Depictive Secondary Predicates and Small Clause Approaches to Argument Structure

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Abstract

Some syntactic approaches to argument structure posit *small clause* constituents to represent what they take to be the semantics of the constructions being analyzed. For example, this approach would analyze a resultative construction like *Martha hammered the metal flat* as containing a small clause [the metal flat]. In the small clause analysis, the NP *the metal* is only an argument of the result state denoted by the small clause, and its referent is not part of the causal hammering event. Depictive secondary predicates show that this analysis is incorrect, and the NP referent must be part of the verbal causing event. I show this for several constructions that have been analyzed as small clauses: resultatives, caused motion constructions, particle verb constructions, and double object constructions, among others. I also revisit arguments that have been presented in favor of small clause analyses, for instance adverbial modification, and show that they do not actually favor small clause analyses. Domains of anaphora, in contrast, converge with depictives as a reliable diagnostic for small clauses, as true small clauses always constitute opaque domains for anaphora.

1   Introduction

Some syntactic approaches to argument structure posit *small clause* constituents to represent what they take to be the semantics of the constructions being analyzed. For example, resultative constructions (1a), caused motion constructions (1b), particle verb constructions (1c), and double object constructions (1d) have all been analyzed as including a small clause component:

(1)   a.   Martha hammered the metal flat.   *resultative constructions*

      b.   Jerome waltzed Matilda across the room.   *caused motion constructions*

      c.   They sponged the water up.   *particle verb constructions*

      d.   Melinda wrapped her friend a present.   *double object constructions*

In Kayne (1984a), for example, a resultative construction like (1a) includes a small clause [the metal flat]; in Folli and Harley (2006), the caused motion example in (1b) includes the small clause [Matilda across the room]; in Kayne (1984a), the particle in (1c) forms a small clause with the direct object, [the water up]. The small clause analysis of double object constructions in (1d) is more abstract, but in the HaveP analysis of Harley (1997, 2002, 2008) they include a small clause [her friend HAVE a present].

Small clause analyses are justified largely by semantics. For instance, the resultative in (1a) is claimed to mean that Martha did some hammering, and as a result the metal is flat. In the small clause analysis, this is encoded directly in the syntax by having *Martha* be the subject of the verb *hammer*, which denotes a hammering event; this hammering event causes an eventuality of the metal being flat. This latter eventuality is encoded directly in the syntax by the small clause. Note that on such an analysis, the semantic derivation establishes no relation between the referent of the object and the event of the verb, but only a relation to the state expressed by the secondary predicate. Thus the derivation of (1a) states a relation between the metal and the flatness, but not between the metal and the hammering.

By examining depictive secondary predicates, I will show here that this is the wrong representation and the wrong semantics. Depictive secondary predicates require an analysis where the object in all of these constructions

is the object of the main verb and a participant in the main verbal (causing) event.[1] Small clause analyses cannot capture the behavior of the NP arguments with depictive secondary predicates in any of these constructions.

I begin by discussing the properties of depictive secondary predicates and showing how they are relevant (section 2). Section 3 then goes through each of the above constructions and shows that depictive secondary predicates are incompatible with the premises of the small clause analysis of those constructions. Finally, section 4 discusses some phenomena that have been used to motivate small clause analyses (e.g., adverbial modification), and shows that they do not actually motivate such analyses. The conclusion is that small clause analyses of these phenomena are on the wrong track.

2   Depictive Secondary Predicates

Secondary predicates (underlined in the examples below) are commonly divided into two categories, *depictives* and *resultatives*:

(2) a. She flattened the metal <u>wet</u>.   *depictive*

  b. She pounded the metal <u>flat</u>.   *resultative*

Depictives characterize an NP referent throughout the duration of the verbal event (the main predicate); resultatives characterize a result state of an NP brought about by the verbal event. Thus, in (2b), the metal becomes flat as a result of the pounding. In (2a), in contrast, the metal is wet throughout the event of flattening, and not as a result of the flattening.

There are numerous syntactic differences between depictives and resultatives. For instance, resultatives may only be predicated of underlying direct objects (see, e.g., Levin and Rappaport Hovav 1995, Rothstein 2004, Williams 2011a). Depictives, in contrast, can be predicated both of direct objects and subjects:

(3) a. She pounded the metal dizzy. (*'She pounded the metal, and as a result she became dizzy.')

  b. She often makes pots naked. ('She is often naked while making pots.')

Another difference is that resultative secondary predicates can add NPs that are not arguments of the main predicate, as in (4a), but depictives cannot (4b):

(4) a. Gerald drank the pub dry.

  b. John drove Mary drunk. (*'John drove, and throughout this event Mary was drunk'; Rothstein 2004, 70, (41))

As Williams (1980) and Rothstein (2004) note, the NP has to name a participant in the main event with a depictive, independently of the appearance of the depictive. This is what will be important here. What a depictive secondary predicate does is describe an individual and an event. The depictive predicates a property of the NP that holds throughout the event. Formal analyses are proposed in Geuder 2000, Rothstein 2004, and Pylkkänen 2008. For example, in the analysis in Pylkkänen 2008, 23, (31) (building on Geuder 2000), a depictive secondary predicate takes an individual argument and an event argument. It says that there is a state named by the adjective, the individual is in that state, and that state overlaps with the event argument. The depictive secondary predicate has to adjoin to a node that is the same semantic type (type $\langle e, \langle s, t \rangle \rangle$), and combines with it by predicate modification. This means that the individual argument is shared by both the verb and the depictive secondary predicate, and so the individual argument must be an actual argument of the verb and a participant in the event named by the verb. What is important here is that in any analysis, if a depictive can predicate a property of an NP that holds throughout a certain event, the referent of that NP must be a participant in that event.

With this in mind, let us turn to small clause analyses of various phenomena.

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[1] I use the terms "causing event" and "result state" or "result eventuality" purely for convenience, and in keeping with the language of the small clause analyses being criticized. It is not important here whether "cause" and "result" are the right notions for describing these phenomena. In particular, it might be that what I call the causing event does not cause the result event, but rather has it as a final part (Pietroski 2005, Williams 2011b).

3 Phenomena Analyzed as Small Clauses

Numerous phenomena besides the four listed in the introduction have been analyzed as including small clauses. In this section I will stick to the examples in the introduction: resultatives, caused motion, particle verb constructions, and double object constructions. Depictive secondary predicates can in principle be used as described here to evaluate a small clause analysis of any phenomenon (I remark on a few in passing in sections 3.1 and 4).

3.1 Resultatives

Small clause analyses of resultatives include Kayne (1984a), Hoekstra (1988), Sybesma (1999), Kratzer (2005), Harley (2005, 2008). To pick one of the more recent ones, Harley (2008, (30)) analyzes a resultative construction in the following way:[2]

(5) Mary hammered the metal flat. (Harley 2008, (30))
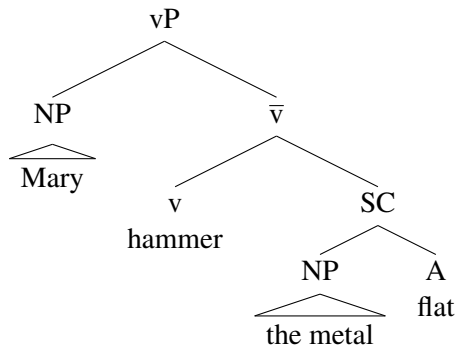
Here, there is a causing portion with the lexical verb spelling out the manner of causation, and a result portion represented by a small clause in the syntax ("SC"). Informally, the intended semantics has a causing event with an agent *Mary* who is acting in a hammering manner, and this causing event causes a result state where the metal is flat.[3]

Given this sytax, the semantic derivation will establish no relation between the referent of the object and the causing event of the verb (the metal and the hammering). It will establish only a relation to the result state of flatness. Given what we saw about depictive secondary predicates, then, we would expect that if one could modify the object NP with a depictive secondary predicate, that depictive would only be able to characterize the referent of the object NP during the result state. This is incorrect, however. Consider the following examples:

(6) a. It's best to hammer metal flat wet, but it's OK if it has dried by the time it's completely flat.

   b. # It's best to hammer metal flat dry, but it's OK if it's wet during the hammering.

(7) a. She always blows her hair dry uncombed, and then starts combing it once it's dry.

   b. She combs her hair first, but it slowly gets tangled up again as she dries it. #So she blows her hair dry uncombed.

(8) a. It's best to heat the soup boiling hot unseasoned, and then add seasoning as it comes to a boil.

   b. The seasonings disappear through boiling, so although she added the seasoning while the soup was heating, #she heated it boiling hot unseasoned.

As can be seen from these examples, when a depictive modifies the direct object in a resultative construction, it characterizes the referent of the direct object during the causing event and *not* exclusively during the resultant

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[2]I have replaced the label "DP" with "NP" in all of the trees in this paper.

[3]In the works of Harley, v represents either CAUSE or BECOME (see section 3.2), while the lexical verb *hammer* is said to adjoin to v as a manner modifier. Copley and Harley (2015, 131) explain briefly what manner modification would be in the force semantics that they propose. They also state that the verb root adjoins to a predicate headed by v_{BECOME} in an example like *Mary hammered the metal flat*. They do not give a structure for this sentence, but it appears they have in mind a structure like that in (5), where v_{BECOME} takes a small clause *the metal flat* as its complement.

state. This is inconsistent with the small clause analysis, where the direct object does not name a participant in the verbal causing event. The facts are the exact opposite of what is expected on the small clause analysis, and are irreconcilable with the very premises of that analysis, as far as I can see.

Depictives show us that what we need is an analysis where the direct object is the object of the verb *hammer* and names a participant in the hammering event (or a *hammering flat* event, depending on the right analysis of resultative constructions). See Williams (2011a, 2015) for more reasons to reject small clause analyses of resultative constructions. Non-small-clause analyses of resultative constructions include McCawley (1971), Dowty (1972), Parsons (1990), Levin and Rappaport Hovav (1995), Li (1995), Rothstein (2004), Williams (2011a), among others. There is also a hybrid approach, where the resultative adjective and NP form a small clause but the NP moves out of the small clause to become an argument of a verbal projection in addition (Ramchand 2008, 121–131). It appears that all of these analyses are compatible with the facts of depictive secondary predicates, unlike small clause analyses. Since the hybrid analysis has the NP move to become an argument in the verbal event, it should be able to capture the facts of depictives, assuming that something can block a depictive attaching to the small clause constituent (see more on this in section 3.5).

It should also be noted that depictive secondary predicates behave the same whether the direct object is a selected argument of the verb (6–8) or not (9–10):

(9) a. That marathoner ran his shoes ragged untied, although he finally tied them once they started falling apart.
     b. Once that marathoner's shoes started falling apart he untied them, so #he ran his shoes ragged untied.

(10) a. Because of the peculiar properties of this clay, when you make a teapot, you should fill it with water and boil the teapot dry unglazed, then glaze it once it's dry.
     b. Boiling the teapot dry will cause the glaze to break down and disappear, so if you do this, #you will have boiled the teapot dry unglazed.

Even if the object is not an argument of the verb, it must still name an argument of the causing event, and not solely of the result.

Before leaving resultative constructions, it should also be noted that depictives give the same result with lexical resultative predicates, which are also sometimes analyzed as including small clauses (e.g., Harley 2005, 2008; Copley and Harley 2015). In such cases, a single lexical verb seems to denote a causing event plus a resulting state. With such verbs, depictives consistently only modify the causing event and may not modify the resulting state:

(11) a. He flattened the metal wet, but by the time it was completely flat it had dried.
     b. # It's best to flatten metal dry, but it's OK if it's wet during the flattening process.

(12) a. He always shears the sheep asleep, although they usually wake up before they are completely shorn.
     b. # You should shear the sheep awake, but it's OK if they're asleep during the cutting.

(13) a. People usually cook lobsters alive. (by the time they achieve cooked state, they are dead)
     b. # You should cook lobsters dead, but of course they have to be alive when you put them in the pot.
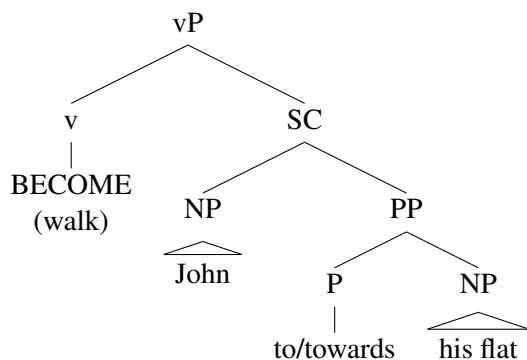
Small clause analyses of such predicates, where the direct object is only an argument of the small clause, are therefore also ruled out for these predicates.
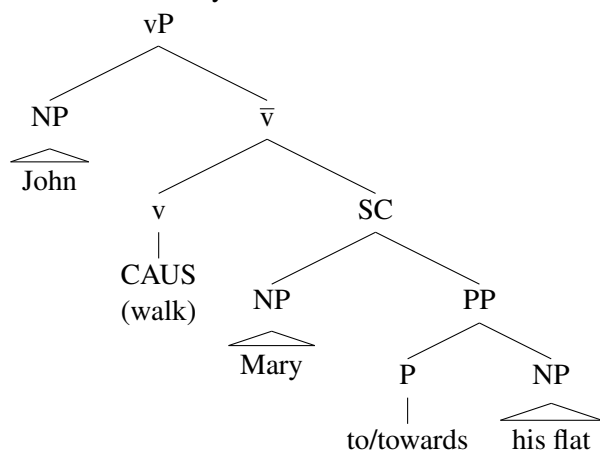
3.2 Caused Motion

Hoekstra and Mulder (1990) and Folli and Harley (2006) analyze caused motion predicates as involving a small clause. I illustrate with the analysis in Folli and Harley (2006):

(14) (Folli and Harley 2006, 137, (27a–b))

a.   John walked to/towards his flat.

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                    vP
           ┌────────┴────────┐
           v                 SC
           │          ┌───────┴───────┐
        BECOME       NP              PP
        (walk)       │          ┌─────┴─────┐
                   John         P          NP
                                │
                           to/towards    his flat
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b.   John walked Mary to/towards his flat.

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                    vP
           ┌─────────┴─────────┐
          NP                   v̄
          │            ┌────────┴────────┐
        John          v                 SC
                      │          ┌────────┴────────┐
                    CAUS        NP                PP
                    (walk)      │          ┌───────┴───────┐
                              Mary         P              NP
                                           │
                                      to/towards       his flat
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As can be seen, in this analysis both intransitive and transitive motion predicates have a small clause. The NP that undergoes motion is the subject of the small clause. In the intransitive case, there is a higher predicate BECOME; the NP moves to become the subject of the clause. In the transitive case, the surface subject is the agent of a CAUS head. This head denotes a causing event, which causes the state expressed by the small clause, a separate eventuality.

Folli and Harley (2006) do not spell out a semantics for caused motion constructions (nor do Hoekstra and Mulder 1990), but they do point to examples like the following as instantiating the same small clause:

(15)   (Folli and Harley 2006, 140, (33a), (34a))
     a.   The halfback is into the end zone!
     b.   John has been to France.

It therefore appears that the small clause simply denotes a stative locational predicate, and once again, the semantics relates the referent of the small clause subject NP only to the small clause state, and not to the causing event described by the main verb. It relates the causing event to its result state, but not to any participant named by the NP subject of the small clause.

Once again, depictive secondary predicates show us that this is not correct. When a depictive modifies the NP undergoing motion, it characterizes it throughout the verbal event, and not just in the final state that is denoted by the small clause:

(16)   a.   After the sudden downpour, Albert had to walk to his flat completely wet. The sun came out on the way, though, so by the time he got to his front door, he was dry.
      b.   Albert installed a giant air dryer right outside his flat, so although he was completely wet for the journey, #he walked to his flat dry.

(17)   a.   Albert walked Gertrude to his flat barely conscious, but she regained consciousness just as they arrived.

b.   Gertrude was completely lucid during the journey, but because of a sudden relapse right on his doorstep, #Albert walked her to his flat unconscious.

(18)   a.   The captain waltzed the countess across the room barefoot, where she stepped into her shoes and continued dancing.

      b.   When they got to the other side of the room the countess kicked off her shoes, so #the captain had waltzed her across the room barefoot.

In fact it is not possible for a depictive to characterize the NP in the final result state, as the (b) examples show. Once again, the facts are the exact opposite of what the small clause analysis would predict.

    I have been able to find very few non-small-clause analyses of caused motion constructions. Brousseau and Ritter (1992) propose a lexical semantics for caused motion constructions, but do not discuss the syntax. Levin and Rappaport Hovav (1995, 188) briefly suggest a possible account. Ramchand (2008, 116, (21)) has a non-small-clause analysis of some cases (like *Alex danced the puppet over the bridge*), but a hybrid approach for other cases (*Michael ran Karena to the coconut tree*; 118, (25)). In the hybrid analysis, the NP starts as the subject of a small clause ("res(ult)P"), but then moves to become the argument of a verbal projection ("proc(ess)P"). It appears that all of these analyses are compatible with the facts of depictive secondary predicates, unlike pure small clause analyses. The hybrid analysis will have to somehow block the depictive from modifying the small clause (see more on hybrid analyses in section 3.5).

3.3   Particle Verbs

Kayne (1984a) proposed analyzing particle constructions in the same way as resultatives, above. Consider an example like the following:

(19)   They sponged the water up. (Kayne 1984a, 122, (108))

According to Kayne, these have a verb *sponge* which embeds a small clause [the water up]. Other small clause analyses of particle constructions include Hoekstra (1988), Svenonius (1992, 1994), den Dikken (1995), Harley and Noyer (1998), Ramchand (2008).[4] Aarts (1989) analyzes some verb-particle constructions as small clauses, but not others. Other than Ramchand (2008), none of these publications spell out a semantics, but it appears that the intended meaning includes a causal sponging event, with a resulting state of the water being up. Since the NP object is not a syntactic argument of the verb, it appears that it is also not intended to semantically identify a participant in the verbal event, but only in the resulting state.

    Once again, depictive secondary predicates show us that this is wrong. When a depictive modifies the direct object, it characterizes it throughout the causing event, and may not characterize it during the resulting state:

(20)   a.   They had to sponge the water up dirty, but because of the peculiar absorptive properties of the sponges they were using, the dirt got left behind and the collected water was completely pure.

      b.   The water was completely pure, but because the sponges they were using were dirty, #they ended up sponging the water up dirty.

(21)   a.   Some people think it's funny to tip cows over asleep; of course they wake up by the time they hit the ground.

      b.   Those cruel people only target cows that are asleep. Since they wake up when they hit the ground, #those cruel people tip cows over wide awake.

Again, the facts are the opposite of what is predicted by the small clause account.

    Non-small-clause analyses of particle verb constructions include, among others, Johnson (1991), Neeleman and Weerman (1993, 1999), Radford (1997), Zeller (2001), Toivonen (2003), Blom (2005), Basilico (2008). Larsen

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[4]Although Ramchand (2008) has a hybrid analysis of resultatives and caused motion predicates, above, where the NP moves from the result small clause to become an argument of a higher verbal projection, in her analysis of particle verbs the NP never leaves the ResultP (132, (49)).

(2014) proposes a hybrid approach, where the particle and NP form a small clause but the NP moves out of the small clause to become an argument of a verbal projection. It appears that all of these, including the hybrid approach, are compatible with the facts of depictive secondary predicates (but again, the hybrid approach will have to block modification of the small clause part of the construction).

3.4 Double Object Constructions

Kayne (1984b) proposed that double object constructions involve a small clause, and this analysis was adopted with some variations by Johnson (1991) and Hornstein (1995), among others. A more developed small clause analysis, the HaveP analysis, has become prominent more recently, and it is this analysis that I will concentrate on. The HaveP analysis was proposed by Harley (1997) and is developed in Harley (2002, 2008), Beck and Johnson (2004), and Harley and Jung (2015), among others. A variant of it appears in Ramchand (2008, 103).

In the HaveP analysis, the verb *give* is analyzed as a light verb vCAUSE taking a small clause headed by Have as its complement. *Give* is the pronunciation of vCAUSE combined with Have. The structure proposed is the following:

(22) Mary gave the car a new engine. (Harley 2008, (53))
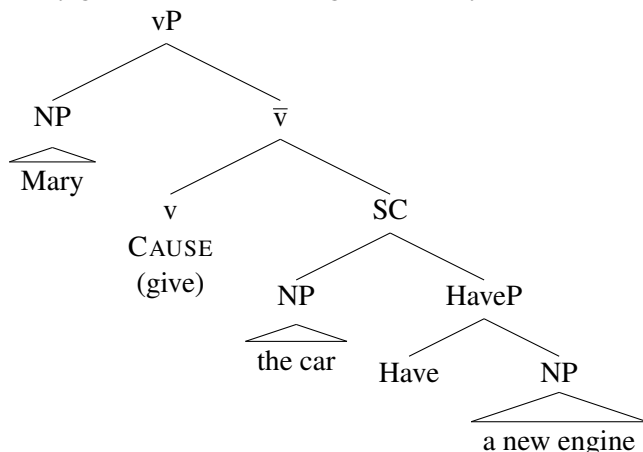
The proposed semantics has a causing event (vCAUSE) with a resulting having state (the small clause headed by Have). The result state is supposed to be equivalent in most respects to the verb of possession, *have* (to be precise, the verb *have* is Have + *be*, so *give* and *have* share a component, HaveP).

If the verb is some lexical verb other than *give*, that verb adjoins to vCAUSE as a manner modifier. Based on Harley's other work (e.g., Folli and Harley 2006, 137, (27a–b)), we can suppose that manner adjunction would look something like this:

(23) Maria handed/threw/wrapped her friend a present.
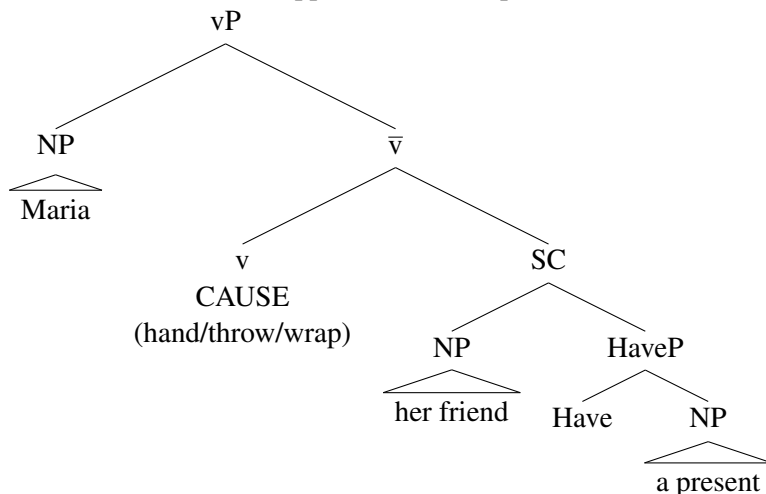
The semantics is supposed to be something like the following paraphrase: 'Mary's action, a handing/throwing/wrapping, caused a result state where her friend has a present'.[5]

The thing to note about this analysis is that there is no relation between the verb stem (acting as a manner modifier) or the causing event and either of the two objects. Neither of the objects names a participant in the causing event which the verb stem modifies; they only name participants in the result state.

Once again, depictive secondary predicates show that this is incorrect. When a depictive modifies a direct object in a double object construction, it clearly characterizes it throughout the causing event, and not during the result state. Consider the following examples:

(24)   a.   I threw him the ball wet, but when he got it it was dry.

      b.   As it left my hand it was wet, #but I threw him the ball dry.

As these examples show, the property *wet* only has to hold of the ball during the causing event. In (24a), the ball can be wet during this event, but dry by the time the result having state is achieved. In contrast, in (24b), trying to have *wet* modify *the ball* only during the result having state, and not during the causing event, is not possible. Again, this is the exact opposite of what would be expected on the small clause analysis.

Turning to the indirect object, there is a peculiar restriction to the effect that depictive secondary predicates may only modify subjects and direct objects, and may not modify indirect objects or objects of prepositions (Williams 1980). In (25), for example, the depictive can only modify the subject, and cannot modify the indirect object:

(25)   Sasha fed Melinda the meat drunk. (Sasha but not Melinda is drunk)

Harley and Jung (2015) claim that this restriction follows in the HaveP analysis, if depictive secondary predicates can only modify events and may not modify states. Then they cannot normally modify the indirect object of a double object construction because that object only names a participant in a state, namely the resulting having state. An immediate problem for this analysis is that the direct object can freely have a depictive predicated of it (as in 24), even though in the HaveP analysis it too only names a participant in the resulting state.

Furthermore, Koizumi (1994) points out that, although indirect objects cannot be modified by depictive secondary predicates in the active, they can when they become the subject of a passive:

(26)   (Pylkkänen 2008, 36, (57a–b))

      a.   He told me the news drunk. (I cannot be the one who is drunk)

      b.   I was told the news drunk. (I am the one who is drunk)

This fact is significant for two reasons. First, it indicates that there is no semantic problem with modifying an indirect object with a depictive, since actives and passives are truth-conditionally identical. In particular, the passive should not change the event structure of the clause, and Harley and Jung's ban against depictives modifying states should still rule out a depictive modifying the indirect object, incorrectly.

Second, we can now use passive double object constructions to see how depictives act when they modify an indirect object. Passives show us that the indirect object of a double object construction must name a participant in the causing event, just like the direct object:

(27)   a.   She was thrown the ball blindfolded, but she managed to get the blindfold off before it arrived and caught it.

      b.   She saw the ball coming and caught it, but simultaneous with her catching it an opponent threw a scarf over her eyes, so #she was thrown the ball blindfolded.

Indirect objects must name participants in the causing event, just like direct objects. Since the HaveP analysis treats both of them only as participants in a having result state, it has the wrong semantics.

There is another exception to the ban on depictives modifying indirect objects. *Light verb* uses of *give* permit indirect object modification (Maling 2001, Pylkkänen 2008):

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[5]Copley and Harley (2015) give a proposal for the semantics of manner modification within a very different framework, but do not discuss double object verbs.

(28) (Maling 2001, (14c–d))
   a. The nurse gave the patient his medication still-groggy/half-asleep.
   b. Victorian doctors preferred to give their female patients a physical exam fully-dressed.

In light verb uses of *give*, *give* seems to have little semantic content; that content is instead provided by the direct object. Thus, *give medication* is interpreted as 'medicate' and *give an exam* is interpreted as 'examine'. It is crucially on these interpretations that the depictive can characterize the indirect object. *Give medication* could also be interpreted as transferring possession of the medication rather than medicating, but (28a) is not possible with this interpretation (Pylkkänen 2008). This would be a non-light use of *give* as a verb of transfer of possession.

Harley and Jung (2015) account for this exception by saying that in light verb uses of *give*, the Have component is eventive rather than stative. This enables the depictive to modify the indirect object, since it now names a participant in an event rather than a state. On the HaveP analysis, however, its referent is still only a participant in the resulting event and is not a participant in the causing event. Again, depictives show us that this is incorrect:[6]

(29) a. The nurse gave the patient his medication asleep, but he woke up by the time it was all injected.
   b. For some reason getting an injection puts that patient to sleep, so although he was wide awake when the nurse jabbed the needle in his arm and stayed awake right up until she was about to pull the needle out, #she ended up giving him his medication asleep.

(30) a. I always give the tables a scrubbing wet, but they're usually dry by the time they're fully scrubbed.
   b. # The tables start out dry, but I always give them a scrubbing wet.

As with all the other cases that have been analyzed as small clauses, the facts of depictive secondary predicates are incompatible with the small clause analysis of double object constructions. As far as I can see, the HaveP analysis cannot be reconciled with the facts of depictive secondary predicates. The HaveP analysis simply has the wrong semantics. (See also Takano 1998 and Bruening 2010a for other arguments against treating double object verbs as including a small clause.)

Non-small-clause analyses of double object constructions include, among others, Larson (1988), Aoun and Li (1993), Pesetsky (1995), Takano (1998), and the Applicative analysis of Marantz (1993), Bruening (2001, 2010a, 2010b, 2014). It appears that all of these are compatible with the facts of depictive secondary predicates, unlike small clause analyses.

3.5 Actual Small Clauses

For comparison, depictive secondary predicates are perfectly able to modify an NP in an actual small clause. By "actual small clause" I mean a clause that is clearly a constituent and is clearly a self-contained proposition but does not include inflectional material like tense (see, e.g., Stowell 1983). Consider the following examples:

(31) a. I want [the soldiers on the parade ground fully dressed]!
   b. [Maxwell in a dress drunk] is a sight to see!
   c. With [Hope in the hospital hurt], we're likely to lose the match.

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[6]Moreover, if the only requirement on depictives is that they need an event to modify rather than a state, we would expect that indirect object modification in the following examples of light verb *give* would be possible, but it is not:

(i) a. He gave us a shout drunk. (only he and not we can be drunk)
   b. He gave us a smile still groggy. (only he and not we can be still groggy)

Give a shout and *give a smile* are eventive, but they do not permit indirect object modification by a depictive. The difference between the *give medication* type of light verb and the *give a shout* type is that the indirect object is interpreted as the logical object of the noun *medication*, but the indirect object is not interpreted as the logical object of *shout*. In *give medication*, *give an exam*, and *give a scrubbing*, the indirect object corresponds to the direct object of the corresponding simple verb. In contrast, with *give a shout* and *give a smile*, the indirect object does not correspond to the direct object of the corresponding simple verb construction. This contrast is unexplained on the Harley and Jung (2015) proposal.

     d.   I consider [him beneath contempt drunk].

     e.   What we can never permit is [adults on the playground naked].

     f.   We can't let there be [adults on the playground naked].

This indicates that there is not some property of small clauses that prevents depictive secondary predication within them, even ones that appear to be stative (contra Harley and Jung 2015).

We can also use such examples to evaluate a possible response that a proponent of small clause analyses might make to the data in this section. This would be to say that a depictive secondary predicate can attach to a small clause, but delay saturation of its event argument until the small clause combines with a causing event. The depictive would then say that the individual argument it characterizes is in the state named by the adjective during the causing event, even though the NP does not name a participant in that event.

Such delayed saturation is clearly not possible in the examples in (31). In (31a), the soldiers are only fully dressed while on the parade ground, not during the wanting event (it is most likely that the soldiers are not fully dressed for most of the wanting event, otherwise the speaker would not need to utter the sentence). In (31d), the referent of *him* is not necessarily drunk during any considering event. The same is true of any granting of permission event in (31e) or letting event in (31f). Note that *let* is often viewed as a type of causative, and so (31f) is a good comparison for this proposal of delayed saturation.

An even better comparison might be causative sentences with *get* and *let* followed by an NP and a non-verbal predicate. These are instructive, even without committing to a small clause analysis of them. Consider the following examples:

(32)   a.   The officer got the soldiers on the parade ground fully dressed.

        b.   We can't let adults on the playground naked.

These seem to have two readings. In one, the depictive characterizes the referent of the NP just in the resulting state. So, in (32a), the soldiers only become fully dressed once they are on the parade ground, and in (32b), the interpretation is essentially the same as in (31f). On this reading of (32b), what we can't permit is a certain state of affairs holding. In the other reading, the depictive characterizes the NP referent during the causal event. In (32a), the officer harries the soldiers to the parade ground while they are fully dressed. In (32b), our act of granting permission involves the adults being naked. This is the only reading when the non-verbal predicate is dropped, as in, *we can't let them naked*.

A natural analysis of this would be to say that such examples are bi-eventive. There is a causing event and a resulting eventuality. The NP object names a participant in both eventualities, however that is done formally (possibilities for argument sharing include raising, control, predicate conjunction, and others). If the depictive modifies the resulting eventuality, we get one reading; if it modifies the causing eventuality, we get the other. The important observation is that with such causatives, the depictive can modify *either* the caused eventuality, or the causing event.

It is then totally unexpected that in the small clause analysis of resultative, caused motion, particle verb, and double object constructions, we can never get an interpretation where the depictive modifies the subject of the small clause only in the resulting eventuality denoted by the small clause predicate. We saw above that this is never possible. Examples of these constructions with depictive secondary predicates are never ambiguous, and only have a reading where the depictive characterizes the NP referent during the causing event. This is totally unlike actual small clauses in (31) and the causal sentences in (32), which may or may not involve small clauses. In both sentence types, the non-verbal predicate names an eventuality, and a depictive secondary predicate is able to modify that eventuality. Resultative, caused motion, particle verb, and double object constructions behave unlike either case. If we want to analyze them as involving small clauses, then we have to ban depictive modification of the small clause, but this is unmotivated because small clause modification is possible in general. The suggested analysis where the depictive adjoins to the small clause but delays saturating its event argument is also unmotivated, since we see nothing like that with other small clauses or non-verbal predicates in general.

I conclude instead that the small clause analyses of these phenomena are on the wrong track. They have the wrong semantics for depictive secondary predicates. The hybrid analyses are problematic, too, since, although

they *permit* depictive modification of the causing event, unlike the pure small clause analyses, they incorrectly permit modification of the small clause result, too. The hybrid analysis would have to posit an unmotivated ban on modification of the small clause constituent, something we can see in (31) and (32) to be possible in general.

3.6   Summary

Depictive secondary predicates are incompatible with the premises of small clause analyses of the phenomena discussed in this section. In small clause analyses, an NP acts solely as the subject of a small clause and its referent is not a participant in the causal event. Depictive secondary predicates indicate that this is not correct, as the NP that is analyzed as the subject of a small clause must in fact name a participant in the verbal (causal) event. The putative small clauses in these analyses behave very differently from actual small clauses and causative sentences with non-verbal caused events. These all permit depictives to modify the result eventuality, unlike resultative, caused motion, particle verb, and double object constructions. Hybrid analyses of these phenomena are also problematic, as they incorrectly permit modification of the small clause portion of the syntax and semantics.

4   Revisiting Arguments for Small Clause Analyses

As stated above, part of the motivation for small clauses analyses was an idea about what the semantics of the relevant construction is. Depictives show us that this semantics is incorrect. Other arguments in favor of small clause analyses have also been given, however. This section shows that none of them go through.

4.1   Adverbial Modification

Beck and Johnson (2004), Harley (2008), and Copley and Harley (2015) also cite some facts of adverbial modification to justify small clause analyses. For example, the modifier *again* can modify just the having part of a double object construction (Beck and Johnson 2004). In the following example, *again* is felicitous even though no one had previously kicked Maria the ball:

(33)   Maria started the game with the ball, but kicked it to someone else. For ten minutes, others had the ball. Finally, someone kicked her the ball again.

What *again* says is instead that the state [Maria HAVE the ball] held before. This is often referred to as a *restitutive* reading of *again* (as opposed to the *repetitive* reading, where the whole event happened before). As Beck and Johnson (2004) show, it is easy to get the restitutive reading in the HaveP analysis, which has a constituent [Maria HAVE the ball] in the syntax. *Again* can adjoin to this constituent and modify it. On the repetitive reading, it would modify a higher verbal projection.

Another modifier that can modify just the having eventuality in a double object construction is the temporal *for X time* (Harley 2008, Copley and Harley 2015):

(34)   I gave Sandy my smartphone for a few minutes.

The sentence in (34) is most plausibly interpreted as Sandy having the smartphone for a few minutes, not as me repeatedly giving her the smartphone for a few minutes. In Harley (2008) and Copley and Harley (2015), this reading is derived in the same way as the restitutive reading of *again*: the *for X time* adverbial adjoins to the small clause.

While the behavior of these modifiers initially seems to support positing a small clause constituent in the syntax, a closer look reveals them to be problematic. If the 'have' reading of *for X time* adverbials and restitutive readings of *again* are derived in the same way, they should always pattern alike. This is not true, however. Stranding *again* under VP ellipsis gets rid of the restitutive reading (Johnson 2004):

(35)   Maria started with the ball, but then no one kicked it to her for a long time. Finally, #Jorge did again.

Again can only be interpreted repetitively when it is stranded by VP ellipsis, which in this example is incompatible with the context. According to Johnson (2004), this follows because, to be stranded, *again* has to be adjoined much higher than HaveP. If *again* is adjoined to HaveP, it will necessarily be included in VP ellipsis.

In contrast, the 'have' reading is not lost when a *for X time* adverbial is stranded by VP ellipsis:[7]

(36) a. Megan loaned him a car for a week, and I did for a month.

b. A: Give me your smartphone for the day, will you? B: I can't for the whole day.

If the 'have' reading of *for X time* resulted from adjoining *for X time* to HaveP, *for X time* should not be strandable in VP ellipsis.

Again and *for X time* also diverge in that some verbs allow a restitutive reading with *again*, but do not allow the corresponding reading with *for X time*:[8]

(37) a. I just got this brand new, sparkling clean shirt. I spilled tomato sauce on it, but I managed to clean it again. (restitutive)

b. I cleaned the shirt for a week. (only repetitive cleaning events)

(38) a. The diver reached the surface again. (restitutive; Jäger and Blutner 2003)

b. The diver reached the surface for 10 minutes. (only repetitive surfacing events)

These differences indicate that restitutive readings of *again* and the reading at issue with *for X time* adverbials are not derived in the same way. This means that they do not support small clause analyses, since their behavior is not as predicted by those analyses.[9]

4.2   Subextraction

Kayne (1984b) justifies a small clause analysis of double object constructions on the basis of subextraction. The argument is that the indirect object of a double object construction patterns with the subject of a small clause (or indeed, any subject) in being opaque to extraction (see Postal 1974, 195). Kayne (1984b) used the same argument to support a small clause analysis of particle verb constructions, although here the data are complicated by the fact that subextraction is only degraded in one particular order (where the NP precedes the particle).

Arguing from patterns of extraction is a tricky matter, however. For many speakers, the indirect object cannot extract at all, not just a sub-part of it. This is very unlike subjects of small clauses or subjects in general, which can freely extract. Extraction therefore points to the opposite conclusion from subextraction.

The judgments themselves are also not entirely clear, or consistent. Kuno (1973), Kayne (1984b), Neeleman and Weerman (1999), and Larsen (2014) all note that not all speakers find subextraction from indirect objects or from pre-particle objects degraded. Additionally, theoretical analyses have been given for the degraded status of subextraction from these constituents that do not depend on them being subjects of small clauses. For instance, Kuno's (1973) *Clause Nonfinal Incomplete Constituent Constraint* bans subextraction from any phrase that is not

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[7]*Again* and *for X time* also behave differently in this respect with simple transitive verbs like *open* and *close*, which Harley (2008) and Copley and Harley (2015) also analyze as involving small clauses:

(i) a. When she came in the window was closed, so Sandy opened it. After a few minutes she got cold, so she closed it again. (restitutive)

b. The wind blew the door open and no one closed it. Finally, *Maribel did again. (*restitutive; Johnson 2004, (30))

(ii) a. A: Open the window for a few minutes to air the room out. B: I only will for one minute, or it will get too cold.

b. To keep the sun from making their rooms too hot, Sandy closes the curtains for a few hours every afternoon, and Sam does for the whole afternoon and evening.

This is also inconsistent with the assumptions of the small clause account of these predicates.

[8]Chierchia and McConnell-Ginet (1990, 359) state that the restitutive reading of *again* is not available with the verb *clean*, but I and numerous speakers I have asked find it acceptable. Jäger and Blutner (2003) also cite an example of *clean* with the restitutive reading.

[9]Numerous publications have argued that it is not necessary for *again* to modify a syntactic constituent in order to yield a restitutive reading; see, among others, Dowty (1979), Egg (1999), Jäger and Blutner (2003), Williams (2015).

final in its clause, regardless of whether it is a subject or not. Trinh (2009, 2010) proposes that extraction must take place from the right edge of a prosodic phrase; it would be possible to analyze subextraction from indirect objects and pre-particle objects as violating this constraint, as suggested in Larsen (2014, 360, note 31). Such an analysis would not make any reference to subjecthood or small clauses. Larsen (2014, 359–360) proposes that subextraction is banned when the NP that is extracted from has undergone movement (Wexler and Culicover 1980, Corver 2006). Following Lasnik (2001), Larsen proposes that an NP in pre-particle position has undergone overt movement for most speakers. So have indirect objects. Those speakers that permit subextraction allow the NP to undergo movement only at LF, so that, when extraction occurs, the NP has not yet moved and so is not an island. This analysis also makes no reference to the NP being a subject. Although Larsen (2014) does analyze particle verb and double object constructions as involving small clauses, the explanation for extraction does not make any reference to small clauses or subjecthood, and could be adopted within a non-small-clause analysis.

Since there are analyses of subextraction that do not depend on the small clause analysis (several of them, in fact), subextraction does not argue in favor of that type of analysis. The facts are compatible with non-small-clause analyses.

Moreover, some of the other constructions discussed above permit subextraction, which is surprising if they are supposed to involve small clauses:

(39)   a.   Who are they burning books about to cinders?   *resultative*
       b.   This dangerous looking man is the one you that you just waltzed the wife of across the room.
            caused motion

It is therefore not possible to maintain both that subextraction is a reliable diagnostic of small clauses, and that all of these constructions involve small clauses. In any case, the facts of subextraction do not favor a small clause analysis of any of these phenomena.[10]

4.3   Against Small Clauses: Anaphora

An argument *against* small clause analyses of the phenomena discussed here is anaphora. As Pesetsky (1995, 159–160) and Bruening (2010a, 524) note, true small clauses constitute opaque domains for anaphora:

(40)   a.   * Maxwell$_1$ considers her proud of himself$_1$.
       b.   * Maxwell$_1$ said that, with Sally angry at himself$_1$, he won't be able to retrieve his kayak from her house.
       c.   * The general$_1$ wants them away from himself$_1$!
       d.   * Maxwell$_1$ said that, with Sally beside himself$_1$, he could do anything.
       e.   * That giant$_1$ believes a dwarf beside himself$_1$ to be an amusing sight.

All of these examples are grammatical with a pronoun rather than a reflexive. This is expected on most accounts of anaphora, where the presence of a subject delimits the domain within which a reflexive must find an antecedent (Chomsky 1973, 1981, but also approaches based on co-argumenthood, like Reinhart and Reuland 1993). Small clauses have subjects. Note that this is true with both AP small clauses and PP small clauses. It is also true with causatives with *get* and *let* that embed non-verbal predicates:

(41)   a.   The teacher$_1$ got the students in front of her$_1$/*herself$_1$.
       b.   The nice man$_1$ let the children in front of him$_1$/*himself$_1$.

In contrast, in none of the cases discussed here does the putative small clause constitute an opaque domain for anaphora:

(42)   *Resultative Constructions*

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[10]Kayne (1984b) also uses nominalization facts to argue for a small clause analysis. The nominalization facts have been analyzed within a non-small-clause analysis in Pesetsky (1995) and Bruening (2010a), so they do not argue for a small clause analysis, either.

    a.   The gingerbread man$_1$ pounded the dough flatter than himself$_1$.

    b.   Mr. Freeze froze the bank teller colder than himself$_1$.

(43) *Caused Motion Constructions*

    a.   John$_1$ pushed Mary away from himself$_1$. (Harley and Jung 2015, 718)

    b.   Thompson and Thomson$_1$ waltzed Bianca to each other$_1$.

(44) *Particle Verb Constructions*

    a.   John$_1$ showed the medal off to himself$_1$. (Harley and Jung 2015, 718)

    b.   Spongebob Squarepants$_1$ sponged the water up into himself$_1$.

(45) *Double Object Constructions*

    a.   Maxwell$_1$ showed Sally himself$_1$.

    b.   Maxwell$_1$ offered Sally himself$_1$.

The results of the anaphora test converge with depictive secondary predicates on the conclusion that small clauses are not involved in these constructions. Contra Harley and Jung (2015, 718), then, the opaque domains test *is* a valid diagnostic of small clauses.

    To further verify this correlation, consider prepositional dative constructions and *put*-type verbs, both of which have been suggested to involve small clauses (e.g., Hoekstra and Mulder 1990, den Dikken 1995). Pesetsky (1995) and Bruening (2010a) give numerous arguments against prepositional datives being analyzed as small clauses, among them the fact that they do not constitute opaque domains for anaphora (46a). This is also true of *put*-type verbs (46b):

(46) a.   John$_1$ gave a gift to himself$_1$. (Bruening 2010a, 524, (11b))

      b.   The tiger$_1$ put butter on itself$_1$.

Our depictive secondary predicate test gives the same result:

(47) a.   I threw the ball to Melinda wet, but by the time she caught it it was dry.

      b.   As it left my hand it was wet, but #I threw the ball to Melinda dry.

(48) a.   She slid the cleaning cloth through the clarinet oily, but when it came out it wasn't oily anymore.

      b.   The cloth was completely clean when she slid it into the clarinet, but it picked up some oil as it came back out the other end. #So she slid the cloth through the clarinet oily.

    We can see from these data that there is a systematic correlation between domains of anaphora and our depictive secondary predicate test. The facts of depictives render a small clause analysis untenable for the constructions at issue here, and distinguish them from true small clauses. This then establishes anaphora as a reliable diagnostic of small clause status. True small clauses are always opaque domains for anaphora, and if some *NP–XP* sequence is not opaque for anaphora, it cannot be a small clause.

4.4 Summary

To sum up this section, arguments that have been presented in the literature for small clause analyses are actually problematic for those analyses (adverbial modification), or are not telling (subextraction). Anaphora converges with depictive secondary predicates to argue against small clause analyses of the constructions under investigation here.

5 Conclusion

This paper has shown that depictive secondary predicates are incompatible with the premises of small clause analyses of the phenomena discussed here. Facts that have been used to motivate small clause analyses, like subextraction and adverbial modification, actually do not support those analyses. In contrast, constituting an opaque domain for anaphora seems to be a fairly reliable diagnostic of small clauses. This diagnostic converges with the facts from depictive secondary predicates to rule out small clause analyses of resultative constructions, caused motion constructions, particle verb constructions, and double object constructions, as well as prepositional dative constructions and *put*-type verbs. At various points I have also pointed out that the facts argue against a small clause analysis of verbs like *open* and *close*, too. The facts indicate that small clause analyses of all of these phenomena are on the wrong track and should be abandoned.

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