

The modality of *offer* and other defeasible causative verbs

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1. Verbs at study

As Oehrle (1976):25 observes, contrary to *give*, *offer* with an agentive subject necessitates only that the possessor is willing to give the internal argument's referent up to somebody: no uptake is required on the latter's part. However, as (1) below suggests, the uptake seems taken for granted with causer subjects.

- (1) a. L'organisateur de la course lui a offert la première place. Mais elle a refusé ce marché.
'The organizer of the race offered her the first position, but she refused this deal.'
- b. Son excellent résultat lui a offert la première place. # Mais elle ne l'a pas prise.
'Her excellent result offered her the first position. But she didn't take it.'
- (2) a. Hans schmeichelte Maria, aber sie fühlte sich überhaupt nicht geschmeichelt.
'John flattered Mary, but she felt absolutely not flattered.'
- b. Dass sie als Erste ausgewählt wurde, schmeichelte Maria, #aber sie fühlte sich überhaupt nicht geschmeichelt.
'That she was chosen first flattered Mary, #but she felt absolutely not flattered.'

This paper is dedicated to verbs displaying the same ambiguity as *offer* in French and German. With agentive subjects, these verbs are used to denote an act performed with the intention of triggering a certain result. But this result does not have to occur for the sentence to be true, as shown by the non-contradictory continuation in (1a)-(2a). This is why we call these verbs 'defeasible causatives'. With causer subjects, the same verbs entail the occurrence of the result, cf. the contradictory continuations in (1b)-(2b). The question raised is how one should handle this ambiguity in the semantics of these verbs.

Following Gropen et al. (1989) and Beavers (2010), we call 'prospective component' the subevent that does not need to obtain for the predicate to be satisfied and 'non-prospective component' the subevent that must obtain for the predicate to be satisfied. The reading which entails the result will be called the 'implicative' reading, and the other 'non-implicative'.¹ Defeasible causatives are found in different semantic classes listed below. For some of them, the ambiguity has already been observed in the

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¹ It has been claimed that for English verbs of transfer, the 'double object variant' triggers the implicative reading, while the *to* variant does not, cf. e.g. Green (1974):157. However, Oehrle (1976):129f. shows that many *give* verbs have the implicative reading on either variant, while with agentive subjects, verbs of future having like *offer* fail to entail caused possession in either variant. That the meaning of the specific verb plays a critical role in the availability of the inference is also argued for in Rappaport Hovav & Levin (2008b), section 5.

literature (e.g. Oehrle (1976) for verbs of caused possession/perception, Hacquard (2006) for *permettre* 'allow/enable', Ruwet (1994, 1995), Martin (2006):397-398 and Mari & Martin (2009) for psych-verbs). In order to arrive at a (more) complete list of verbs, we automatically extracted from the searchable version of the Lexique des verbes français (Bédaride (t.a.)) all verbs which allow animate and inanimate subjects (around 5.000 verbs) and identified manually those which alternate between an implicative and a non-implicative reading (around 60 verbs). Very often, there are corresponding German verbs which allow agent and causer subjects and show the same ambiguous behavior. These can be further divided in six semantic verb classes. We name some verbs of each subclass below. Illustrating examples are given for each class in Martin & Schaefer (2012).

1. Agentive object experiencer psych-verbs: *encourager/ermutigen* 'encourage', *flatter/schmeicheln* 'flatter', *provoquer/provozierer* 'provoke', *offenser/beleidigen* 'offense', *pousser à/ermuntern* 'push to', *rassurer/beruhigen* 'reassure', *intimider/einschüchtern* 'intimidate', *embêter/belästigen* 'tease' (cf. Martin (2006):397-398, Mari & Martin (2009))

2. Verbs of communication: *annoncer/vorhersagen* 'predict', *attester/bestätigen* 'attest', *contredire/widersprechen* 'contradict', *exhorter/zu etwas anhalten* 'exhort, urge', *expliquer/erklären* 'explain', *prédire/vorraussagen* 'predict', *prévenir/warnen* 'warn', *questionner* 'question', *rappeler/erinnern* 'remind', *suggérer/suggestieren* 'suggest'.

3. Influence verbs (Under their agentive reading, these verbs describe an action to induce or to allow someone to perform an action, cf. Sag & Pollard (1991), Rau (2010)): *appeler à/appellieren* 'call for', *demander/verlangen* 'ask', *exiger/fordern* 'demand', *inciter/anstacheln* 'incite', *inviter* 'invite', *pousser/drängen* 'push', *permettre/erlauben* 'allow' (cf. Hacquard (2006):41 & 202), *presser/antreiben* 'urge', *réclamer/verlangen* 'urge'.

4. Verbs of caused perception: *interpeller* 'to shout at, to question', *montrer/zeigen* 'to show' (cf. Oehrle (1976):68-113).

5. Verbs of caused possession: *attribuer/zuweisen* 'to allocate, grant', *destiner* 'to design to s.b., to destine', *enseigner/lehren* 'to teach' (cf. Oehrle, *id.*:76), *envoyer* 'to send', *offrir/bieten* 'to offer'.

6. Epistemic verbs (cf. Martin & Tovenia (2012)): *vérifier/verifizieren* 'verify', *assurer/zusichern, versichern* 'assure/ensure', *authentifier/bestätigen* 'authenticate', *garantir/garantieren* 'guarantee', *certifier/bestätigen* 'certify'.

7. Others: *soigner* 'cure, treat', *imperméabiliser* 'waterproof'.

The difference in the continuations in (1a)-(2a) vs (1b)-(2b) might suggest that these sentence pairs differ in terms of event structure. The a-examples seem mono-eventive, while the b-examples seem bi-eventive since they describe a result besides the causing event. In Martin & Schaefer (2012), we showed however that this solution is not tenable: many arguments, including standard event structure tests, show that defeasible causatives are bi-eventive under both their implicative and non-implicative readings. The ambiguity should therefore be handled without assuming different event structures.

In Martin & Schaefer (2012), we also show that contrary to what happens with modal verbs (cf. a.o. Hacquard (2006)), perfectivity is not required for the implicative reading to be triggered. In fact, for some defeasible causatives, causer subjects trigger the implicative reading and agentive subjects the non-implicative one also with the *futur simple*, cf. (3a)-(4a) vs (3b)-(4b) below.

- (3) a. Pierre lui enseignera le russe. Mais évidemment, il ne l'apprendra pas.
'Pierre will teach him Russian. But obviously, he will not learn it...'
- b. Ce voyage lui enseignera le russe, # mais, évidemment, il ne l'apprendra pas.'
'This trip will teach him Russian. But obviously, he will not learn it...'
- (4) a. Hans la flattera, mais elle ne se sentira pas flattée pour autant.
'Hans will flatter her, but she will not feel flattered because of that.'
- b. Ce fait la flattera, # mais elle ne se sentira pas flattée pour autant.
'This fact will flatter her, but she won't feel flattered because of that.'

2. Defeasible causatives as sublexical modal verbs

2.1. Sublexical modality

Some defeasible causatives like *offer*, *urge* and *require* are addressed by Koenig & Davis (2001), who introduce modality in their semantics. They propose to divide the semantics of verbs into two components². The *situational core component* categorizes types of relations between participants in situations and the roles the participants play in them (i.e., argument and event structures). The *sublexical modal* component (a modal base) evaluates these relations at various world indices.³ Koenig & Davis (2001) assume that while in the case of plain modal verbs like *must*, the selection of the modal base is contextually determined, for verbs like *offer* or *require*, etc. the modal base is lexically specified.⁴

Most of our defeasible causative verbs are what Koenig and Davis call *energetic modals*: the modal base contains all worlds in which the action of the Agent achieves her/his goal, see the paraphrases (5b, 6b) of (5a, 6a).

- (5) a. Susan offered Brenda 10 euros.
b. ‘Susan caused Brenda to have 10 euros in all worlds where the goal of her offer is achieved.’
- (6) a. Susan urged Brenda to give her 10 euros.
b. ‘Susan caused Brenda give her 10 euros in all worlds where the goal of her urging is achieved, i.e. where Brenda is indeed persuaded and gave Susan 10 euros.’

Introducing modality in the semantics of these verbs nicely allows to keep a bi-eventive decomposition for these verbs (as (5b, 6b) show, the event structure of *offer* and *urge* involves a cause relation, cf. also (7) below), without having to assume that they entail a result in all of their uses. Given the conclusion adopted here that verbs at hand are bi-eventive on both uses, this is what we need. Note in passing that in adopting Koenig & Davis’ sublexical modal component, we depart from the often adopted implicit premise (cf. e.g. Rappaport Hovav & Levin (2008a)) that the event to which the root is associated has to be entailed by the verb: a verb’s root can be associated to a result even if this result is not entailed in the actual world.

Koenig & Davis (2001) focus on the agentive use of defeasible causatives, and therefore do not address the ambiguity between the implicative and non-implicative readings. The same is true of Rappaport Hovav & Levin (2008b) and Beavers (2010), who also adopt their sublexical modality component. In order to capture the difference in interpretation of verbs at hand with causers and agent subjects, one could at first sight assume a lexical ambiguity with a sublexical modal component present with agents but not with causers. However, this is not the right way to go, because as it will be shown below in Section 4, in some contexts, it is possible to cancel the inference that the result takes place even with causer subjects. This can only be accounted for if a modal base is at play with both types of subjects.

2.2. Proposal

We propose that defeasible causatives are bi-eventive and involve a modal base on any use. They lexically encode the modal force of necessity. The differences between the implicative and non-implicative readings can be captured through the choice of the modal base:

² Under the assumption that linking constraints (for direct arguments) only depend on the situational core component and are insensitive to the sub-lexical modality, this allows them to explain that verbs like *give* and *offer* have the same linking pattern, although only the former entails a result in the actual world.

³ At this stage of the paper, we do not do justice enough to Oehrle (1976), who already suggested that verbs like *offer* have a modal component, despite of his proposal that under their agentive use, they are basically activity verbs.

⁴ As e.g. the circumfix *ka...-a* lexically encodes circumstantial modality in Salish languages, cf. Davis et al. (2009)). See van der Klok (2012) for a cross-linguistic semantic typology of modals with respect to the lexicalisation of the modal force and/or the modal base. According to our proposal, verbs like *offer* lexicalize both, cf. the last section on this point.

- With agent subjects, the modal base is energetic: it contains those worlds where the goal of the agent is achieved. Since the world of evaluation is not necessarily included in the modal base, the result does not have to take place in the actual world. The verb therefore triggers a ‘result implicature’ rather than a ‘result implication’.
- With causer subjects, the modal base is typically circumstantial. The world of evaluation is therefore not filtered out and, thus, necessarily quantified over. However, in some contexts, defeasible causatives with causer subjects are evaluated with respect to a stereotypical modal base. In that case, the verb does not have its implicative reading.

The proposal is illustrated through the lexical representation associated to the VP *offrir y à z* in (7). ρ in (7) is a free variable for the modal base, where a modal base is viewed as a function from worlds to sets of worlds. So, for example, $\rho(w)$ is the set of worlds that are ρ -compatible with w .

- (7) $[\text{VP offrir } y \text{ à } z] \rightsquigarrow$
 $\lambda y \lambda z \lambda e [\text{offer}(e) \wedge \text{theme}(e, y) \wedge \text{recipient}(e, z) \wedge$
 $\Box_{\rho} \exists e' (\text{cause}(e, e') \wedge \text{have}(e') \wedge \text{possessee}(e', y) \wedge \text{possessor}(e', z))]$
 $=_{\text{def}} \lambda y \lambda z \lambda e [\text{OFFER}(\rho, e, z, y)]$
Conditions:
 (i) $\forall e \forall z \forall y (\text{OFFER}(\rho, e, z, y) \wedge \exists x (\text{agent}(e, x)) \rightarrow$
 $\rho = \text{energetic})$
 (the existence of an agent implies an energetic modal base)
 (ii) $\forall e \forall z \forall y (\text{OFFER}(\rho, e, z, y) \wedge \exists x (\text{causer}(e, x)) \rightarrow$
 $\rho = \text{circumstantial} \vee \rho = \text{stereotypical})$
 (the existence of a causer implies a circumstantial or a stereotypical modal base)

The representation ensures that in all uses, *offrir y à z* entails the occurrence of an event which is an offer, has y as its theme and z as its recipient. But since the caused possession is within the scope of the modal operator, it takes place only in those worlds which are contained in the modal base. The verb is furthermore associated with two conditions. The first ensures that the existence of an agent implies an energetic modal base, while the second ensure that the existence of a causer implies a circumstantial or a stereotypical modal base.

The truth conditions for \Box_{ρ} are standard, with respect to a model M , an assignment function g , and a world w :

- (8) $\llbracket \Box_{\rho} \phi \rrbracket^{M, g, w} = 1$ iff for all $w' \in \rho(w)$, $\llbracket \phi \rrbracket^{M, g, w'} = 1$.

In the next section, we investigate in more details the relation between agentivity and intentionality, in order to clarify under which conditions the result implication can be cancelled with an Agent.

3. The modal base with animate subjects

The observation reported in this section is that the result implicature can be cancelled as soon as the subject’s referent performs an action which fits the description of the VP, no matter whether the intention pursued through this action fits this description or not. As we will see later, the energetic modal base has to be slightly redefined in order to capture this.

3.1. Non-intentional agents vs causers

Prima facie, in the context of an animate subject, we would expect the result implication not to be cancellable as soon as the VP is modified by an adverbial like *sans le faire exprès* ‘without doing it on purpose’, *sans le vouloir* ‘without wanting it’ or *non-intentionnellement* ‘unintentionally’. Indeed, ‘non-intentional’ agents seem at first sight to be identifiable with causers. However, the data below show that this is a wrong move. They show that it is sometimes possible to cancel the inference that a result takes place with animate subjects even in presence of these adverbials.

- (9)
- a. Marie lui a montré sans le vouloir les problèmes de son analyse, mais il ne les a pas perçus.
'Marie showed him without wanting it the problems of his analysis, but he didn't perceive them.'
 - b. Il les a prévenus sans le faire exprès de sa visite qu'il voulait garder secrète, mais heureusement ils ne l'ont pas réalisé.
'He told them unintentionally about his visit that he wanted to keep secret, but fortunately they didn't take notice of it.'
 - c. Pierre l'a insultée sans vraiment le faire exprès (il est si arrogant de nature qu'il est insultant en permanence sans le vouloir), mais heureusement, elle ne s'est sentie insultée d'aucune façon.
'Pierre her has insulted without really doing it on purpose (he is so arrogant that he's permanently insulting, without wanting it), but fortunately, she didn't feel insulted at all.'

The same is true in German:

- (10)
- a. Der Direktor suggerierte mir ohne Absicht, dass er ein Genie sei, aber ich habe das keinen Augenblick geglaubt.
'The director suggested to me unintentionally that he was a genius, but I didn't believe it a single moment.'
 - b. Der Direktor provozierte sie ohne es zu wollen, aber sie blieb davon ganz unberührt.
'The director provoked him without wanting it, but she remained untouched by this.'

The result implicature can thus be cancelled, although, as these adverbials indicate, the Agent's intention does not fit the description of the VP.

This does not mean that any animate subject enables the non-implicative reading. In order to cancel the inference that the result takes place, we nevertheless need a context which makes clear that the subject's referent performs an action which fits the description of the VP (although the intention motivating this action might not fit this description). If, on the contrary, the context indicates that the subject's referent, although animate, does not perform any action, the result implication is triggered. For instance, this inference is systematically triggered in presence of the adverbial *without doing a thing* (on a related point, cf. Oerhle 1976:84):

- (11)
- a. Sans rien faire, Pierre lui a montré les problèmes de l'analyse, # mais elle ne les a pas vus.
'Without doing a thing, Pierre showed her the problems of the analysis, but she didn't see them.'
 - b. Sans rien faire, il les a prévenus de sa visite qu'il voulait garder secrète, # mais heureusement ils ne l'ont pas réalisé.
'Without doing a thing, he told them about his visit that he wanted to keep secret, but fortunately they didn't take notice of it.'

The result implication is also automatically triggered when the causing eventuality is normally not conceived as an action. For instance, the first event denoted by *teach the sense of humour* is typically not conceived as such.

- (12)
- a. Il m'a enseigné le sens de l'humour, # mais je ne l'ai pas appris.
'He taught me the sense of humour, but I haven't learned anything.'
 - b. Il m'a permis de me connaître, # mais je ne l'ai pas fait.
'He enabled me to know myself, but I didn't do it.'

In conclusion, in the context of an animate subject, the result inference cannot be cancelled if the subject's referent does not perform an action, and it can be cancelled as soon as the action performed fits the description of the VP, no matter whether the intention pursued through this action fits this description too or not. In the typology of Dowty (1972):chap. 5 and Kamp (1999-2007), (9)-(10) are examples of the *non-intentional agentive reading* (the act performed fits the description provided by the VP, but not

the intention of the agent), while (11)-(12) are examples of the *non-agentive reading* (the causing event is not an act).

Given the fact that the result implication can be cancelled when the subject is a non-intentional agent, we have to define the energetic modal base slightly differently than Koenig & Davis (2001). Remember that Koenig and Davis define it as the set of worlds in which the action achieves the goal that motivates this action. The goal is supposed to be the triggering of the result described by the verb (i.e. causing a perception in the case of *show*).

This definition raises now a difficulty, because under the non-intentional agentive reading, the goal that motivates the Agent's action is *not* of the right type. As we just saw, if *x* non-intentionally and agentively showed Mary the problems of her analysis, the goal that *x* pursued through his action is precisely not to cause Mary to see these problems. Let us assume that *x*'s goal was to explain *w* to Paul. If we define the energetic modal base as above, the analysis makes a wrong prediction for this case, namely that with an Agent, *x showed Mary the problems of her analysis* entail in the worlds contained in the modal base that Paul understood *w* (rather than Mary saw the problems of her analysis).

We therefore need to redefine the energetic modal base. For this purpose, we will assume that actions have inherent, normal consequences, no matter whether the intention of the agent fits the description used to refer to this act. The normal consequence of a showing of *y* to *z* is that *z* perceives *y*, independently of whether the shower has the corresponding goal or not. The energetic modal base will then be defined as *the set of worlds where the action achieves its inherent/normal consequences*.⁵ Of course, under this definition, the energetic modal base can be seen as a subkind of the *stereotypical* modal base. We come back to this point in the last section.

4. The modal base with inanimate subjects

As mentioned above, with causer subjects, we assume that the modal base is typically circumstantial and thus realistic. Hence the result inference in the world of evaluation. However, with an inanimate subject, there are at least two types of contexts where defeasible causatives allow to cancel the inference that the result takes place.

4.1. Causers vs Instruments

Firstly, with some defeasible causatives at least, the result implicature is more easily cancellable if the subject's referent can be conceived as the instrument of an implicit agent, cf. the examples (13a) vs (13b) and (14a) vs (14b) below.

- (13) a. Le discours du recteur l'a vraiment flatté à plusieurs reprises, mais cela l'a laissé complètement indifférent.
'The speech of the dean really flattered him at several places, but it left him totally unmoved.'
- b. Qu'il ait été choisi le premier l'a vraiment flatté, # mais cela l'a laissé complètement indifférent.
'That he was chosen first really flattered him, but it left him totally unmoved.'
- (14) a. La lettre de la police l'a encouragé à la dénoncer, mais cela n'a pas eu d'effet sur lui.
'The letter of the police encouraged him to denounce her, but this didn't have any effect on him.'
- b. Lire la lettre de la police l'a encouragé à la dénoncer, # mais cela n'a pas eu d'effet sur lui.
'Reading the letter of the police encouraged him to denounce her, but this didn't have any effect on him.'

⁵ In fact, Koenig & Davis (2001) already introduce the notion of inherent consequences of acts/situations in their energetic modal base: 'for energetic modals, the selected worlds are worlds in which the actions or situations denoted by the verb achieve the goals that motivate those actions *or the inherent consequences which result from the occurrence of the situation*' (p. 89, italics ours). What we do here is basically opting for the second conjunct of their definition.

Examples (13a) and (14a) are not real counter-examples to the generalization according to which defeasible causatives get their implicative readings with causer subjects. Indeed, Alexiadou & Schaefer (2006) show that such non-human subjects behave even morpho-syntactically as agents, not as causers. Since in these examples, the inanimate subject is associated to the role Agent, the energetic modal base is selected. Since it does not necessarily contain the world of evaluation, the result is not entailed in this world.

4.2. Abnormal worlds

More interestingly, it is possible to cancel the inference that the result takes place in a context making clear that the reaction of the internal argument's referent to the eventuality involving the Causer is abnormal and/or unexpected. For example, in (15) and the a-examples in (16)-(20), the context indicates that the object's referent reacts in an unexpected, absent-minded, crazy or stupid way to the event involving the subject's referent.

- (15) Ces circonstances lui ont offert un super job; et pourtant, contre toute attente, elle a ne l'a pas pris.
'These circumstances offered her a great job; and nevertheless, against all expectations, she didn't take it.'
- (16) a. Objectivement, la chute de pierres les a bel et bien prévenus du danger! Il faut vraiment qu'ils aient été bien étourdis pour ne pas s'en rendre compte.
'Objectively, the stone fall well and truly warned them of the danger! They must have been really absent-minded for not realizing it.'
- b. La chute de pierre les a prévenus du danger. # Mais ils ne s'en sont pas rendu compte.
'The stone fall warned them of the danger. But they didn't realize it.'
- (17) a. Clairement, cette situation leur a bel et bien montré le problème! C'est fou qu'ils ne l'aient pas vu!
'Clearly, this situation well and truly showed them the problem! It is crazy that they didn't see it!'
- b. Cette situation leur a montré le problème, # mais il ne l'ont pas vu.
'This situation showed them the problem, but they didn't see it.'
- (18) a. Clairement, ce voyage leur a enseigné quelque chose tout de même! Il faut vraiment qu'ils soient idiots pour n'avoir rien appris.
'This trip objectively taught them something though! They really must be idiots for not having learned anything.'
- b. Ce voyage leur a enseigné quelque chose, # mais ils n'en ont rien appris.
'This trip taught them something, but they didn't learn anything from it.'

Interestingly, in many cases — but not all, cf. (15) —, this inference is much easier to cancel in presence of the evidential adverb *objectivement* 'objectively' or *clairement* 'clearly'. Often, the suspension of the inference is even easier in the presence of the discourse marker *bel et bien* 'well and truly' or *tout de même* 'nevertheless'.

In a similar way, in German, the result inference becomes cancellable in such abnormal contexts and in presence of evidential adverbials like *objektiv betrachtet* or *klar und deutlich* and discourse markers like *zwar...aber* or *doch*:

- (19) a. Objektiv betrachtet hat ihn der Steinschlag zwar vor der Gefahr gewarnt. Aber er war so geistesabwesend, dass er die Gefahr nicht erkannt hat.
'Objectively seen, the stone fall indeed warned him of the danger. But he was so absent-minded that he didn't recognize the danger.'
- b. Der Steinschlag hat ihn vor der Gefahr gewarnt. #Aber er hat die Gefahr nicht erkannt.
'The stone fall warned him of the danger. But he didn't recognize the danger.'

- (20) a. Diese Situation hat ihnen doch klar und deutlich das Problem gezeigt. Es ist verrückt, dass sie es trotzdem nicht gesehen haben!
 ‘This situation showed them after all well and truly the problem. It is crazy that they didn’t see it nevertheless!’
- b. Diese Situation hat ihnen das Problem gezeigt, #aber sie haben es nicht gesehen.
 ‘This situation showed them the problem, but they didn’t see it.’

We claim that in (15) and the a-examples under (16)-(20), defeasible causatives are interpreted with respect to a stereotypical modal base: the result takes place only in those worlds which are close to the normal course of events in the world of evaluation. Since the context of these examples makes clear that things went in an abnormal and/or unexpected way on the side of the human internal argument, the world of evaluation is filtered out and is not part of the domain of quantification of the modal operator.

We are not in a position to explain in all details why evidential adverbials *objectivement/ objektiv betrachtet/ clairement/ klar und deutlich* and the discourse markers *bel et bien/ tout de même/ zwar/ doch* help to cancel the result inference. We have two suggestions on this point though.

Firstly, *bel et bien/ tout de même/ zwar...aber/ doch* all have the function to mark their complement proposition *p* as uncontroversial/ shared/ old/ familiar (see Grosz (t.a.) for *doch*) and all present *p* as contrasting/correcting (for *doch*) or corrected by (for *zwar...aber*) another proposition *q*.⁶ In our examples, *p* is the proposition that the first event took place, and *q* is the proposition that the result didn’t take place. So for instance, in the case of (20a), the proposition [_{*p*}The situation showed them the problem] corrects the salient⁷ proposition [_{*q*}They didn’t see the problem]. We think that if these discourse markers help to get the non-implicative reading, it is precisely because they incite the interpreter to find a proposition *q* which *contrasts* with their complement proposition *p* (*p* being e.g. that there was a showing of *y*). The proposition *q* that the result did not take place (that there was no perception of *y*) is an excellent candidate, precisely because in normal contexts, *p* entails $\neg q$ (normally, if there is a showing of *y*, there is a perception of *y*).

The role of the evidential adverbials *clairement/ objectivement/ objektiv betrachtet/ klar und deutlich* is different and complementary. First of all, let us underline through the following data that contrary to frame adverbials like *theoretically* or *mathematically*, these adverbials do not have the power to cancel the entailment with standard (i.e. non defeasible) causative verbs:

- (21) a. Theoretically, I killed this mosquito. I don’t understand why this stupid insect is still alive.
- b. Objectively/ clearly, I killed this mosquito. # I don’t understand why this stupid insect is still alive.

The unacceptability of (21b) shows that with standard causatives, *objectively/ clearly p* entails (or quasi-entails, cf. Barker (2009)) the occurrence of the result in the actual world. The possibility to cancel the result inference in (16a)-(20a) is thus not due to these adverbials alone.

We propose that if these evidential adverbials help to trigger the non-implicative reading, it is because they contrast in the right way the different epistemic perspectives at play on the facts at-issue.⁸ Obviously, from the *subjective perspective* of the object’s referent (at least at event time), there was no event satisfying the constant ‘warn’, ‘show’ or ‘teach’ — the stone fall didn’t send them any sign, the situation didn’t contain any symptom of the problem, etc. *Clairement/ objectivement* contrasts this subjective perspective on the facts with the *impersonal perspective* of an impartial reasoner. *Clearly/ objectively* indicate that facts are considered independently of any subjective perspective — only bare

⁶ For detailed analyses of *doch*, see e.g. Karagjosova (2012), Grosz (t.a.) and references cited therein. We are not aware of works of the same level of granularity for the corresponding French discourse markers.

⁷ Observe that in all our *tout de même/ bel et bien/ doch* examples, the proposition *q* that the result didn’t occur is presented as *presupposed* in the second part of the discourse (e.g. as the complement of a factive VP like *Es ist verrückt dass/ c’est fou que...* ‘It is crazy that...’ or in the *pour* clause in (16a) and (18a)). This is expected if indeed *q* is presented as salient in the first part of the discourse. The case of *zwar* is different; the proposition *q* which contrasts with complement proposition *p* of *zwar* is not presented as salient by *zwar p*.

⁸ This idea was proposed to us by Cleo Condoravdi, although we are not sure she would agree with the way we develop it.

facts count. And if we restrict ourselves to this publicly available evidence⁹, we are in the position to conclude that a warning/ showing/ teaching event well and truly took place. In other words, by inviting us to adopt an objective perspective on facts, *clearly/objectively* help us to assume the occurrence of the first event, and thereby to go against the subjective perspective of the internal argument's referent, from which the occurrence of the same event is denied.

It goes without saying that these rather complicated examples would need a more careful analysis, but they suffice to show, in any case, that defeasible causatives contain a sublexical modal component with causer subjects too.

5. Open questions

We started from the observation that the interpretation of defeasible causatives like *offer* varies with the nature of the external theta-role. We adopted the hypothesis argued for in Martin & Schaefer (2012) that the two uses do not differ in event complexity – even the non-implicative reading involves a bi-eventive structure. We argued that these verbs involve a sublexical modal base both with agent and causer subjects, and proposed to capture the difference between the implicative and non-implicative readings through the choice of the modal base. With agents, defeasible causatives are typically interpreted with respect to the energetic modal base. As a result, the result is understood as prospective, no matter whether we deal with an intentional or a non-intentional agentive reading (i.e. no matter whether the Agent's intention fits the VP description or not). With causers, defeasible causatives are typically interpreted with respect to the circumstantial modal base. The result is thus interpreted as non-prospective. But with such causer subjects, in the right context, defeasible causatives can also have their non-implicative reading once they are interpreted with respect to a stereotypical modal base. This fact goes against an alternative analysis which would explain the two uses as a case of lexical ambiguity, the non-implicative *offer* having a sublexical modal component and the implicative *offer* lacking it.

We are aware of the fact that the account proposed redescribes the facts rather than explaining them, since the question of why the modal base is typically energetic with agents and typically circumstantial with causers is left unanswered. We also realize that we might not have to assume that the modal base involved can be of three different types (energetic, stereotypical, circumstantial). In fact, under the assumption that worlds where agents achieve their goals are worlds obeying the normal course of events, the energetic modal base can easily be redefined as a subcase of the stereotypical one.¹⁰ The circumstantial modal base can also be seen as a subcase of a stereotypical modal base (i.e. the stereotypical modal base including the world of evaluation). We could then assume that defeasible causatives lexically specify a stereotypical modal base (and the universal modal force), and assume that it contains the base world under the implicative reading. The hard question would then resurface in another form: why is the stereotypical modal base of defeasible causatives typically non-realistic with agents, and typically realistic with causers?

Another problematic point concerns verbs of desire like *vouloir* 'want', *demander* 'ask' or *exiger* 'demand', which raise two problems. For some reasons that we do not understand, they invariably trigger a result implication with causer subjects, even in examples like (15)-(20), which should help to interpret them with respect to a (non-realistic) stereotypical modal base:

- (22) Objectivement, ce projet a bel et bien demandé beaucoup d'argent! # Mais contre toute attente, personne n'y a accordé un centime!
 'Objectively, this project well and truly asked a lot of money! But against all expectations, nobody devoted a single cent to it!'

⁹ On *clearly*, see Barker (2009), who defends the view that *clearly p* roughly means that the publicly available evidence justifies concluding that *p*. Cf. also Wolf & Cohen (2011) on the same adverbial.

¹⁰ As Robert Truswell (p.c.) made us observe, on this perspective, the examples (9)-(10) of the non-intentional agentive reading are in fact of the same nature as the examples (15)-(20) of defeasible causatives with causer subjects interpreted with respect to the stereotypical modal base. We deal with different species of the same kind of abnormality: the internal argument's referent does not react to the causing event (action or not) in the normal/ expected way.

Furthermore, contrary to ‘typical’ defeasible causatives, these verbs seem mono-eventive: they do not form *-ung* nominalisations in German and look mono-morphemic, cf Martin & Schaefer (2012). If they are indeed mono-eventive, how should we account for the difference between their implicative and non-implicative readings?

A further question relates to scopal ambiguities. If defeasible causative verbs indeed have a modal operator in their lexical representation, we probably predict ambiguities to occur in the presence of other quantifiers. Scopal interactions between pure modal verbs and quantifiers have e.g. been observed by von Stechow & Iatridou (2003):175 for deontic modals, Huitink (2008), Swanson (2010) and Wolf (2012) for epistemic modals. We have so far not been able to find any ambiguity of this type with defeasible causatives, but this might be related to the type of modality involved.

Next, we observe that with some of verbs at hand, it seems that there is a kind of locality restriction on the effect of the modal operator. So far, we have seen that examples with agent subjects allow the result to be denied. However, for verbs like *enseigner/lehren*, this works only if the result is expressed as an object noun-phrase within the same clause, as in the a-examples below. If the result is expressed as an embedded infinitive clause as in the b-example, the result is entailed even with an agent.

- (23) a. Er lehrte sie Autofahren, aber sie kann es immer noch nicht.
Il lui a enseigné la conduite automobile, mais elle n’est toujours pas capable de conduire.
‘He taught her driving, but she is still unable to drive.’
- b. Er lehrte sie [PRO einen Lastwagen zu fahren], #aber sie kann es immer noch nicht.
Il lui a enseigné à conduire une voiture, # mais elle n’est toujours pas capable de conduire.
‘He taught her to drive a truck, but she is still unable to drive.’
- (24) a. Er lehrte sie Russisch, aber sie koennen immer noch kein Wort.
Il leur a enseigné le russe, mais ils n’en connaissent toujours pas un mot.
‘He taught them Russian, but they still don’t know a word.’
- b. Er lehrte sie [PRO Russisch zu sprechen], #aber sie koennen immer noch kein Wort.
Il leur a enseigné à parler le russe, # mais ils n’en connaissent toujours pas un mot.
‘He taught them to speak Russian, but they still don’t know a word.’

We have no explanation for this difference. Note that it does not generalize to all verbs which can take both types of complements. For instance, *encourager à développer* ‘encourage to develop’ is *not* implicative with agentive subjects, exactly like *encourager le développement* ‘encourage the development’.

The last point we want to mention relates to the presence of the constant modifying the first event in the lexical representation of defeasible causatives. Remember that in (7), the constant **offer** is applied to the first variable *e*. This seems necessary if we want to capture the truth conditions of sentences containing this verb in an appropriate way — without this constant, any event which would cause the possession of *y* by *z* could make such sentences true. The presence of this constant might also explain why it is often difficult, with causer subjects, to replace *give* by *offer*; arguably, this is due to the fact that not any eventuality which causes/can cause the possession of *y* is an offer of *y*. However, with others of our defeasible causative verbs, and particularly the object experiencer psych-verbs, virtually *any* eventuality can be identified with the causing (or possibly causing) eventuality *with causer subjects*, while the set of eventualities which can play this role is much more restricted with *agentive subjects*. For instance, a non-agentive encouraging event can theoretically be of any type — after all, whether an eventuality causes *y* to feel encouraged or not largely (if not completely) depends on the psychological properties of the Experiencer. On the other hand, to be an encouraging *action*, an event must fulfill some characteristic properties, and the set of events fitting this description has consequently more delimited conceptual boundaries. It is then tempting, for these verbs, to adopt an analysis where the first event is modified by the constant (e.g. **encourager**) with agentive subjects, but not with causer subjects.

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