than asking Mary.

(5) Ask Mary and she will tell you

Generally speaking, the constructions considered here require that, for at least one of the agents mentioned in *A* or *B*, any action in addition to *A* be superfluous, which is not the case in (2b-d), for instance. The felicity of the different examples depends on *which* agent wants to obtain or avoid *B* (agent-sensitivity). To keep the presentation simple, we disregard tense and resort to a standard deterministic causal framework, along the lines of Wooldridge (2000). Worlds are sets of time points with a backward linear branching structure (a single past line, several future lines). Formulas are evaluated at each  $\langle \text{world}, \text{time} \rangle$  pair,  $t \models_w \phi$ , or, for short,  $t \models \phi$ ,

notes that  $\phi$  is true at  $\langle w, t \rangle$ . Eventualities  $e$  and actions  $\alpha$  are relativised to the agents they involve or affect ( $e_X$  or  $\alpha_X$ ,  $X$  being a set of agents). They connect time points within the same world.  $t \oplus e_X = t'$  means that the occurrence of  $e_X$  (in  $w$ ) at  $t$  leads to  $t'$  (in  $w$ ). The future temporal operator  $\Box_F$  is defined by:  $t \models \Box_F e_X$  iff, for every immediate successor  $t'$  of  $t$ , either  $t \oplus e_X = t'$  or  $t' \models \Box_F e_X$ . Adapting Lewis (1973, 2004), we say that  $e_X$  causes  $e_Y$  at  $t$  whenever (i)  $t \not\models \Box_F e_Y$ , (ii)  $t \oplus e_X \models \Box_F e_Y$  and (iii)  $t \oplus e'_X \not\models \Box_F e_Y$  for some  $e'_X$ . We assume that any action  $\alpha_X$  follows from an intention of  $X$ .

(6) **Agent-sensitive sufficient condition:** A pseudo-imperative  $A_{imp}$  (and) B or pseudo-declarative A and B, where A and B denote  $e_X$  and  $e_Y$  respectively, is felicitous at  $t$  with respect to an agent  $a \in X \cup Y$  whenever the speaker believes that, for every  $t'$  such that  $t'$  is like  $t$  except that  $a$  has no intention of obtaining  $e_Y$  in  $t'$ ,  $e_X$  causes  $e_Y$  at  $t'$ .

Since, in  $t'$ ,  $a$  has no intention that  $e_Y$ , it cannot be the source of an action in favour of  $e_Y$  in the subsequent temporal states. So, (6) says that one can suppress the actions of an agent in favour of  $e_Y$  without any noticeable effect on the result ( $e_Y$ ). Suppressing intermediate or final actions by the addressee in (2) may lead to other solutions than calling the hot-line, a fact which violates (6). (6) does not metaphysically exclude the possibility of unexpected events that would block  $e_Y$ , but such events are simply not part of the speaker's belief.

Why should (6) be associated with the constructions we have considered? As noted by Han, pseudo-imperatives and pseudo-declaratives are particular cases of Roberts' modal subordination. B is then presented as a consequence of A. In its prototypical use, an imperative expresses a proposed/imposed future action of the addressee. There is no point in proposing/imposing an action A that is not sufficient for B to obtain, since it would suggest that consequence B does not depend on the addressee, and then suppress the main motivation for using an imperative in the first place. We conjecture that this central limitation has been extended to cases where imperatives denote non-controllable events, resulting in the sensitivity of pseudo-imperatives to (6). For pseudo-declaratives, the crucial point is that *and* normally introduces the last element of an enumeration. So, the '*and B*' part suggests that B is the last term of a sequence of eventualities. A paratactic conditional A,B (without *and*) entails that every transition that correspond to A leads us to a time point where the B transition is (normally) inescapable. This is compatible with the fact that A determines B with the help of extraneous expected/normal eventualities. In contrast, pseudo-declaratives with *and* imply that A has the causal potential for triggering the whole chain leading to B (if A then  $A_1 A_2 \dots B$ ). This makes sense if there is some sort of 'automatic' (Bolinger) transitive causation that leads directly from A to B, without intermediate causal chain, or if the responsibility of the intermediate causal chain  $A_1 A_2 \dots$  is ascribed to an agent (i) different from  $a$  and (ii) that  $a$  cannot or does not wish to counteract after  $e_X$  has happened, which is exactly the agent-sensitive profile captured by (6).

In the full paper, we will reconsider some of Culicover's observations on *one more* sentences in the light of the present treatment and extend it to other constructions that involve modal subordination and coordination.

**Main References** Bolinger, D.L. (1977). *Meaning and Form*. ■ Culicover, P. (1972). OM sentences. *Foundations of Lang.* 8. ■ Culicover, P.W. & Jackendoff, R. (1997). Semantics subordination despite syntactic coordination. *LI* 28. ■ Franke, M. (2007). Pseudo-imperatives and other cases of conditional conjunction and conjunctive disjunction. To appear in *Subordination vs. Coordination*. ■ Han, C. (1998). *The Structure and Interpretation of Imperatives*. Ph.D. Upenn. ■ Lewis, D. (2004). Causation as influence. In *Causation and Counterfactuals*. ■ Russell, B. (2007). Imperatives in conditional conjunction. *NLS*. ■ von Stechow, K. & Iatridou, S. (2006). The anatomy of a modal. To appear in *Ling. & Phil.* ■ Wooldridge, M. (2000). *Reasoning about Rational Agents*.