HANDBOOK SEMANTICS
B10(iii)
Causal and Purposive Clauses

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1. PHENOMENOLOGY

A language will contain a number of conjunctions which are termed causal
because they have the essentials of their semantics in common, and a couple
of words being classified as purposive conjunctions in order to signal a sem-
antic kinship, or identity, of a certain kind. The implication is that they con-
vey the modal categories of cause and purpose, respectively, and relate their
conjuncts to each other as cause, or reason, to effect, or consequence, and
means to end. Purposes are sometimes thought of as a special kind of cause,
and so both classes of conjunctions would appear to have some part of their
semantics in common.

Morphologically these conjunctions form a heterogeneous group. They present
a variety of phenomena, ranging from atomic elements (e.g. German "weil") to
concatenations of independent morphemes (e.g. Spanish "para que").
Preposition plus 'that' (Spanish "porque") and adverb plus 'that' (Swedish
"därför att") are typical patterns among complex conjunctions.

Standard modal (causal/purposive) conjunctions combine with a sentence to
form a sentence adverb and so belong to the syntactic category ((t/t)/t) cor-
responding to the logical type $\langle t,\langle t,t\rangle\rangle$, though with a view to interpretation
they are more appropriately treated as two-place sentence operators, on a par
with coordination.

It is not unusual for a language to have several causal and purposive conjunc-
tions that are not syntactically interchangeable. There are at least five dis-
tinctive features, that is to say, one conjunction can be different from an-
other in at least five respects.

1. Mood. As often as not, and notably in Romance languages, the purposive
clause is systematically construed with the subjunctive:

(1) *Legati ad Caesarem venerunt,* **ut** *auxilium rogarent.*
('envoys came to Ceasar to ask for help')

2. Infinitive. Normally there is one purposive conjunction that may (e.g.
Russian "что́бы") or must (e.g. German "um (zu)") be combined with an infinit-
ival. So in the latter case, it is not a conjunction in the strict sense; it is a
preposition, and the same one can often be combined with 'that' (e.g. French
"pour que") to form the conjunction in the strict sense.
The empty subject of purposive infinitivals is normally controlled by the
subject of the matrix sentence, as in (2a). Reference of PRO may be arbitrary
as in (2b), though it's a question how arbitrary; whether (2c) isn't a correct
representation. - There may be problematic cases, like (3) and (4).
(2a) *I sold the books* [PRO *to help the refugees*]
(2b) *the books were sold* [PRO *to help the refugees*]
(2c) *the books were sold* (*by someone*$_i$) [PRO$_i$ *to help the refugees*]

 (3) *we're not shooting* [PRO *to kill*]*, but they are* (*shooting* [PRO *to kill*])
 (4) *some people take pills* [PRO *to go to sleep*]*, others use alcohol*
  ([PRO *to go to sleep*])

Preposition + infinitive can serve as causal clause too, such as "door...te..-en"
in Dutch:
 (5) *Door te vroeg buiten te komen, begon Jantje weer opnieuw te hoesten.*
  ('through-too-early-out-to-go, Jantje began coughing again')

3. Topology. Clauses introduced by certain conjunctions (e.g. Russian "потому́
что", Swedish "för") cannot precede the main clause.
(6a) *Rien n'est perdu pour la France,* **car** *la France n'est pas seule.*
(6b)* **Car** *la France n'est pas seule, rien n'est perdu pour la France.*

4. Subordination. Causal clauses are not always subordinate - causal conjunc-
tions can be conjunctions in the very strict sense of coordination. For examp-
le, Norwegian "for" clauses exhibit main clause word order whereas "fordi"
clauses do not.
(7a) *Hun la ham i ei krybbe, for det* **var ikke** *plass til dem i herberget.*
  ('she-laid-him-in-a-manger, for-there-was-not-room-for-them-in-
  the-inn')
(7b) *Hun la ham i ei krybbe, fordi det* **ikke var** *plass til dem i herberget.*
  ('she-laid-him-in-a-manger, because-there-not-was-room-for-them-
  in-the-inn')

5. Commentability ('focusability' would be an interchangeable term). One
causal conjunction seems to occupy a special position in many languages, like
"because", corresponding to German "weil", Norwegian "fordi", French "parce
que", etc. Only elements from this class can be commented upon, e.g. negated,
or focused on by scalar particles ((8a) and (8b) from Lang (1976: 171)):

(8a) *Die Heizungsröhren sind geplatzt,* **nicht weil** *es Frost gegeben hat,* **sondern weil** *sie einen Materialfehler haben.*

(8b)* *Die Heizungsröhren sind geplatzt,* **nicht denn** *es hat Frost gegeben,* **sondern denn** *sie haben einen Materialfehler.*

(8c) Ты это говоришь, **только потому́ что** ты меня любишь.
    ('you're saying that only because you love me')

(8d)*Ты это говоришь, **только так как** ты меня любишь.
    ('you're saying that only since you love me')

Or questioned (the example is Norwegian):

(9a) *Gikk hun* **fordi** *hun kjeda seg?*
    ('Did she leave because she was bored?')
(9b)* *Gikk hun* **siden** *hun kjeda seg?*
    ('Did she leave since she was bored?')

Or emphasized by means of clefting:

(10a) *C'est* (**seulement**) **parce que** *...., que .....*
(10b)* *C'est* (**seulement**) **puisque** *...., que .....*

Or by means of 'Korrelat':

(11a) *Sie ist* **deshalb** *wichtiger als ihr alle,* **weil** *sie es ist, die ich begossen habe.*
(11b)* *Sie ist* **deshalb** *wichtiger als ihr alle,* **da** *sie es ist, die ich begossen habe.*

It seems that only elements from this class allow the main clause to be topical (Pasch 1982: 63); this will be reflected in intonation.

1. and 5. are probably of special relevance to the semantics of causals and purposives, reflecting some aspect of truth conditions. So are two further facts, concerning the propositions expressed by the conjuncts in purposives and causals:

First, matrix sentences of purposive constructions do not allow of every type of proposition; they must be conceivable as representing conscious actions, or at least intended results of such actions. Passives are okay, as in (2b), as are states deliberately brought about; (Norwegian) (12) and (Swedish) (13).

(12) *Brua er så høy for at store båter skal kunne passere under.*
    ('the bridge is so high in order that big ships may pass beneath it')
(13) *Norska anoraker är röda för att vara synliga på långt avstånd.*
    ('Norwegian anoraks are red in order to be visible at a distance')

Agents need not be human, cf. (Danish) (14), suggesting God or Nature, and (Spanish) (15).

(14) *Mange dyr og fugle bliver hvide når vinteren kommer, for at deres fjender ikke skal se dem.*

('many animals and birds turn white when winter comes in order that their enemies shall not be able to see them')

(15) *Nunca viene sola una desgracia, y parece que el Hado las envía en quadrilla para que no se pierdan por el camino.*

('a calamity never comes alone, and it seems that fate sends them in bands in order that they do not lose each other on the way')

But (2d) is excluded (Manzini 1980), as well as (Norwegian) (16) because the action is non-agentive.

(2d)* *the price decreased* [*to help the poor*]

(16)* *Vi kom til å knuse et vindu for å komme oss inn.*

('we happened to break a window (in order) to get in')

Second, in the typical case, time reference of the causal proposition is prior to or simultaneous with that of the main proposition; this will be reflected in tenses and time adverbials. As of purposives, the opposite is the case, the content of the subordinate clause being temporally posterior to or simultaneous with that of the main clause. (18) and (20) are Lappian examples of simultaneity.

(17) *Parce qu'il n'a pas tué ces deux-là, des milliers d'enfants mourront pendant des années encore.*

(18) *Bivan dainna go viegan.*

('I am keeping warm because I am running')

(19) *Je plante cette arbre maintenant, pour pouvoir récolter des pommes dans cinq ans.*

(20) *Viegan vai bivan.*

('I am running to keep warm')

Still one more potential distinctive feature deserves attention. Whereas purposive conjunctions in general permit only intentional acts as main clause propositions, there may be causal conjunctions which on the contrary do not tolerate that sort of thing. Dutch "doordat", for example, differs from the more frequent "omdat" in that it cannot give a reason for an agentive action. "Jantje stopte" in (21a) describes an involuntary event, while "Jantje stopte" in (21b) expresses a deliberate act of the will.

(21a) *Jantje stopte* **omdat / doordat** *zijn remmen zich vastgezet hadden.*

('Jantje stopped because his brakes had jammed')

(21b) *Jantje stopte* **omdat /* doordat** *de stoplichten op rood stonden.*

('Jantje stopped because the traffic lights were red')

2. THE STANDARD CASE

A standard causal construction carries the assertion of a causal connection, i.e. it can be false even if both conjuncts are true. (22a) is false if (22b) - in the reading where the 'link' is denied - is true. (23a) is false if (23b) is true.

(22a) *She got the job because she's a woman.*
(22b) *She didn't get the job because she's a woman.*
(23a) *Hann fór til Vesturheims, af því að honum leið svo illa heima.*
      ('he went to America because he was doing so badly at home')
      (Icelandic)
(23b) *Hann fór ekki til Vesturheims, af því að honum liði svo illa heima.*
      ('he didn't go to America because he were (!) doing so badly at home')

"Because" and "af því að" are 'commentable' ('focusable') causal conjunctions (cf. fact 5. under Chapter 1). Whenever it is possible to comment upon the conjunction in a causal construction, we may be confident that the causal connection conveyed is actually asserted.
A standard purposive construction carries the assertion of some connection too; it can be false just because that connection fails to hold. (24a) is false if (24b) - in the 'wide' negation reading - is true. And (25a) is false if (25b) is true. (The former example is Icelandic and the latter is Norwegian.)

(24a) *Hann fór til Vesturheims, til þess að litast um í veröldinni.*
      ('he went to America in order to look about in the world')
(24b) *Hann fór ekki til Vesturheims, til þess að litast um í veröldinni.*
      ('he didn't go to America in order to look about in the world')
(25a) *Det var ikke for å bli rik at han gjorde det heller.*
      ('it-was-not-to-get-rich-that-he-did-it-either')
(25b) *Det var for å bli rik at han gjorde det.*
      ('it-was-to-get-rich-that-he-did-it')

A causal construction can be untrue for the simple reason that one of its conjuncts is false. Assertion or presupposition? Probably the former; "because" does not seem inherently factive with respect to either one of its connects. So "p because q" entails both p and q and so is paraphrasable by "p & q & ...." (e.g. Reichenbach 1947: 329f. - "because" as "and" + ... - and Reis 1977: 60f.). It may be that depending on topic and focus and topology, p and q can be alternately presupposed, according to some presupposition concept.

Purposive constructions - "p in order that q" - seem to be semantically structured in the same way, with the one exception of entailing that the agent wants q to be the case instead of simply q. (Needless to say, this neutrality-to-fact of purposives as regards the end as such is what justifies the use of t

the subjunctive in the q clause.) Thus even syntactically complete – sentential – purpose clauses are incomplete as second arguments of a purposive conjunction as a truth-conditional operator, the conjunct involved on the level of logical form resulting from the application of the agent's intention attitude on the apparent conjunct. We shall see below that "p because the agent wants that q" explicates "p in order that q" reasonably well. The agent being that of p, the completed – expanded – conjunct really refers across the conjunction (this reducing in effect to "because"), depending on the matrix sentence for determination of the subject of intending, just as surface purposive infinitivals derive their subject proper from the main clause.

How should the causal connection conveyed by "because" and its approximate equivalents be analyzed? As with causation proper and in general, philosophers and linguists have taken two basic approaches. Both of these take as their starting point that causals are in some way closely related to conditionals, and the mainstream of "because" analysis has been based on the idea of sufficient conditionship.

Many people have assumed that "p because q" somehow involves "p if q" (e.g. Ramsey 1965: 248 and, somewhat differently, Ryle 1963: 310) or some regularity connection along the same lines – something like "always if q, p" (cf. van Dijk 1977: 48) or (counterfactually) "always(if q, p)" ('nomic tie'; cf. v. Wright 1971: 71); q may not be sufficient by itself, but together with implicit circumstances (cf. Ballweg 1981: 151): "whenever q-and-unspecified-conditions, p".

'Regularity' analysis may seem too narrow in scope to encompass very many causal constructions. (26a) can be viewed as an instantiation of a universal statement (26b), and if (26b) is felt too strong, one can recur to (26c). But (27) looks like a counterexample. One has to make a considerable amount of abstraction to obtain a law-like paraphrase and in that process, the gain would be lost in the getting.

(26a) *Because inflation has now been curbed, unemployment will decrease too.*
(26b) *Whenever inflation is curbed, unemployment decreases.*
(26c) *Whenever inflation is curbed and the situation resembles this one, unemployment decreases.*
(27) *Japan has surrendered because an atomic bomb has been dropped on Hiroshima.*

Causal conjunctions mostly treats of singular, particular things in quite specific situations, and there can be no unambiguous way of identifying the associated general statement (cf. Weber 1981: 160). Strictly speaking, there is no need to specify it in stating truth conditions, like: "p because q" is true only if there is a law and there are facts such that the law, the facts and q jointly imply p – and this is at the same time a possible analysis of "p if q" (to be compared, for instance, with the one in Kratzer 1978: 241-248).

But there is another way of using conditionals. "p because q" can be fairly convincingly paraphrased by ("p", "q", and) a counterfactual: "if it weren't for q, p wouldn't be the case either". Lewis (1973) is the classic of counterfactual analysis of causation. Dowty (1972) made the abstract predicate CAUSE of generative semantics take two sentential arguments in logical structure and interpreted "CAUSE(A,B)" as ("A" & "B" &) "not-A > not-B" (p. 125). Wierzbicka (1972: 199) defined: "S_1 is P_1 because S_2 is P_2 . = ...if S_2 were not P_2, then S_1 would not be P_1."

One good thing about this conception is that it can always be put to the test; it is immediately accessible to intuition. Moreover, intuition seems to license paraphrases like (22c) and (28b).

(22a) *She got the job because she's a woman.*
(22c) *She got the job and she's a woman and she wouldn't have got it if she weren't a woman.*
(28a) *He shot himself because gasoline wasn't obtainable.*
(28b) *He shot himself and gasoline wasn't obtainable and if it had been, he wouldn't have shot himself.*

Closer investigation reinforces the equivalence in question. Denial of the causal connection may take forms like (22d) and (28c).

(22d) *She didn't get the job because she's a woman - she would have got it otherwise too.*
(28c) *He shot himself, but not because gasoline wasn't obtainable - he might have done so even if gasoline had been obtainable.*

When used in the analysis of causation, counterfactuals are given a ceteris-paribus interpretation in terms of possible-world similarity, the classics of which, in turn, are Stalnaker (1968) (using the sign ">") and Lewis (1973a) (using the sign "□→", which has since become general).
Conjunctions accentuate one traditional problem: that of 'causal selection', pointed out e.g. by John Stuart Mill in <u>A System of Logic</u> (Book 3, Ch. 5, § 3). A given proposition 'depends counterfactually' on many different propositions, i.e. there are many necessary conditions, yet causation statements as a rule require us to select one of them. Conjunctions may assign several causes to one effect; we may have, for instance, "p because q and because r", and there are countless possible variations on this theme (cf. Henschelmann 1977: 145f.). Causes can even be graded, as is seen in (22e) and (28d):

(22e) *She got the job not so much because she's a woman, - mostly because she's acknowledged as a very able person.*
(28d) *He shot himself mainly because gasoline wasn't obtainable, but also to a certain degree because it was so hot.*

So conjunctions enable us not only to single out one 'causal factor' as **the** cause, but also to make subtle distinctions among such factors. A hierarchy of causes can be named, and this phenomenon may be matched by the solution to the selection problem proposed in Abbott (1974) and Dowty (1979: 107-109), using the scalar notion of distance from actuality ('important' causes would be absent in worlds relatively close to this one).

'Backward causation' seems impossible in standard "because" cases and corresponding counterfactuals seem contradictory too.

(29a) *The settlements perished around 1390 because supply ships ceased to arrive in 1403.*

(29b) *If supply ships hadn't ceased to arrive in 1403, the settlements wouldn't have perished around 1390.*

On counterfactual analysis, this absurdity is explicable in terms of trees (where worlds split at moments of time) (cf. Sæbø 1980).

Aristotle related 'purpose' to 'cause' in two ways. Purposes, or ends, figure as his fourth type of cause, and at the same time, they may be caused (Metaphysics, Book 5, Chapter 2):

""A cause" means ... the end, and this is the final cause (that for the sake of which); for example, walking is for the sake of health. Why does he walk? We answer, "In order to be healthy"; and having spoken thus, we think that we have given the cause."

" ... there may be causes of each other (for example, exercise is a cause of good physical condition, and good physical condition is a cause of exercise, although not in the same manner, but good physical condition as an end, and exercise as a moving principle); ... "

So purposive and causal clauses would seem to meet on a double basis:
1) Both types of clause can be used for answering "why" questions, so purposive clauses are 'causal' clauses in a wider, general sense. Purpose clauses somehow give reasons for action.
2) Purposive constructions can be taken to represent reversals of causal constructions; "because" as a reverse of "in order that". Main clause actions are supposed to 'bring about' the ends. (30a) is much more similar to (30b) than to (30c).

(30a) *Aristotle works in order to feel good.*

(30b) *Aristotle feels good because he works.*

(30c) *Aristotle works because he feels good.*

Both of these aspects are since traceable in philosophy and linguistics. Georg Henrik von Wright gives a ripe version of the second aspect in Explanation and Understanding (1971):

"If ... I say that he ran in order to catch the train, I intimate that he thought it (under the circumstances) necessary, and maybe sufficient, to run, if he was going to reach the station before the departure of the train." (p. 84)

"We ask "Why?" The answer often is simply: "In order to bring about p." It is then taken for granted that the agent considers the behavior which we are trying to explain causally relevant to the bringing about of p ... " (p. 96f.)

But at the same time he admits that 'teleological explanations' might turn out to be transformable into 'causal' ones so that "He ran in order to catch the train" would "depend on the truth of a nomic connection between his "anxiety to catch the train" ... and his running." (p. 192)

We are left with two alternative analyses of purposive constructions, based on these two paraphrases: "a does m in order to attain e" =
1) "a does m because a wants to attain e",
2) "a does m and a wants to attain e and a believes that doing m is the best way to achieve e".

(30d) *Aristotle works because he wants to feel good.*
(30e) *Aristotle works and he wants to feel good and he thinks that unless he works, he won't feel good.*
("a does m because a wants to attain e" would only be an intermediate stage in that analysis, preparing the purposive e.g. for the ultimate paraphrase "a does m and a wants to attain e and a wouldn't do m if a didn't want to attain e".
(30f) *Aristotle works and he wants to feel good and if he didn't want to feel good, he wouldn't work.*)

On the surface these two possibilities are very different from each other. Paraphrase no. 1) rests on the proposition that the agent entertains certain preferences; this proposition remains opaque. Paraphrase no. 2) dissects that proposition and introduces a cognitive element, viz. the agent's propositional attitude of belief towards the proposition that the act in question is in some (strong or weak) sense a necessary condition for the fulfilment of his intention. (One should note that the agent thus regards her action as a potential cause of the end-attainment; if she is right and her intention comes true, we may say that she wouldn't have attained e if she hadn't done m, and so (30b) would be justified.) (Both viewpoints are again represented in linguistic literature; e.g. the former in Rudolph (1982: 218), the latter in Rudolph (1973: 59).)
Differences shrink to a minimum, however, when it comes to deciding which one is the more adequate analysis: 1) seems a bit stronger, and therefore more adequate, than 2).
Suppose you'd stop doing m the moment you were to lose interest in e, then surely you think of m as the (or one) best way to produce e, - due to a principle of rationality, we may assume.
But the supposition that you think of m as the best, perhaps even the only, way to produce e appears to be compatible with the contention that you'd do m even if you didn't care about e - e could be only a pleasant side-effect, a gratuitous by-product; m could be enjoyable, for instance, and then it would

be untruthful to say that you do m to achieve e. We may reject purpose P_1 and accept purpose P_2 (see e.g. (31), (32)) and yet agree to paraphrase no. 2) for both of them (then we'd say that the one necessary intention was stronger than the other intention).

(31) *We used aluminium to save money / to ensure safety.*
(32) *Brecht wrote an advertisement to redeem a bet/ to acquire an automobile*

On the other hand, paraphrase no. 1) does not preserve the restriction that the main clause represent an agentive action. (2e) and (33), as opposed to (2d) and (16), are acceptable.

(2e) *the price decreased because the authorities wanted to help the poor*
(33) *Vi kom til å knuse et vindu fordi vi ville komme oss inn.*
    ('we happened to break a window because we wanted to get in')

How are purposives lacking agent subjects to be paraphrased on the model "because ... want ..."? Most matrix sentences are overt or hidden passives, like (2b) and (12), representing intended events or states of affairs deliberately brought about, and it is reasonable to treat the one who brings them about as agent, i.e. to have the unexpressed indefinite instigator be the one to want.

(2f) *the books were sold because those who sold them wanted to help the refugees*
(34) *the bridge is so high because those responsible for it being so high intended to enable big ships to pass beneath it*

A causal or purposive construction is structured logically as a tripartite conjunction, and so there are a variety of possibilities for the whole to be false. A comprehensive "not" has three places to go, plus combinations, providing theoretically seven different ways of negating. (Of course, this is not to say that sentences displaying wide-scope negation are ambiguous, however, focus and topic may serve to allocate denial and assent within a sentence, so that what is meant actually varies.) Specifically, a construction "p because q" or "p in order that q" can be false for the simple reason that one of its two simple conjuncts is. But note that on counterfactual analysis ("p & q & ¬q$\square$→ ¬p" or "p & Wq & ¬Wq$\square$→ ¬p" ("W" symbolizing "the agent wants that")), this is only half true, since the alternative of (W)q and only (W)q being negative is contradictory; either p or the counterfactual (not both, which would again yield a contradiction) must follow along.
The opposite option, on the other hand - p and only p is negative - will sometimes materialize. (35a) and (36a) suggest this reading of "not(p because/in order that q)", aptly rephrasable by saying that (W)q fails to bring about p. (35b/36b) are paraphrases adhering to the pattern "¬p & (W)q & ¬(W)q$\square$→ ¬p".

(35a) *I don't close my eyes to the consequences because they're unpleasant.*
(36a) *The rescue party aren't risking their lives to recover survivors.*

(35b) *I don't close my eyes to the consequences, which are unpleasant, as I certainly wouldn't were they not unpleasant.*

(36b) *The rescue party are trying to recover survivors, if they weren't, they would certainly not be risking their lives, and they aren't either.*

The normal locution for this content, however, is a **concessive** conjunction conjoining "¬p" and "q", where negation is confined to the main clause. (35c) and (36c) are fair paraphrases of the above sentences. This would mean the following analysis of "p although q": "p & q & ¬q$\Box$→ p". (Quite possibly, the two latter conjuncts are best considered presuppositions.)

(35c) *I don't close my eyes to the consequences even though they're unpleasant*

(36c) *The rescue party, though eager to recover survivors, aren't risking their lives.*

3. THE RESIDUE

Conjunctions that cannot be commented, or focused, upon (cf. fact 5 under 1.), such as "since" and "for", German "da" and "denn", and Norwegian "siden" and "for", pose anew the question of how truth conditions are structured. We have good reason to doubt that the connections they convey are asserted. Moreover, we cannot be sure that sentences 'subordinated' by "since", "da", "siden" etc. do not 'merely' represent presuppositions.

(37) *My opinion is (not) that since we've lost more than two thousand subscribers, we cannot go on publishing.*

(38) *Je (ne) pris (pas) la résolution d'en prendre à mon aise puisque c'était dimanche.*

Comprehensive negation seems unable to suspend the implication that we've lost more than two thousand subscribers. Both the implication that "c'était dimanche" and the connection carried by "puisque" are apparently untouched by "ne...pas" in (38). Martin (1973), Heinämäki (1975), and Dal (1952: 215) (e.g.) contend that "puisque"-, "since"-, and "da" sentences, respectively, are presupposed.

Conjunctions belonging to the coordinating paradigm – "for", "denn", "car" etc. – are comparable with adversative conjunctions "but", "aber", "mais" etc.; they thus probably 'include' "and", "und", "et" etc. (see e.g. Reis 1977: 59), i.e. both connects are asserted (e.g. Pasch 1982: 197), whereas the relation they establish is probably best represented as a presupposition or conventional implicature (see Grice (1967: lecture 2, p. 6) who makes the point regarding an occurrence of "therefore").

(39) *Und sie verwunderten sich seiner Lehre, denn seine Rede war gewaltig.*
(6a) *Rien n'est perdu pour la France, car la France n'est pas seule.*

What do the connections conveyed/relations established by "since" and "for" and their approximate equivalents consist in? One answer to this question could be simply: the same as the Standard Case (**2.**). (37), (38), (39), and (6a) are not yet obvious counterexamples: they could contain "because", "parce que" and "weil" and be analyzed in terms of counterfactual dependence. But this conception is too narrow. 'Causation' is too restricted to capture e.g. (40)–(43). ((40) is taken from Boettcher/Sitta (1972), (41) from Lang (1976), (42) from Ross (1970), and (43) from Aijmer (1978).)
(40) *Da die Lampe nicht brennt, ist der Motor kaputt.*
(41) *Es hat Frost gegeben, denn die Heizungsröhren sind geplatzt.*
(42) *Jenny isn't here, for I don't see her.*
(43) *Bill has gone to Spain, for he told me he would.*

Members of the "because" paradigm are not restricted to the Standard Case either, though conjunctions which, like "because", can anytime be substituted for the coordinating one seem more versatile than those subordinating through word order. (44) is taken from Quirk et al. (1974: 752), and (45) is taken from Rutherford (1970: 100), who drew attention to its second, 'non-restrictive' sense, or reading:
(44) *They've lit a fire, because I can see the smoke rising.*
(45) *He beats his wife because I talked to her.*

(40), (41), and maybe (42) and (44), belong to what has been termed the 'symptomatic', or 'evidential', 'use' of causal conjunctions. One can note two things in this connection: this 'use' favours epistemic modals, and 'reverses' the 'causation use', so that (46a) and (46b), brought by Morreall (1979: 234), seem near-equivalent:
(46a) *Louie has definitely come into some money, because he's driving around town in a new Rolls-Royce.*
(46b) *Louie is driving around town in a new Rolls-Royce because he has come into some money.*

One could conclude that one connection can give rise to two constructions. Lang (1976: 166f.) paraphrases (41) as (41c) and (41a) as (41b).

(41a) *Die Heizungsröhren sind geplatzt, denn es hat Frost gegeben.*
(41b) *Wenn es Frost gegeben hat, dann sind die Heizungsröhren geplatzt, nun, es hat Frost gegeben, also sind die Heizungsröhren geplatzt.*
(41c) *Wenn es Frost gegeben hat, dann sind die Heizungsröhren geplatzt, nun sind die Heizungsröhren tatsächlich geplatzt, also darf man annehmen, dass es Frost gegeben hat.*

Such occurrences of "(p) because/since/for (q)" as (40)-(46a) may be considered to center on another aspect of "p" - "p" in another rôle: the causal clause appears to explain the main clause not as an event or a state of affairs, but as an object of belief, or a judgment, or an assertion, - as a proposition complete with attitude; - an act including (representative) illocution (cp. e.g. Pasch 1982: 106f.).

But (40)-(46a) exemplify only the tip of the iceberg: main 'clauses' need not be declarative sentences; corresponding speech acts need not be representatives. ((47) from Quirk et al. (1974: 752), (48) from Küper (1983: 16), and (49) from Aijmer (1978: 46).)

(47) *Are you going to the post-office? - because I have some letters to send.*

(48) *Bring mir ein Bier, denn ich habe Durst.*

(49) *Since you're a linguist, what is the current status of transformational grammar?*

(50) *Brother, can you spare a dime, 'cause my children are starving.*

Here "p" unmistakably appears as questions and requests, and there is no evident cognitive connection between q and the propositional content p. At the latest, this is where the 'performative hypothesis' comes in (Ross (1970), Rutherford (1970), Sadock (1974), Morreall (1979), i.a.). By embedding p under 'hyper sentences' in semantic structure, (40)-(50) would be made to conform to, thus restoring, the Standard Case:

(44a) *I claim/know that they've lit a fire because I can see the smoke rising.*

(46c) *I'll bet that Louie has (definitely) come into some money, because he's driving around town in a new Rolls-Royce.*

(47a) *I ask you whether you're going to the post-office because I have some some letters to send.*

(48a) *Ich fordere dich auf, mir ein Bier zu bringen, denn ich habe Durst.*

Now the performative method has met with heavy criticism (Kac (1972), Grewendorf (1972), Gazdar (1979), i.a.). (44a) evinces an ambiguity, or a vagueness: Does 'explaining a speech act' mean giving a reason for the performance or some other aspect of it? Choosing the latter alternative, one can deepen the analysis (Valgard (1979), Küper (1983)), as the rules constituting the act - its felicity conditions - can provide a bridge between the performance and q. The causal clauses in (44), (47), (48) go to explain the sincerity rule of the respective acts: the speaker justifies his/her belief in p, his/her desire to know if p, and his/her desire for the hearer to bring about p, respectively. With the causal clause of (49) the speaker justifies his/her conviction that the hearer knows if p, and in (51) he/she explains why he/she doesn't.

(51) *Lebt er noch? denn in meiner Einsamkeit höre ich nichts von ihm.*
    (quoted by Adelung (1782: 485))

Some people have suggested that "denn" (Reis 1977: 60) and "puisque" and "car" (LE GROUPE λ-1 1975: 245f.) should be described as illocutionary indicators, indicating a speech act of explanation.

There is a 'speech act use' of purposive clauses too. A purposive clause can serve to explicate indirect speech acts, cp. (52), like a performative phrase, or an indicator. It can serve to clarify the point of the utterance where there may be doubt because the indicator is ambiguous: (53). It can be used for defining the act more accurately, making the point of the utterance more precise, i.e. specializing the essential rule of e.g. questions ((54)) or representatives/answers ((55)).

(52) *Just to warn you: there's a bull on the meadow.*

(53) *To give you a good piece of advice, Doc: Get married!*

(54) *Just to make quite sure - you didn't notice anything unusual?*

(55) *Well, to be quite exact, I imagine she did seem a bit suspicious.*

Besides, a purposive clause can give a reason for a speech act via a rule too. (56): Stating the purpose of the point of the utterance (i.e. '(attempt) to get H to do A' - essential rule), the purposive clause states the end purpose of the directive. (57): Relating something good for H, the purposive clause explains S' premiss that doing A will benefit H (preparatory or sincerity rule of advice): 'p is in your best interest because q is so too'.

(56) *Die Geisslein riefen, "zeig uns erst deine Pfote, damit wir wissen, dass du unser liebes Mütterchen bist.* " (quoted by Rudolph (1982a: 277))

(57) *Bitte senden Sie den Informations-Coupon möglichst umgehend ein, damit Ihnen rechtzeitig Ihre individuelle Computer-Analyse kostenlos vorliegt.* (quoted by Rudolph (1982a: 277))

Purposives have one more 'secondary use'. Bech (1957: 102ff.) employed the term 'determination' to describe the way the purpose phrase appears to modify some certain part of the main clause in sentences like (58)-(61): here the "to" phrase would 'determine' the verb "do", the adverb "enough", the verb "need", and the auxiliary "must", respectively. (59)-(61) appear to permit the paraphrases (62)-(64). Here the items in question are necessity words in a wide sense, and such sentences seem to convey exactly a notion of necessary condition (Bech 1957: 104 and Rudolph 1973: 103, 114f., 141).

(58) *the government hasn't done enough to reduce unemployment*

(59) *the government hasn't accomplished enough to get reelected*

(60) *the government needs an economic boom to get reelected*

(61) *to get to Harlem, you must take the "A" train*

(62) *because the government has accomplished so little, it won't get reelected*

(63) *without an economic boom, the government won't get reelected*

(64) *you won't get to Harlem unless you take the "A" train*

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