Catalyzing causation: hindrance and sufficiency in causative *get*

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1 Introduction: causal meaning

Natural languages employ a variety of expressions which convey information about *causal* relationships. The claims in (1) illustrate some of this diversity for English: each of (1a)-(1d) is immediately recognizable as a description of a scenario in which Nur was causally involved in bringing about an event in which the children danced.

(1) a. Nur **caused** the children to dance.
b. Nur **made** the children dance.
c. Nur **had** the children dance.
d. Nur **got** the children to dance.

Despite this core conceptual unity, (1a)-(1d) are not interchangeable. (1a) is natural in contexts where Nur's influence on the children was indirect or inadvertent, while (1b) suggests that she intended the children to dance, and perhaps even forced them to do so. Substituting *have* for *make* changes things again, so that (1c) picks out scenarios where Nur exercised some directorial authority over the children. Finally, (1d) suggests that Nur maneuvered or manipulated the children into dancing. The semanticist's task in analyzing these data is twofold: we must explain why (1a)-(1d) are uniformly recognized as *causal* in nature, while at the same time accounting for a number of nuanced but robust distinctions in their use and interpretation.

On the "classical" approach to this problem (see, e.g., Shibatani 1976, Dowty 1979), causal expressions are unified by a shared element in their lexical representations: causal meaning is taken to be fully encompassed by the predicate CAUSE, which expresses a unique dependence relation between two events (a cause and its effect). Differences between individual expressions—such as the **periphrastic causative** verbs in (1a)-(1d)—must then be explained in terms of ancillary constraints which can affect features of the individuals or events referenced by a CAUSE predication, but which cannot alter or refine the nature of the dependency itself.

While this hypothesis is attractive in its simplicity, an immediate issue is that treating causation as a single binary relation does not seem to reflect cognitive reality. When we engage in practical causal reasoning—for instance, in speculation about the reasons that a particular event took place—we seem instead to conceptualize caused events as standing in many-to-one relations: i.e., as following from the collective influence of multiple prior conditions. This perspective motivates a view on which the binary nature of causal claims is a constraint which emerges only at the level of linguistic description, so that a causal claim may refer to just some portion of a larger, more complex causal structure (see, e.g., Neeleman & van de Koot 2012). In line with this view, Nadathur & Lauer (2020) (see also Lauer & Nadathur

2018, Baglini & Bar-Asher Siegal 2020) suggest that distinct causal expressions need not pick out the same type of causal dependency (i.e., CAUSE), but can instead be semantically unified as linguistic devices which refer to **causal models**—structured, language-independent representations of causal information—while diverging with respect to the targets of description in a broader causal context.

Nadathur & Lauer fruitfully apply this idea to the comparative semantic analysis of *cause* and *make*, showing that similarities and differences between claims like (1a) and (1b) are predicted if the two verbs predicate distinct roles for their subject cause(r)s within a contextually relevant set of conditions that produce a specified effect.[1] This paper extends a causal modeling approach to a unified treatment of two types of *get* construction, analyzed here as causal in meaning. *Get* claims with both participial (2a) and nonfinite (2b) complements license an inference of subject responsibility (see 2c), but differ with respect to the "hindrance" inference in (2d).

(2) a. Nur got the door closed. → (2c), (2d)
b. Nur got the children to close the door. → (2c)
c. *Responsibility:* Nur was responsible for the door being closed.
d. *Hindrance:* Nur faced difficulty/resistance in closing the door.

I take the shared responsibility inference to diagnose a shared causal core (*contra* McIntyre 2005; see §2.1), and argue that *get* predicates an **indirect** (or *catalyzing*) form of **causal sufficiency**, wherein some event involving the *get* subject guarantees the proximate (final *necessary* and *sufficient*) cause of a result specified by the *get* complement. Variability in the hindrance inference is linked to what the complement provides: hindrance arises where the matrix causer can be identified with the causer of the intervening event, as in (2a), but is replaced with an inference of *indirectness* when the matrix and intervening causers are distinguished, as in (2b). This approach predicts that *get*—unlike other sufficiency causatives—selects exclusively for causal (caused) complements, and provides support for an emerging view on which the aspectual structure of events is supplied by world knowledge in the form of causal models (Nadathur & Bar-Asher Siegal 2022).

2 *Get* constructions: some background

A unified analysis of *get* is complicated by its semantic versatility (Kimball 1973, Gronemeyer 1999, McIntyre 2005, 2012, a.o), some of which is illustrated in (3). (3a) seems to employ *get* as a verb of caused possession, while (3b) is usually analyzed as a passive (Lakoff 1971, Fleischer 2006). The construction in (3c) indicates that its subject was the recipient of some (desired) opportunity (DiPillo 2023). Even (3d)-(3f), which are the most plausibly semantically related—and which, at least pre-theoretically, appear to describe causal situations—differ with respect to the inferences of hindrance and (in)directness discussed in §1: while each of (3d)-(3f) suggest that Nur bears responsibility for some state of affairs described in the

[1] Variations on this approach have been applied to the analysis of other causal contrasts, such as the elusive notion of (in)directness which differentiates *lexical* from *periphrastic* causatives (Martin 2018, Baglini & Bar-Asher Siegal 2020). Baglini & Francez (2016) and Nadathur (2023) apply the modeling approach to the lexical analysis of *implicative* verbs like *manage* (see also §4).

complement, only (3e) licenses the inference that she acted directly (i.e., physically) on a causee, or that she faced difficulty in bringing about the specified result.

(3) a. Nur got a book. [lexical]
b. Nur got fired. [passive]
c. Nur got to go to the movies. [opportunistic]
d. Nur got the children dancing. [progressive/resultative)]
e. Nur got the door closed. [participial/resultative]
f. Nur got the children to close the door. [nonfinite/causative]

My goal in this paper is limited: I pursue a unified analysis only of participial and nonfinite *get* (3e and 3f, respectively). While I will not examine (3a)-(3d) here, I leave open the possibility that my approach can be extended to treat at least some of these constructions, and offer some comments on this in the conclusion. The rest of this section focuses on the inferential profiles of participial and nonfinite *get*.

2.1 Responsibility and hindrance with participial *get*

McIntyre (2005) (see also 2012) offers the most detailed examination of participial *get* of which I am aware. He observes that while (4a) patterns with the causatives in (4b)-(4c) in indicating subject responsibility, it is unique in (4) in licensing the inference that Nur encountered *hindrance* or resistance in closing the door.

(4) a. Nur got the door closed. ($\equiv$ 3e)
b. Nur closed the door. [lexical causative]
c. Nur caused the door to close. [periphrastic causative]
(4a), (4b), (4c) $\rightarrow$ *Nur was responsible for the door being closed.*

Further differentiating participial *get* from (4b)-(4c), McIntyre points out that (4a) appears to presuppose some action on the part of its subject. Crucially, negating a participial *get* construction licenses an inference of *inability*, as shown in (5a): where the negated lexical causative in (5b), diverges from its positive counterpart (4b) in failing to entail that Nur engaged in action, (5a) suggests that Nur tried and failed to close the door, preserving the action inference which follows from (4a).

(5) a. Nur did not get the door closed.
$\sim$ *Nur couldn't close the door. / Nur tried and failed to close the door.*
b. Nur did not close the door. (no action inference)

McIntyre concludes that participial *get* is not causative—specifically, that it does not assert the truth of a relation such as CAUSE between the subject's action and the result specified by the *get*-complement. He instead analyzes *get* as the *inchoative* of a responsibility-specifying predicate $\text{HAVE}_{\text{resp}}$ (pronounced *have*), so that (6b) describes the initialization of a state specified by (6a). Building on earlier work on *have* (Belvin & den Dikken 1997, Harley 1998, a.o.), McIntyre proposes that $\text{HAVE}_{\text{resp}}$ is true at an interval I just in case (i) the state s described by the *have*-complement obtains at I, and (ii) the sentential subject is understood to have performed actions before I which caused s to come about (2005, p.418). The responsibility requirement is captured by (ii); this is not presuppositional for *have*.

(6) a. Nur had Ola worried. $\equiv$ PAST([Nur $\text{HAVE}_{\text{resp}}$ [Ola [WORRIED]]])
b. Nur got Ola worried. $\equiv$ PAST([BECOME[(6a)]])

Inchoative semantics are introduced by the lexical atom BECOME (Dowty 1979, Bierwisch 2004), shifting a stative *have* predication to an eventive reading that describes a transition into the $\text{HAVE}_{\text{resp}}$ state, as shown in (7).[2] McIntyre argues that, by presupposing the prior instantiation of a situation which does not verify the $\text{HAVE}_{\text{resp}}$ state (see 7b) but which crucially can evolve into this state (see 7a), *get* necessarily presupposes the prior action which gives rise to the responsibility inference for unembedded $\text{HAVE}_{\text{resp}}$ claims. This explains the inability inference in (5a), since negation on this analysis targets a potential transition into a closed-door state, but allows the inference of prior (causally-relevant) action to project.

(7) **Proposal for participial *get*** (McIntyre 2005, pp.419–420). $[\, x$ *get* $[\, y\, [\, P\,]]]$ is true at interval I iff BECOME$([x$ $\text{HAVE}_{\text{resp}}\, [\, y\, [\, P\,]]])$ is true at I, where BECOME(ϕ) is true at I just in case:
   a. some interval K including the final bound of I verifies ϕ
   b. some interval J including the initial bound of I is presupposed to verify $\neg\phi$
   c. there is no interval I' such that $I' \subset I$ and (a) and (b) hold for I'

The hindrance inference is explained pragmatically. McIntyre suggests that the overtly causative (CAUSE-predicating) claims in (4b)-(4c) constitute salient alternatives to *get*: as a result, using non-causative *get* amounts to the selection of a linguistic form which "downplays the importance of [the subject's] actions" in achieving the *get*-result. Coupled with the presupposition of prior action, this implies that the causal relationship between the presupposed action and the *get*-result is *non-automatic*, making the result (by definition) hard to achieve: we infer that the target state is "not guaranteed to eventuate just because the subject tries to attain [it]", but that it additionally requires the cooperation of certain external circumstances, which may or may not obtain in a given context (McIntyre 2005, p.422).[3]

2.2 Hindrance and (in)directness: nonfinite vs. participial *get*

Existing work on nonfinite *get* focuses on its role as an interpersonal causative, taking (3f) (repeated below as 9a) to suggest that Nur's responsibility for the door being closed follows from some influence she exerted to convince or manipulate the children to act. This analysis is schematized in (8) (cf. Wierzbicka 1998). As (9b) shows, however, nonfinite *get* is not restricted to interpersonal uses.

(8) X *get* Y to $Z \sim X$ influenced Y to bring about $Z(Y)$

(9) a. Nur got the children to close the door. ($\equiv$ 3f)
b. Nur got the door to close.

[2] *Get*'s eventivity is demonstrated by compatibility with the progressive (see also McIntyre 2005):

(i) Nur is/was getting the door closed.

[3] McIntyre (2012) takes up the idea that BECOME corresponds to a non-agentive form of CAUSE (Kratzer 2005), so that the difference between *get* and its causative alternatives becomes one of agentivity, presumably with similar pragmatic consequences.

While (9b) is closer in meaning than (9a) to the participial *get* claim (3e)/(4a), it nevertheless preserves the key contrast between participial and nonfinite *get*: (9b) does not suggest that Nur encountered any particular difficulty in bringing it about that the door was closed. Similarly, although the sense of indirectness associated with nonfinite *get* in (9a) is attenuated in (9b)—insofar as (9b) is compatible with a scenario in which Nur acted physically upon the door—it is not altogether absent. (9b) suggests that Nur did not simply close the door, but that she triggered or set in motion some (potentially door-internal) mechanism which then precipitated the result. What (9a)-(9b) have in common, then, is that Nur's responsibility for the door being closed is at a slight remove: both claims describe Nur's influence on some intermediary which acts as the immediate cause of the specified result.

The schema in (8) can account for both (3f) and (9b) if we allow Y to represent both animate and inanimate causers and take "influence" to correspond to a general notion of *triggering* which encompasses both physical and verbal means. (8) then boils down to the hypothesis that nonfinite *get* introduces as its subject an indirect or "secondary" causer which triggers some causal process internal to the complement.[4] If this hypothesis is on the right track, we predict that nonfinite *get* should be incompatible with complements that fail to introduce a causing force. This prediction is supported by the observation that nonfinite *get* resists composition with rigidly stative predicates like *be red* and *be old*, as shown in (10).[5]

(10) ??Nur got the door to be red. / ??Nur got the children to be old.

As it turns out, participial *get* patterns with nonfinite *get* in resisting composition with complements that lack a canonical cause. The effect in (11) is somewhat surprising on McIntyre's analysis (§2.1), but becomes less perplexing if participial *get* is, like nonfinite *get*, associated with indirect or secondary causation, so that it selects exclusively for *resultative* (i.e., caused) complements.[6]

(11) ??Nur got the door red. / ??Nur got the children old.

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[4]This hypothesis likens *get* to so-called 'second' (*-vaa*) causatives in Hindi/Urdu (Bhatt 2003, a.o.). *-Vaa* causatives always introduce an indirect causer: for instance, the landlord in (ii) is understood to act on an intermediary—taken to be directly responsible for the specified outcome—whether or not this intermediary is specified in the *-vaa* claim. *-Vaa* causatives are well-paraphrased by *get*:

(ii) zamiindaar-ne (ḍakaitõ-se) makaan jal-vaa di-yaa.
Landlord-ERG (bandits-INST) house.M burn-CAUS2 GIVE-PFV.M
'The landlord got (had) the house burned (by the dacoits).'

[5]Nonfinite *get* is compatible with stative complements just in case they plausibly describe a state transition which can be controlled by the causee: (iii) indicates that Nur convinced the children to stop making noise.

(iii) Nur got the children to be quiet.

No such reading is available for the examples in (10), since neither the process of becoming red nor the process of becoming old is canonically controlled by the holder of the state.

[6]McIntyre's (2005) problem is not with participial *get*, *per se*, but rather with his hypothesized embedded occurrence of $\text{HAVE}_{\text{resp}}$ (=*have*): the data in (11) are predicted by the unacceptability of (iv), but the judgments in (iv) are not themselves predicted by McIntyre's semantics for $\text{HAVE}_{\text{resp}}$.

(iv) ??Nur had the door red / ??Nur had the children old.

As further evidence for an underlying unity between participial and nonfinite *get*, the shift from hindrance to indirectness which occurs in moving from the former to the latter can also be observed with participial *get* claims like (12b), whose complements specify an intervening causer distinct from the matrix subject: (12a) licenses both the inference that Nur acted on the door, and that she faced resistance in closing it, while (12b) has roughly the same interpretation as (9a).

(12) a. Nur got the door closed (herself). [+direct, +hindrance]
b. Nur got the door closed (by the children). [−direct, −hindrance]

The core difference between participial and nonfinite *get*, then, is not that the latter is an indirect causative while the former is hindrance-specialized (and non-causative; cf. McIntyre), but rather that the nonfinite complement type necessarily specifies an embedded subject-causer, while participial complements can do so optionally (as in 12). Where an (implicit or explicit) intervening causer is distinct from the matrix subject, participial *get* claims are essentially indistinguishable from their nonfinite alternatives; it is only when the matrix and embedded causers can be mutually identified that the indirectness inference is replaced by hindrance.

The emerging picture is one on which participial and nonfinite *get* share a core semantic structure, mediated by the properties of their respective complement types. The shared responsibility inference—noted in §1—further evidences an underlying semantic unity: as (13a) shows, responsibility in both constructions obtains independently of the intentions of the matrix causer, and is eliminated under negation.

(13) a. Nur (inadvertently) got the door { closed / to close }, #but she wasn't responsible for the door's being closed.
b. Nur didn't get the door { closed / to close }.
$\not\rightarrow$ *Nur was responsible for the door's being closed.*

(13b) shows that whatever licenses the responsibility inference should be treated as *at issue* content. While this seems at first to contravene McIntyre's suggestion that participial *get* induces responsibility by presupposing some prior action by the matrix subject, (14) shows that the inference of *trying* does indeed project from both types of *get* claim: like participial *get* in (5a), nonfinite *get* indicates inability (rather than inaction) under negation. Taken together with (13), (14) shows that the prior-action presupposition must be distinguished from a responsibility entailment.

(14) Nur didn't get the door { closed / to close }.
$\rightsquigarrow$ *Nur couldn't close the door. / Nur tried and failed to close the door.*

The preceding discussion reveals sufficient commonality between participial and nonfinite *get* to argue against assigning them fully distinct semantic analyses. I propose that the shared responsibility entailment reflects a shared causal core, and suggest in particular that responsibility derives from an asserted relation of **causal sufficiency** (defined in §3.1) which obtains between some action of the *get* subject and a causing force introduced by the complement. The originator of this force may be named (as in 9a-9b, 12b), but can remain underspecified for participial *get*, which allows identification with the matrix causer. Both forms of *get* select for complements which specify a (canonically-)caused result, so that *get* constructions make their subjects responsible for an overall result via the mediation of an intervening

causer. Finally, although *get* on this proposal is causative in nature, it does—as per McIntyre (2005)—presuppose the triggering (causing) action taken by its subject, thus producing the inability or failed-attempt inference in (14) under negation.

3 Sufficiency causatives

I begin by offering additional motivation for adopting a causal modeling approach to linguistic causation. As discussed in §1, the classical approach assumes that all causative expressions predicate a single causal dependency (e.g., CAUSE), accompanied by ancillary constraints which account for contrasts between expressions; it has, however, proven difficult to pin down these constraints in any individual case. Nadathur & Lauer (2020) illustrate the problem for causative *make*: based on the observation that claims like (1b) (below) license an inference of force or *coercion* (Shibatani 1976), we might hypothesize that *make* augments CAUSE with the inference that its causee did not want the complement. This is schematized in (15).

(1b) Nur made the children dance.
$\sim$ *Nur caused the children to dance, and the children did not want to dance.*

(15) X *make* Y do $Z := \textsc{cause}(\textsc{act}(X), Z(Y)) \,\&\, \neg\textsc{want}(Y, Z(Y))$

Make can, however, be felicitous in contexts where the causee plausibly does desire the *make*-complement, as in (16a), or even with inanimate (non-volitional) causees, as shown in (16b). Proposal (15) thus cannot be upheld across the board.

(16) a. A surprise surgery [...] brought Albert in contact with nurses who made her feel happy and important [...]
b. Too much watering made the plant die.

Rather than treating *make* as polysemous (cf. Wierzbicka 1998), Nadathur & Lauer reconcile the naturally-occurring data in (16) with the coercive implication by arguing that *make* predicates a relation of **sufficiency**, conveying that its subject *guarantees* its complement. This captures coercion just in case *make* takes a volitional causee: if the cause(r) made it inevitable that the result would occur, then the causee could not have acted freely, since no desire or intention on their part could have prevented the result.

As a hypothesis about the causative meaning of *make*, the sufficiency proposal cuts against a monolithic approach to causal meaning. Certain causal expressions are (famously) associated with counterfactual necessity: insofar as this necessity links the specified cause and effect in a claim like (17a), it seems to constitute the core causal element of *cause*.[7] Examples like (17b) demonstrate, however, that *make* can be perfectly felicitous where no necessity relationship obtains.

(17) a. The recession caused Jerry to lose his job.
$\rightsquigarrow$ *If the recession had not occurred, Jerry would not have lost his job.*
b. I was considering ending my subscription anyway, but the price change is what really made me do it!
$\not\rightsquigarrow$ *I would not have ended my subscription if the price had not changed.*

[7] Indeed, this association has motivated analyses of the hypothetical atom CAUSE in terms of counterfactual dependency; see, e.g., Lewis (1973), Dowty (1979).

Nadathur & Lauer argue that the contrast in (17)—and the coercive implication—can be cleanly predicted if *make* predicates causal sufficiency, whereas *cause* predicates causal necessity, but this requires two things. First, we must give up the notion that causal expressions make reference to a single causal relation; second, we must offer some principled way of distinguishing different causal dependency relations. Following Nadathur & Lauer, I take the view that **structural equation causal models** (Pearl 2000) provide a rich and flexible basis for the latter task, and one which ultimately allows us to make sense of a number of other causal contrasts that have resisted explanation on the classical approach, such as a notion of (in)directness associated with the choice between lexical and periphrastic causatives (see, e.g., Baglini & Bar-Asher Siegal 2020), and which was invoked in the descriptive account of *get* offered at the end of §2.2. I next provide a brief overview of structural equation models as a basis for defining *causal necessity* and *causal sufficiency*.

3.1 Causal necessity and sufficiency in a structural equation model

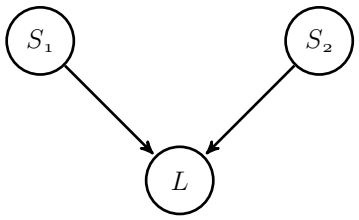
Using Pearl's (2000) structural equation framework, causal information can be represented by a directed acyclic graph $D = \langle V, E \rangle$. The set V of vertices comprises a finite set of propositional variables, which can be paired with valuations of 0, 1, or u (*undetermined*; Schulz 2011). The directed edges of the graph correspond to an atomic (unanalyzable) notion of *causal relevance*, so that for any two nodes $X, Y \in V$, $\langle X, Y \rangle \in E$ indicates that the value of X causally influences the value taken by Y. D is paired with a set of *structural equations* which specify how the values of dependent vertices depend on the values of their immediate causal ancestors.[8] Given this setup, we treat a *situation* s as three-way assignment of values to vertices; the structure of D and the information in its accompanying equations can be used to calculate any causal consequences—up to the **maximal normal causal development** (Nadathur & Lauer 2020)—of any situation s.

To illustrate, Figure 1 provides the graphical model corresponding to the Lifschitz (1990) circuit context in (18). (18a) establishes the rules—causal laws—of the system, while (18b) specifies a starting situation. The information in Figure 1 can be used to calculate the expected or *normal* causal developments of this situation: we expect (a) that the lamp will be off ($L \rightarrow 0$), but also that changing the position of exactly one of the switches will result in the light coming on ($L \rightarrow 1$).

(18) **The Lifschitz circuit.** Assume a circuit with one light and two switches.
   a. The light (L) comes on ($L \rightarrow 1$) just in case both switches (S_1, S_2) are set to the same position, either up (1) or down (0).
   b. Suppose switch 1 is down ($S_1 \rightarrow 0$) and switch 2 is up ($S_2 \rightarrow 1$).

As Figure 1 shows, structural equation models support a many-to-one representation of cause-effect correspondences. In this framework, distinct binary causal relations refer to distinct structural relationships between a condition and one of its causal descendants, relative to a starting situation. The definitions in (19) cash out the following intuitions: a cause is *necessary* for an effect in a situation s if there

[8] Formally, the set of structural equations can be treated as a function F_D which assigns to each $X \in V$ a pair $\langle Z_X, f_x \rangle$ such that $Z_X = \{Y \in V | \langle Y, X \rangle \in E\}$ and $f_X : \{0,1\}^{|Z_X|} \rightarrow \{0,1\}$.



Graphical skeleton

S_1	S_2	L
0	0	1
0	1	0
1	0	0
1	1	1

Structural equation(s)

Figure 1: Graphical representation of the circuit example (18)

is no *causally consistent* way to get from s to the effect without first verifying the cause; a cause is *sufficient* for an effect relative to s if adding the cause to s guarantees (makes inevitable) the effect in the course of normal causal developments.

(19) **Causal necessity and sufficiency.** Let $D = \langle V, E\rangle$ be a model, and let s be a situation over V. Then, for any two variables C, E such that C is causally upstream of E and values $c, e \in \{0, 1\}$ such that s does not verify $\langle C, c\rangle$ and $\langle E, e\rangle$ is not in the normal causal developments of s:

a. $\langle C, c\rangle$ is **causally necessary** for $\langle E, e\rangle$ relative to s just in case:

i. There is a causally consistent supersituation s' of $s[C \mapsto c]$ (the situation which matches s everywhere except possibly at C) such that s' does not verify $\langle E, e\rangle$ but does have $\langle E, e\rangle$ in its normal causal developments

ii. There is no consistent supersituation s'' of $s[C \mapsto c]$ such that (i) holds but s'' does not have $\langle C, c\rangle$ in its normal causal developments

b. $\langle C, c\rangle$ is **causally sufficient** for $\langle E, e\rangle$ relative to s just in case $s[C \mapsto c]$ has $\langle E, e\rangle$ as a normal causal development

Given the model in Figure 1, let s be the situation in (18b). Relative to s, changing the position of switch 1 from down to up (i.e., setting $S_1 \rightarrow 1$) is both causally necessary and causally sufficient for the lamp to come on ($L \rightarrow 1$); the same holds for flipping switch 2 to down ($S_2 \rightarrow 0$) (again, relative to s).[9] In the next section, I use the definitions in (19) to provide a formal treatment of *get*.

3.2 Catalytic causation: indirect causal sufficiency

The descriptive proposal at the end of §2 classifies *get* with *make* (per Nadathur & Lauer 2020) as a sufficiency causative, an assessment which is supported by the oddness of continuing a *get* claim as in (20):

(20) Nur got the door to close, ??but she didn't ensure that the door closed.

Despite this shared classification, however, *get* and *make* are interpreted differently. The distinction can be linked to the selectional restriction observed in §2.2: *get* resists composition with complements that lack causal meaning, but *make* is acceptable with statives that are not canonically caused, as shown in (21b).

(21) a. ??Nur got the door (to be) red. / ??Nur got the children (to be) old.

[9] Nadathur & Lauer (2020) explore the consequences of these definitions for the comparative analysis of *make* and *cause*, providing scenarios which tease the two causal relations apart.

b. Nur made the door red. / Nur made the children old.

This difference is explained if *get*—but not *make*—necessarily predicates *indirect* causal sufficiency, as discussed in §2.2. More precisely, *get* requires some causing force to intervene between its subject and the complement-specified result, so that the subject acts as a trigger or *catalyst*[10] for some embedded causing process. (21b) shows that *make* does not require any such intervener, and the contrast becomes even clearer when we consider the role of causee volition in interpersonal uses of *make* and *get* (repeated below from 1b and 1d, respectively).

(22) a. Nur made the children dance. [no causee choice]
b. Nur got the children to dance. [influenced causee choice]

(22a) gives rise to a coercive implication, indicating that Nur ensured that the children would dance, regardless of their own preferences. Causee volition is not overridden with *get*, however, but leveraged instead: (22b) conveys that Nur brought about the complement by influencing the children to dance on the basis of their own volition. The difference is subtle but robust: crucially, (22b) differs from (22a) in failing to suggest that the children would still have had to dance if they had (somehow, counterfactually) changed their minds. The same difference obtains with inanimate causees: both examples in (23) suggest a less typical process of door-closing than does the lexical causative *close* (*Nur closed the door*; 4b), but (23a) suggests a direct, resistance-overriding force from Nur, while (23b) more naturally describes a scene in which Nur activated some internal closing mechanism associated with the door (e.g., by pushing a button or a lever of some kind).

(23) a. Nur made the door close. [direct force]
b. Nur got the door to close. [indirect manipulation]

I aim to capture these data as follows: per Proposal (24), *get* establishes the *causal sufficiency* of (some event involving) its subject and the **proximate**—final necessary and sufficient—**cause** of a result specified by its complement.

(24) **Proposal for causative *get*.** Let X stand for an event C_1 or its most prominent participant, and let D be a contextually-relevant causal model.
a. $[\![X \text{ get } Y \text{ to VP}]\!]^D$ is defined for a situation $s \subseteq w^*$ and model D iff $s(C_1) = 1$ and there is some event C_2 which is **causally necessary** and **causally sufficient** for $E = [\![\text{VP}]\!]([\![Y]\!])$ relative to s, D.
b. If defined, $[\![X \text{ get } Y \text{ to VP}]\!]^D = 1$ iff C_1 is **causally sufficient** for C_2 relative to $s - C_1, D$.

Responsibility inferences are captured via causal chain: the *get* subject cause(r) guarantees the proximate necessary and crucially sufficient cause of the complement-specified result, in turn ensuring this result. To capture the projective behavior of subject action and the effect of inability under negation (see §2.1-§2.2), (24a) treats the subject event as presupposed; additionally presupposing the existence of a proximate complement cause is intended to account for the selectional restrictions of *get*. Treating only the initial sufficiency relation as at-issue in (24b) correctly predicts

[10] I borrow this term from Baglini & Francez (2016), who use it in reference to *manage*; see §4.

that negated *get* claims should have the two readings exemplified in (25), permitting both interpretations like (25a) where the failure of sufficiency results in the non-realization of the proximate cause (precluding the final result), as well as interpretations like (25b), where the *get*-complement is realized, but its proximate cause is triggered by something other than the (insufficient) subject event.

(25) Nur didn't get {the door to close / the children to close the door}.
   a. *The door didn't close because Nur's actions didn't {trigger its closing mechanism / convince the children to close it.}*
   b. *{The door opened / The children opened the door}, but it was not because of Nur's actions.*

Linking the selectional restrictions of *get* to the specification of a proximate cause has interesting consequences for the lexical analysis of certain eventuality predicates. The restriction is *a priori* unproblematic for examples like (26a), where the complement contains a lexical causative—we may simply hypothesize that these verbs encode a proximate-cause relationship between their subject cause(r)s and a lexically-specified result state (i.e., that the classical CAUSE amounts to a joint specification of causal necessity and sufficiency; see, e.g., Baglini & Bar-Asher Siegal 2020). Something more must be said about unergative predicates like *dance* (as in 26b), however, as well as about unaccusatives like *grow* in (26c), below.

(26) a. Nur got the children to close the door. [causative complement]
   b. Nur got the children to dance. [volitional activity complement]
   c. Nur got the plant to grow. [internally caused CoS complement]

I want to suggest that the acceptability of (26b)-(26c) supports a view on which the embedded predicates in these examples are inherently causal, and should thus be decompositionally represented as involving some causal force or impulse which originates in their single arguments. I will have to leave this idea to be explored in later work, but it is worth noting that it is not without precedent: Levin & Rappaport Hovav (1994) (see also references therein) suggest that unaccusatives like *grow* resist the causative alternation because they describe *internally caused changes of state*; they likewise propose that unergatives like *dance* assign an agentive causer role to their arguments, and a similar idea is reflected in Copley & Harley's (2015) more recent *force-dynamic* treatment of activity predicates.

Finally, we have also seen that *get* is compatible with the inchoative variant of verbs that participate in the causative alternation, as in (9b) (*Nur got the door to open*). If Proposal (24) is on the right track, the acceptability of such data suggests that these "inchoatives" may pattern with internally caused CoS verbs. This idea also has precedent in the causative alternation literature, and in particular in analyses (e.g., Koontz-Garboden 2009) which take the inchoative variant of an alternating pair to assign a causer role to its single argument. I will again have to leave this idea to be spelled out more completely in future work.

4 Hindrance specialization: participial *get* and implicative *manage*

The last thing to be explained is the hindrance inference of participial *get* (cf. McIntyre 2005). In view of the observation (see §2.2) that participial *get* resists embed-

ding predicates of non-(canonically-)caused states, I propose that acceptable participial *get* complements are necessarily structured as *resultatives* (see, e.g., Embick 2004, Kratzer 2005), in particular specifying states which occur as the outcome of an (underspecified) proximate causing process, as schematized in (27). As in §3.2, *proximate cause* should here be understood to pick out a jointly necessary and sufficient cause for the relevant effect.

(27) $[Y \text{ be } S_{\text{result}}] \sim \exists e, s[\text{PROX-CAUSE}(e)(s) \,\&\, S(Y)(s)]$ [resultative state]

The indirectness of nonfinite *get* derives, on Proposal (24), from the requirement that some cause intervenes between the *get* subject and the final result; where *get* takes a nonfinite complement, this interver is specified and (typically) distinguished from the matrix causer introduced by *get*.[11] Resultative complements, by contrast, need not identify the intervening cause: this optional specification opens up the possibility for the source of the intervening cause to be matched with the participial *get* subject, as in the default reading spelled out for (3e) in (28).

(28) Nur got the door closed. ($\equiv$ 3e)

a. *Presupposed:* Nur is the agent of an actual event C_1 and there is an event C_2 which is necessary and sufficient for the door to close.

b. *Asserted:* C_1 is causally sufficient for C_2

c. *Pragmatic default:* Nur is the agent of C_2

It is also possible for participial *get* to refer to an intervener distinct from the matrix causer: this abrogates the hindrance inference, as we saw in for (12b) in §2.2. The question, then, is why hindrance correlates with the 'single-causer' interpretation.

McIntyre (2005) compares the hindrance inference of participial *get* to an inference of difficulty or *non-triviality* which is associated with uses of the **implicative** verb *manage* (Karttunen 1971): the inferences are close enough that participial *get* claims can—on the hindrance reading—be paraphrased using *manage*.[12]

(29) Nur got the door closed. $\sim$ Nur managed to close the door.

I argue that Proposal (24), together with the resultative treatment of participial complements, provides a natural explanation of the above effect: (24) predicts that identifying the matrix and intervening causers in a *get* construction establishes a causal background which is structurally parallel to the background that licenses *manage*.

The explanation draws on Nadathur's (2023) recent causal analysis of *manage*, summarized below. Implicative verbs famously license a polarity-sensitive pattern of complement entailments, which is paired with presuppositional content that (a)

[11] That this type of causal chain—in which an initiating cause(r) is separated from a target result by an intervening cause(r)—gives rise to judgments of causal indirectness amounts to the negative corollary of Wolff's (2003) empirically-supported *no-intervening-cause hypothesis*.

[12] The similarity between hindrance *get* and *manage* primarily cuts one way: it is easy to find *manage* claims like (v), which cannot be paraphrased by *get* (Baglini 2012).

(v) Nur managed to remember her coat. ($\not\sim$??*Nur got her coat remembered*)

Ultimately, this contrast must be explained in terms of the structural differences between *manage* and *get*, but it need not preclude an account on which the shared hindrance inference derives (where it arises) from the same underlying semantic components.

blocks the discursive equivalence of a *manage* claim and its reconstructed complement, and (b) ostensibly licenses the target inference of hindrance or non-triviality.

(30) a. Nur managed to open the door. → *Nur opened the door.*
b. Nur did not manage to open the door. → *Nur did not open the door.*
c. (30a), (30b) → *Closing the door was difficult/non-trivial for Nur.*

The presupposed content of *manage* is tricky to pin down: *manage* can be felicitous where any one of several plausible candidate inferences—intention, trying, difficulty, unlikeliness—is explicitly denied (Coleman 1975, Baglini & Francez 2016). The same pattern obtains for hindrance *get* (Baglini 2012): see (31b).

(31) a. Nur managed to close the door {inadvertently / without even trying / easily / as expected}.
b. Nur got the door closed {inadvertently / without even trying / easily / as expected}.

Nadathur's solution to this problem builds on an insight from Baglini & Francez (2016): namely, that the presuppositional content of *manage* is about the causal background of the event described by the *manage* complement. Nadathur proposes that *manage* claims are felicitous in just those contexts which support the causal necesity and causal sufficiency of some prerequisite for the complement, as shown in (32). "Hindrance" (or complement non-triviality) follows from the fact that the *manage*-complement cannot be realized without the prior resolution of its causal prerequisite. The joint effect of presupposition (32a) and assertion (32b) derives the implicative inferential profile in (30): $A(x)$ ensures $P(x)$ in the positive case, while prerequisite failure ($\neg A(x)$) precludes $P(x)$ under matrix negation.

(32) **Proposal for *manage*** (Nadathur 2023). Given an agent x and a one-place predicate P, x *manage to* P:
a. Presupposes the existence of some A such that $A(x)$ is *causally necessary* and *causally sufficient* for $P(x)$ in the utterance context
b. Asserts $A(x)$

Returning to single-causer *get*, the key observation is this: the intervening (C_2) cause of a *get* claim is entirely analogous to the presupposed *manage* prerequisite ($A(x)$) just in case its originator is identified with the *get* subject. In this case, C_2—like $A(x)$—has the sentential subject as its agent; moreover, C_2 is (by hypothesis) causally necessary and sufficient for the *get*-result, exactly as $A(x)$ is for the *manage* complement. *Manage* asserts $A(x)$, while *get* establishes C_2 only via causal entailment (see 24), but end result is the same: in both cases, the target result is achieved if and only if the sentential subject realizes the prerequisite event. Assuming Proposal (24) for *get*, then, and adopting the causal analysis in (32) for *manage*, the hindrance (or non-triviality) inference arises for the same reason in both cases: the appropriate contexts for *manage* and single-causer *get* are ones in which the sentential subject must exert some (additional) causal force to realize a specified result. No hindrance inference arises if the C_2 causer for *get* is distinct from the sentential subject simply because—by assumption—the subject is not involved in C_2, and therefore need not take action (beyond what they are presupposed to have done already) in order to bring about the *get*-result.

5 Conclusions and outlook

This paper pursues a unified approach to participial and nonfinite *get*. I propose that both constructions introduce the semantics of indirect or *catalyzing* causation, asserting that some (presupposed) action involving the *get* subject is *causally sufficient* for the proximate cause of a result specified by the *get*-complement. This analysis, cashed out using *structural equation causal models*, places *get* in a larger proposed class of sufficiency causatives, while explaining the interpretive contrast between *get* and sufficiency-predicating *make* (Nadathur & Lauer 2020) in terms of *get*'s selection for causal complements; this restrictive behavior has not (to my knowledge) previously been systematically observed or explained. The analysis also explains the hindrance inference of participial *get*, as well as the similarity between hindrance-*get* and implicative *manage* (McIntyre 2005, 2012): the indirect sufficiency semantics correctly predicts that hindrance inferences will arise just in case the subject of a *get* construction is identified with the originator of the proximate cause of the specified result, since this identification aligns the causal background of a *get* claim with the background that licenses *manage* (Nadathur 2023).

I suspect that the approach outlined in this paper—or aspects thereof—may ultimately be adapted to accommodate additional uses of *get* (see §2). Accounting for progressive-complement *get* (*Nur got the children dancing*; 3d) seems relatively straightforward. This complement type has a naturally resultative interpretation, and may thus be analyzed as describing a (caused) progressive state (see, e.g. Moens & Steedman 1988): *get* constructions like (3d) should then behave entirely parallel to participial *get* claims, but will never license hindrance inferences since the progressive complement structure selects exclusively for dynamic eventualities (which are internally caused and thus causer-specifying, per §3.2).

Accounting for the *get*-passive (*Nur got fired*; 3b) or opportunity-get (*Nur got to go to the movies*; 3c) will take a bit more work (if it is indeed possible), but even these constructions have elements which seem related to the indirect sufficiency semantics introduced here. *Get*-passives have been argued to assign more responsibility to their subjects than standard passives (Fleischer 2006): this effect might be captured by combining the catalyzing semantics with a passive complement, which suppresses or demotes its subject but remains semantically associated with a causer role. Opportunity-*get*, interestingly enough, shares the overall inferential profile of implicative *manage* (see 30, §4), with one difference: where the implicative by default involves its subject in the proximate cause of the complement (Nadathur 2023), opportunity-*get* does not appear to do so.[13] There is thus a clear conceptual affinity between caused-possession *get* (*Nur got a book*; 3a) and opportunity-*get*, on the one hand, and between opportunity-*get* and a (modeling-based) causal analysis, on the other. This seems well worth exploring in future work.

Finally, and looking farther ahead, the proposals I have made rely on specific assumptions about the internal conceptual structure of certain eventuality types, as indicated at the end of §3.2. While the causal modeling approach argues against reducing causal meaning to the uniform occurrence of a single lexical atom in the decompositional representation of all causative predicates, we have neverthe-

[13] More precisely, although the subject of opportunity-*get* is involved in the final result, they are not immediately responsible for this result; this induces the 'opportunistic' reading (DiPillo 2023).

less seen that some predicates—in particular, those compatible with *get*—must be specified as containing causal meaning in some way. This idea—that eventuality predicates may be lexically specified as causal despite embedding non-uniform dependencies—dovetails with a recent proposal made by Nadathur & Bar-Asher Siegal (2022): their suggestion is that telic event predicates necessarily make reference to causal models and the complex causal relationships therein. If this idea can be extended to other dynamic predicates, a broader picture emerges on which the event structural properties that constitute and distinguish aspectual classes may ultimately be defined and explained in terms of the features of language-independent causal models, which in turn can be conceptualized as cognitive devices used to map world knowledge of a causal nature into a form which can serve as the input to the more familiar set-theoretic constructs of formal, truth-conditional semantics.

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