Agent entailments induce manner properties: evidence from verbs of killing*

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July 30, 2019

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Abstract

Rappaport Hovav and Levin (2010) argue that verbs fall into two classes, i.e. result verbs (e.g. *kill*), which encode a result state, and manner verbs (e.g. *poison*), which encode a manner of action. Crucially, though, a single verb cannot encode both a manner of action and a result state. Following Beavers and Koontz-Garboden (2012), I argue that such limitation on possible verb meanings is contrary to fact. I contend that what I call *murder* verbs (i.e. *murder*, *slay*, *slaughter*, *massacre* and *assassinate*) encode both a manner of action and a result state. More specifically, *murder* verbs encode an intentional action that is carried out with the intention to bring about the result state of *death*.

Keywords: *lexical semantics, verb meaning, intentionality, manner, result.*

1 Introduction

Over the last twenty-five years, Levin and Rappaport Hovav (1991, 2006, 2013, 2014), Rappaport Hovav and Levin (1998, 2010), Rappaport Hovav (2017) and Levin (2018) have been arguing that eventive verbs fall into two wide semantic classes: manner verbs (1a), which encode the manner in which some action is carried out, but not any result state from that action, and result verbs (1b), which encode a result state, but not the manner in which the result state is attained.

(1) a. Manner verbs: *run*, *swim*, *blink*, *sweep*, *poison*, *wipe*, *scrub*, etc.
b. Result verbs: *break*, *kill*, *clean*, *destroy*, *arrive*, *go*, *shatter*, etc.

*I am grateful to several people for our discussions which turned out to be really helpful for the development of the present paper. In this respect, I wish to thank Jaume Mateu, Toni Bassaganyas-Bars, Vítor Míguez and Alexandra Spalek. I am especially grateful to Josep Maria Fontana and Louise McNally for reviewing earlier versions and for providing valuable comments which were crucial to improving the final version. This research was supported by the grant FFI2016-76045-P (AEI/MINEICO/FEDER, UE) and by an ICREA Academia award to Louise McNally. All remaining errors are my own.

Rappaport Hovav and Levin (2010) (hereafter, RHL) strongly argue that a simplex verb cannot encode both meanings, i.e. a single (nonderived/monomorphemic) verb cannot express both a manner of action and a result state. This restriction in verb meaning was formalized as Manner/Result Complementarity (hereafter, MRC).[1]

(2) Manner/Result Complementarity: Manner and result meaning components are in complementary distribution: a verb lexicalizes only one. (Levin and Rappaport Hovav 2013: 50)

RHL argue that MRC is a consequence of how roots are inserted into the event structure, i.e. a single root can only be inserted as a modifier of the so-called ACT predicate (3a) (i.e. manner), or as an argument of the so-called BECOME predicate (3b) (i.e. result) (see Rappaport Hovav and Levin 1998).

(3) a. [x ACT <ROOT>]
b. [[x ACT] CAUSE [y BECOME <ROOT>]]]

Crucially, though, RHL argue that roots are inserted either as modifiers or arguments depending upon their root ontology, manner and result taken to be root ontologies.[2] Thus, MRC also holds as a restriction on the entailments that a root can encode, as a single root either encodes a manner of action or a result state, but never both.

MRC, however, has been challenged and shown to not hold categorically (Férez 2007; Zlatev and Yangklang 2004; Goldberg 2010; Husband 2011, and see Levin and Rappaport Hovav 2013, 2014; Rappaport Hovav 2017 for some responses). An important contribution in this respect is that of Beavers and Koontz-Garboden (2012) (see also Beavers and Koontz-Garboden 2017) (hereafter, BKG) as they argue that what they call manner of killing verbs (i.e. *drown*, *guillotine*, *hang*, *electrocute* and *crucify*) counterexemplify MRC since manner of killing verbs encode both a manner of action and a result state. However, Rappaport Hovav (2017) has recently argued that manner of killing verbs are not relevant to MRC in that they are denominal, and therefore morphologically derived despite not displaying any overt

[1] RHL (p. 26) insist that MRC does not apply to verbs *per se*, but to roots. The motivation for this claim comes from the structure of verbs in other languages (e.g. Lakhota) in which a single verb can encode both manner and result but they are clearly bimorphemic in that prefixes and stems combine to form complex verbs (see Rappaport Hovav 2017). In this respect, RHL (p. 23) understand root as "[...] an idiosyncratic component of verb meaning, [...]." which is "common to a wide variety of uses of a verb" (Rappaport Hovav 2017: 83). More specifically, they argue that "each root has an ontological categorization, chosen from a fixed set of types, including state, result state, thing, stuff, surface/container, manner, instrument." (p. 23-24). While it is reasonable to assume that roots have an ontological classification which is relevant when determining grammatical properties (Rappaport Hovav and Levin 1998 *et seq.*), this does not necessarily imply that manner and result cannot be part of the entailments of a single root.

[2] For root ontologies see Rappaport Hovav and Levin (1998), Reinhart (2002), Ramchand (2014), Alexiadou, Anagnastopolou, and Schäfer (2015), Rappaport Hovav (2017), amongst others. Instead, the view that roots have an ontological classification relevant when determining grammatical properties is rejected in Borer (2003, 2005), Acquaviva (2008, 2014), Mateu and Acedo-Matellán (2012), Acedo-Matellán and Mateu (2014), amongst others.

morphology (i.e. *guillotine*)[3] or they are not monomorphemic (i.e. *crucify, electrocute*), and therefore irrelevant to MRC as this is a restriction on root meaning. In a similar vein, Rappaport Hovav argues that *drown* does not encode any manner of action, but only a result state, and therefore it does not counterexemplify MRC.

In the present paper, following BKG, I focus on the simplex verbs of killing *murder*, *slay*, *slaughter*, *massacre* and *assassinate* (hereafter, *murder* verbs) in order to argue that MRC does not hold as a restriction on possible verb meanings; I contend that *murder* verbs encode both a manner of action and a result state despite being simplex, i.e. monomorphemic and nonderived, therefore providing further evidence in favor of BKG's claim that MRC is contrary to fact. Thus, the analysis of *murder* verbs as manner-result verbs has consequences for the role that intentionality plays within the study of verb meaning since intentionality appears to be of more importance than previously acknowledged, as I argue that agent entailments, i.e. performing an intentional action, are sufficient to induce manner properties.[4]

This paper is structured as follows. In Section 2, I briefly summarize the proposal by RHL to equate manner verbs with nonscalar changes and result verbs with scalar changes. In the same section, I briefly summarize Rappaport Hovav's (2017) argument regarding the fact that the series of manner of killing verbs by BKG are not relevant for MRC.[5] In Section 3, I will discuss first some preliminary data and then use the result and manner diagnostics as implemented in both RHL and BKG in order to show that *murder* verbs encode both a manner and a result, and therefore counterexemplify MRC. I argue that then that encoding intentionality, as in *murder* verbs, is enough for a verb to encode a manner of action, i.e. that agent entailments are sufficient to induce manner properties. Section 4 concludes the paper.

2 Manner and Result

RHL argue that the crucial difference between result and manner verbs is that whereas the former encode scalar changes, the latter encode nonscalar changes. In this respect, a scale is formed by a set of degrees (which specify measurement values) on a specific dimension, i.e. width, length, alive-dead etc., with an ordering relation.[6] More specifically, a scalar change "[...] involves a change in value of this attribute in a particular direction along the scale, with the direction specified by the ordering relation." (RHL p. 28). For instance, the verb *die* is related to an attribute (i.e. *dead*) which holds of an argument when it undergoes a dying

[3] See Kiparsky (1997) for an analysis of verbs named after a specific machine.

[4] I use *encode* as in Levin and Rappaport Hovav (2013: 49) to make reference to those "[...] facets of meaning that are strictly contributed by the verb [...]." Thus, this includes a verb's core meaning which is consistent across all uses of such verb, i.e. regardless of context, a verb always includes its specific entailments.

[5] BKG also include two other verb classes (i.e. ballistic motion and manner of cooking verbs) which they claim to be counterexamples to MRC as well. However, verbs of killing are the main case study they consider when arguing against MRC. Thus, I focus on this verb class and center on the idea that agent entailments are enough to induce manner properties, as I show that this is the case in *murder* verbs.

[6] For scalar change and scale structure see Hay et al. (1999), Kennedy and McNally (2005), Beavers (2008, 2011), Kennedy and Levin (2008), Rappaport Hovav (2008, 2014), Rappaport Hovav and Levin (2010), Beavers and Koontz-Garboden (2012, 2017), amongst others.

event. Thus, a result relates to a change in some property of a patient. Roughly put, when a patient participates in a change of state event (i.e. a scalar change), at the end of it, there is a modification in the degree of some value/property of the patient (e.g. a soup becoming cooler/warmer after an event of cooling/warming).

In contrast, nonscalar changes are defined as "any changes that cannot be characterized in terms of an ordered set of values of a single attribute." (RHL p. 32). Manner verbs thus encode nonscalar changes since they relate to complex combinations of various changes, but these complex combinations do not constitute an ordered relation and therefore no scalar change follows (e.g. *run*, *walk*, *exercise*). In short, "a manner is a complex sequence of separate changes that collectively define an action, but do not necessarily add up to a single cumulative change along any one dimension." (BKG p. 343).

In the next section, I briefly review BKG's manner of killing verbs as counterexamples to MRC and summarize Rappaport Hovav's (2017) argument that these verbs are not relevant to such complementarity since, as discussed above, they are not monomorphemic or morphologically simple and therefore irrelevant to MRC, since this is taken to be a complementarity on root meaning.

2.1 Manner of killing verbs

Verbs of killing are often divided into those that only encode a result state, but not a manner of killing (e.g. *kill*), and those that encode a manner of killing, but not a result state (e.g. *poison*) (see Levin 1993). However, regarding some manner of killing verbs, Levin (1993: 232) herself acknowledges that "[...] as means verbs, these verbs need not entail that the action they denote results in death; however, some of them do appear to have this entailment." Drawing on Levin's disclaimer, BKG argue that some of the verbs previously classified as manner by Levin encode both a result and a manner of action, i.e. what they call manner of killing verbs. Nonetheless, as pointed out before, Rappaport Hovav (2017) argues that manner of killing verbs do not actually pose a problem for MRC if "MRC is a constraint on what is encoded in roots" (Rappaport Hovav 2017: 83), since they are not monomorphemic (i.e. *electrocute*, *crucify*) or morphologically simple (i.e. *guillotine*). In this respect, Rappaport Hovav (p. 84) points out the following:

> An analysis in the case of the first two verbs [*crucify*, *electrocute*] would determine the contribution of each morpheme to the meaning of the verb, and in the case of the latter [*guillotine*], the contribution of the nominal root and the derivation of the verb.

Regarding *drown*, Rappaport Hovav argues that it does not encode a manner of action, but only a result state.[7] Rappaport Hovav argues that *drown* does not encode any manner of action in that, among other things, it permits the anticausative in English and natural forces as causers, where the notion of an action (of an agent) is irrelevant.

[7]Rappaport Hovav argues that the result state is not death, by rather death is an inference from the context, as "not all uses of the root √DROWN involve a manner of killing" (p. 83).

(4) a. John drowned.
b. The water drowned him. (adapted from Rappaport Hovav 2017: 85)

Last, regarding *hang*, BKG (p. 338) argue that it encodes a result since it is contradictory to utter that *#John just hanged Joe, but nothing is different about him*. They argue that what exactly the result is is not important; the important fact, according to them, is that it involves some result, and they add "we believe it to be death" (p. 339). Following Rappaport Hovav (2017), I argue that death in *hang* is an inference from the context in that, amongst other things, someone can survive being hanged.

(5) Iranian man who survived execution [hanging] must be hanged again, judges say.[8]

In addition, *hang* is compatible with a *to death* resultative, whereas verbs of killing that clearly encode this result do not permit it (e.g. *murder*, *slay*, *assassinate* etc.). Although BKG argue that some of their manner of killing verbs allow *to death* resultatives redundantly specifying death, these verbs permit *to death* resultatives since they do not appear to encode the death of their patient; rather, this is an inference from the context.

(6) a. #John murdered/slew/assassinated the president to death.
b. They were hanged to death.[9]
c. Man 'electrocuted to death' when cherry picker hits power lines.[10]

This is in line with what Arsenijevic (2010: 18) argues regarding BKG's manner of killing verbs:

> This [the result of death] is rather a matter of inference relying on real world knowledge, than a real entailment of the verb. In other words, manner of killing verbs are certainly manner-incorporating verbs, but the result incorporation is not so certain.

In a similar vein, it could be argued that, as BKG argue for *crucify*, the result in *hang* could be related to a change of location. However, while it seems to be the case that in order to *crucify* somebody they must be placed in a cross (as BKG note), and therefore a change of location follows, it is not clear whether this is also the case with *hang*.

Having summarized why manner of killing verbs have been claimed not to be relevant for MRC, in the next section I argue that *murder* verbs pattern as both manner and result verbs, and therefore counterexemplify MRC. I first discuss some preliminary data on *kill* and *murder* verbs as they are relevant for the analysis of *murder* verbs as manner-result encoding verbs. I then turn to the result and manner diagnostics as implemented in both RHL and BKG in order to show that *murder* verbs are simplex verbs encoding both a manner of action and a result state. I claim then that agent entailments (i.e. intentionality) appear to be sufficient to induce

[8] https://www.theguardian.com/world/2013/oct/16/iranian-man-execution-hanged-alireza-meth
[9] https://www.theguardian.com/world/2016/mar/25/malaysia-hangs-three-men-for-in-secretive-execution
[10] http://metro.co.uk/2017/11/21/man-electrocuted-to-death-when-cherry-picker-hits-power-lines-7097446/

manner properties, since I argue that such entailments are what induce the manner properties in *murder* verbs.

3 The semantics of *murder* verbs

It has been long acknowledged that *kill* does not impose any kind of selectional restrictions upon its subject, whereas *murder* verbs do. This has been said to follow from the fact that whereas verbs such as *murder* entail intentionality, *kill* does not (Talmy 1985; Dowty 1991; Lemmens 1998; Van Valin and Wilkins 1996; Van Valin, 2005; Rooryck and Wyngaerd, 2011; Grano 2016; Solstad and Bott 2017, *i.a.*). Thus, *murder* verbs require their subject to be intentional, whereas *kill* does not. This is shown in the following examples, in which the presumed intentionality in *kill* can be either canceled (7) or reinforced (8) (since it is an inference from context), something not possible with *murder* verbs, since intentionality, in this case, is an entailment of such verbs.

(7) a. John killed Tom unintentionally/by accident.
b. #John murdered/slew/assassinated the president unintentionally/by accident.
c. #John massacred/slaughtered the civilians unintentionally/by accident.

(8) a. John killed Tom intentionally/on purpose.
b. #John murdered/slew/assassinated the president intentionally/on purpose.
c. #John slaughtered/massacred the civilians intentionally/on purpose.

Roughly speaking, then, intentionality is understood in the present paper as a verb entailment that relates to performing an action intentionally (i.e. the entity denoted by the subject is volitional in performing an action with a specific intention, in this case, the causing of the death of the entity denoted by the patient). Thus, as shown in (7) and (8), and further illustrated below, intentionality is part of the lexical semantics of *murder* verbs, as it is an entailment, but not of *kill*.

(9) a. John killed Tom, but didn't intend to/but wasn't his intention.
b. #John murdered/assassinated/slew the president, but didn't intend to/but wasn't his intention.
c. #John slaughtered/massacred the civilians, but didn't intend to/but wasn't his intention.

In the next two sections, I make use of the result and manner diagnostics as implemented in RHL and BKG in order to show that *murder* verbs encode both a manner of action and a result state, which contrasts with *kill* in that it only encodes a result state. Contra RHL, this shows that manner and result can be part of the lexical entailments of some roots.

3.1 Encoding result states

The first result diagnostic relates to the fact that, since result verbs encode scalar changes, if a participant engages in an event involving a change along a scale, at the end of the event, the participant must have an altered degree of some property/value. Thus, denying this change results in a contradiction with result verbs as they encode a result state (RHL; BKG).[11]

(10) a. #John just broke the vase, but it is not broken/but nothing is different about it.
b. #John just shattered the bottle, but it is not shattered/but nothing is different about it.
c. #John just destroyed the city, but it is not destroyed/but nothing is different about it.

In contrast, the same diagnostic with manner verbs does not result in a contradiction, as only a manner of action, but not a result state, is encoded.

(11) a. John just wiped the table, but it is not clean/but nothing is different about it.
b. John just hit the wall, but it is not dented/but nothing is different about it.
c. John just swept the floor, but it is still dirty/but nothing is different about it.

BKG (p. 338) note that "these diagnostics are insensitive to manner encoding; a verb passing one of these tests may also encode manner". Thus, this diagnostic simply picks out verbs which encode a result, regardless of the fact that the same verb could also encode a manner of action.

In this respect, *murder* verbs (together with *kill* (cf. *#John just killed Tom, but he is not dead/but nothing is different about him*)) pattern like canonical result verbs in that it is contradictory to claim that nothing is different about the patient or that the patient referent does not die after the event, i.e. that the entity denoted by the patient does not undergo the result state named by the verb.

(12) a. #John just murdered/slew/assassinated the President, but he is not dead/but nothing is different about him.
b. #John just slaughtered/massacred the civilians, but they are not dead/but nothing is different about them.

The second result diagnostic follows from RHL's claim that result verbs permit a narrower range of possible result phrases, whereas manner verbs tend to allow a wider range, and this is taken as a diagnostic by RHL to tell manner and result verbs apart.[12]

[11] In addition to the original diagnostic by RHL, i.e. denying that the result state named by the verb holds of a patient, I also make use of the diagnostic as implemented in Beavers (2011), namely *something is different about x*, in order to capture that a participant has undergone a more general change. As noted by BKG (p. 357), the original diagnostic by RHL could be subject to the criticism that this diagnostic does not show that all result verbs encode the "same notion of result." Hence, the *something is different about x* diagnostic by Beavers (2011) identifies a notion of change/result which is not specific to a particular verb.

[12] As Goldberg (2001) already notes, result phrases with result verbs may not be as restricted as initially thought. For instance, result path phrases are compatible with result verbs:

Roughly put, this difference follows from the fact that result verbs already have a specific result state in their lexical semantics, whereas manner verbs do not.[13] Thus, manner verbs permit a wide range of result phrases predicated of their object (13a), as well as result phrases predicated of a nonselected object (13b) or predicated of a fake reflexive (13c).

(13) a. John wiped the table clean/dry/shiny/spotless.
b. John ran his shoes ragged.
c. John laughed himself silly.

This contrasts with result verbs since the only result phrases they permit are those that further specify the result state encoded by the verb (14d). Thus, result verbs do not permit result phrases that introduce a new result state different from the one encoded by the verb (14a) and result phrases predicated of a nonselected object (14b) or of a fake reflexive (14c).

(14) a. *John broke the vase off the table/valueless.
b. *Kim dimmed her eyes sore. (BKG p. 340)
c. *John broke himself tired.
d. John broke the vase into pieces/in half/open.

In this respect, *murder* verbs also pattern like result verbs in showing limited result phrases.

(15) a. *John murdered/assassinated/slew the President into pieces/off the stage.
b. *John murdered/assassinated/slew his hands bloody.
c. *John murdered/assassinated/slew himself tired. (adapted from Goldberg 2001)

(16) a. *John slaughtered/massacred the civilians into pieces/up in the air.
b. *John slaughtered/massacred his hands bloody.
c. *John slaughetered/massacred himself tired.

The last result diagnostic relates to the claim by RHL that manner verbs permit more argument realization options than result verbs as they allow nonselected objects as well as the deletion of the object, whereas result verbs cannot. This is shown in (17) where we can see that manner verbs permit nonselected objects (e.g. fake reflexives (17a), the *way*-construction (17b), etc.) and constructions which involve the deletion of the object (e.g., *out-* prefixation (17c)), whereas this is not generally possible with result verbs (18).

(17) a. John laughed himself silly.
b. John kicked his way into the concert.
c. John outscrubbed Tom.

(i) a. John broke the eggs into the bowl.
b. The machine melted the chocolate into the bowl.

[13] According to Rappaport Hovav (2008: 22) this restriction in limited result phrases is due to the fact that verbs "with no lexically specified scale [manner verbs] can appear with a variety of results. [...] In contrast, verbs which have lexically specified scales [result verbs] [...] are very restricted in the kinds of resultatives they can appear with."

d. All last night, John swept/scrubbed.

(18) a. *The toddler broke his hands bloody. (RHL p. 22)
b. ??John destroyed his way into the concert.
c. ??Kim outshattered the other bottle-shatterer. (BKG p. 339)
d. *All last night, John broke/shattered.

As pointed out by BKG, the motivation for this claim can be found in Rappaport Hovav (2008: 24) as she argues that object deletion (and also nonselected objects) in result verbs is not possible because "[...] scales require that the participant whose property is measured out by them is overtly realized."[14]

In this respect, *murder* verbs pattern like result verbs in that they generally disallow the deletion of the object or nonselected objects (as already shown in examples (15) and (16), repeated here as (20)-(21)).

(19) a. *All last night, John murdered/slew/assassinated.
b. *All last night, John slaughtered/massacred.

(20) a. *John murdered/slew/assassinated his hands bloody.
b. *John murdered/slew/assassinated himself tired.

(21) a. *John slaughtered/massacred his hands bloody.

[14]As I note in Ausensi (2019) (also see Ausensi to appear), however, result verbs can appear with some nonselected objects, contra RHL. More specifically, in Ausensi (2019) I note that result verbs frequently appear in the *way*-construction, i.e. which is a case of a nonselected object construction (see Levin and Rapoport 1988; Salkoff 1988; Jackendoff, 1992; Marantz, 1992; Tenny, 1994; Goldberg, 1995, 1996; Israel,1996; Kuno and Takami, 2004, *i.a.*), as illustrated in the following examples (from Ausensi 2019)

(i) a. The cold froze its way into her skull and eye sockets like a razor.
b. Several more explosions ripped their way along the street, blowing a group of old people into a bloody heap.
c. Radiation and chemo tore their way through Jeff, sores opened up all over his body.
d. Over 800 lightning strikes this afternoon shattered their way into central California.
e. The heat of the 1 million candle stick powered light melted its way through the resin floor of the ambulance.
f. [...] a fire which burnt its way into the computer networks room from outside.

Murder verbs are also found in the *way*-construction, and therefore showing that they pattern like canonical result verbs in permitting this type of nonselected object.

(ii) a. Spartacus wanted to engage Crassus in battle, slaughtering his way toward the general's position. (from Ausensi 2019)
b. He murdered his way to the head of the Cult of Frost. (from *Corpus of Contemporary American English*
c. The superior forces of the North conquered and massacred their way through the jungles. (from *Google Books*).

In short, in Ausensi (2019) I argue that result verbs can permit some nonselected objects, thus showing that this result diagnostic needs to be revisited since result verbs appear to be more elastic with regard to their argument realization options than previously claimed.

b. *John slaughtered/massacred himself tired.

In short, it has been shown that *murder* verbs pattern like canonical result verbs when subject to the diagnostics by RHL. In the next section, I make use of the manner diagnostics as implemented in BKG in order to argue that *murder* verbs also encode a manner of action. More specifically, I contend that *murder* verbs encode an intentional action that is performed by the entity denoted by the subject with the intention to bring about the result state of *death* of the patient. Such a manner of action, however, is not encoded by the canonical result verb *kill*, as such an action (or any action) does not have to take place in order to bring about the result state of *death*.

3.2 Encoding manners of action

The first manner diagnostic BKG propose relates to selectional restrictions manner verbs impose on their subjects. In this respect, BKG (p. 344) argue that if a verb encodes a manner of action then it restricts the range of subjects it can appear with since "result but not manner verbs require no specific action of their subjects." This is shown in (22) in which canonical result verbs such as *break* or *destroy* do not place selectional restrictions upon their subject, whereas canonical manner verbs such as *wipe* and *sweep* do, as shown in (23).[15]

(22) a. John accidentally broke/destroyed the vase.
b. The earthquake broke/destroyed the vase.
c. The hammer broke/destroyed the vase.

(23) a. #John accidentally wiped/swept the floor.
b. #The wind wiped/swept the floor.
c. #The mop wiped/swept the floor.

Roughly put, if a verb encodes some manner of action then that verb restricts the types of subjects it permits according to that manner of action (see Beavers and Koontz-Garboden 2017), i.e. a verb like *wipe* only permits subjects that denote entities capable of carrying out the action denoted by the verb, in this case, wiping. Result verbs are not restricted in this sense, as no manner of action is encoded.

In this respect, *murder* verbs pattern like manner verbs since they restrict their subjects depending on the (manner of) action encoded: only volitional entities capable of performing an intentional action are permitted as subjects. This constrasts with *kill*, since this verb does not encode any manner of action and therefore it does not impose any kind of selectional restrictions upon its subject. Thus, *kill* can appear with nonintentional causers (24a), natural forces (24b), general causers (24c) and instruments (24d) as subjects, whereas this is not possible with *murder* verbs (25)-(26).

(24) a. John killed Tom by accident/unintentionally.

[15] BKG (p. 244) note that there may be exceptions to this. For instance, certain machines or instruments can appear with manner verbs, especially when the instrument is being controlled by the agent, as in *I like how this mop scrubs the floor*.

b. The floods killed thousands.
c. Cancer killed two million people last year.
d. That machine weapon killed thousands.

(25) a. #John murdered/slew/assassinated the president unintentionally/by accident.
b. #The floods murdered/slew/assassinated the president.
c. #Cancer murdered/slew/assassinated every president in the US.
d. #The machine weapon murdered/slew/assassinated the president.

(26) a. #John slaughtered/massacred the civilians unintentionally/by accident.
b. #The floods slaughtered/massacred the civilians.
c. #Cancer slaughtered/massacred all the citizens in that town.
d. #The atomic bombs slaughtered/massacred the civilians.

Thus, *murder* verbs pattern like manner verbs in restricting their subjects according to the manner of action encoded, this not being the case with *kill*, as no manner of action is encoded and thus no selectional restrictions arise.

The second manner diagnostic by BKG relates to what they consider to be the most prototypical kind of manner of action, i.e. moving parts of the human body when carrying out an action, what they call *actor-oriented manner*. BKG argue that if a subject is an actor, then "it should be impossible to assert that they performed the action specified by the verb and yet didn't move a muscle." (p. 345) This seems to be a correct intuition since in prototypical manner verbs the *didn't move a muscle* diagnostic results in a contradiction.

(27) a. #John ran, but didn't move a muscle.
b. #John wiped the table, but didn't move a muscle.
c. #John exercised at the gym, but didn't move a muscle.

As BKG argue, with result verbs then it should be possible to deny that any action has been performed in causing a change, as the verb encodes causation but not any (manner of) action. However, BKG (p. 345) in this respect note the following:

> If all result verbs encode is a result but not (any specific type of) action, then it should be possible to deny that action occurred. [...] But, [...] how can one cause something without acting in some way? [...] an example might be negligence –failing to act in some (expected) way to prevent a change from occurring, thereby being responsible for it.

Thus, result verbs should be compatible with the *didn't move a muscle* diagnostic, especially in a negligence context, as they lexicalize causation but not any sort of action. This is shown in (28).

(28) Jim destroyed his car, but didn't move a muscle – rather, after he bought it he just let it sit on his neighbor's lawn on cinder blocks, untouched, until it disintegrated. (BKG p. 346).

In this respect, *murder* verbs pattern like manner verbs in that it is not possible to deny that an action has been performed when bringing about the result state encoded by the verb. This contrasts with *kill* as no action is encoded and thus it is not contradictory to deny that an action has been performed.

(29) a. John killed Tom, his son, but didn't move a muscle - rather, he did not give consent to his operation on his tumor due to religious beliefs.
b. #John murdered Tom, his son, but didn't move a muscle - rather, he did not give consent to his operation on his tumor due to religious beliefs.

(30) a. John killed the president, but didn't move a muscle - rather, he refused to alert the Secret Service to the hidden bomb.
b. #John assassinated the president, but didn't move a muscle - rather, he refused to alert the Secret Service to the hidden bomb.

(31) a. John killed all the passers-by, but didn't move a muscle - rather, he failed to alert security services to the car bomb.
b. #John slew all the passers-by, but didn't move a muscle - rather, he failed to alert security services to the car bomb.

(32) a. John killed all the citizens, but didn't move a muscle - rather, he refused to warn them about the incoming hurricane.
b. #John slaughtered/massacred all the citizens, but didn't move a muscle - rather, he refused to warn them about the incoming hurricane.

As BKG argue, this does not mean that in the aforementioned scenarions John cannot be held accountable for the death of such people, but what is not possible is to express this with *murder* verbs. More specifically, BKG (p. 347) claim that "one cannot be accused of electrocuting, hanging, drowning, or crucifying someone simply by negligently failing to prevent it [...]." I propose to include here *murder* verbs: whereas one can be accused of killing someone simply by negligently failing to prevent it, as in the examples above, this is not possible with *murder* verbs.

The last diagnostic by BKG derives from the fact that most manner verbs are complex, as they encode nonscalar changes, as argued by RHL. Thus, BKG assume that complex manners should be durative, and this is taken as a diagnostic. BKG follow Beavers (2008) and the diagnostics laid out by Kearns (2000: 206) to capture durativity, namely the *take-time* diagnostic, considered to be a standard durativity test. The *take-time* diagnostic conveys an *after x time* reading with punctual events and both an *after* and a *during x time* reading with telic events with duration. Durative predicates which are atelic only have the *during x time* reading in the *spend x time* test.

Thus, BKG argue that simplex actions (i.e. simplex manners) correlate with punctuality and complex actions with durativity. This is shown in (33) (from BKG p. 348).

(33) a. It took John five minutes to blink (once). (*after* five minutes, punctual)
b. John spent five minutes running. (*during* five minutes, durative)

Murder verbs encode a two-point scale, i.e. alive-dead, and, therefore, they are expected to be punctual, since as Beavers (2008) shows, scales which are open typically involve durative predicates, whereas closed scales (i.e. two-point scales) involve punctual predicates by default (e.g. *break*). More precisely, BKG (p. 348) argue the following:

> "[...] if we know independently that the change for some verb is simplex, so that the scale has only two points, then if the predicate is durative, it must be because there is a complex manner."

This seems to be the case with *murder* verbs, as they have a *during* and an *after* reading, proving that the events these verbs describe are durative despite encoding two-point scales.

(34) a. It took John 5 minutes to murder/assassinate/slay the president. (*after/during* 5 minutes)
b. It took John 5 minutes to slaughter/massacre all the citizens. (*after/during* 5 minutes)

Murder verbs then pattern like manner verbs in this last diagnostic as well in that the events they describe are durative, despite encoding nongradable scales. The change of state encoded by *murder* verbs is simplex, since the scale has only two points, but they are durative, which strongly suggests that they encode a complex manner as well. Roughly put and following BKG, the result state in *murder* verbs, i.e. death, is nongradable and therefore this result cannot be contributing the durativity. Consequentially, the manner of action encoded in *murder* verbs is actually the component which contributes the durativity. This in line with the observation by Beavers and Koontz-Garboden (2017: 862) with regard to the fact that "some manners force a predicate to be durative even if the scale is nongradable."

In short, I have shown that *murder* verbs, when making use of the diagnostics by both RHL and BKG, pattern like manner and result verbs. More specifically, *murder* verbs pattern like canonical manner verbs (e.g. *run, wipe*) in restricting their subjects depending on the manner of action encoded: only volitional entities capable of carrying out an intentional action are permitted. Further, *murder* verbs pattern like manner verbs since it cannot be denied that an action has taken place when bringing about the result state encoded by the verb. Lastly, *murder* verbs describe durative events despite encoding nongradable scales.

The analysis of *murder* verbs as manner-result encoding verbs poses a problem for MRC since *murder* verbs are simplex verbs that have both manner and result entailments encoded in a single root. Consequently, I conclude that agent entailments, i.e. intentionality in this case, are sufficient to induce manner properties, as these agent entailments are responsible for inducing the manner properties in *murder* verbs.

Lastly, an important caveat is in order: following what BKG (p. 349) note for manner of killing verbs, it could be argued that *murder* verbs encode a manner which is somewhat different from the pure manner encoded by canonical manner verbs (e.g. *run, wipe*). However, BKG (p. 349) note the following in this respect:

> [The diagnostics in BKG] were rooted in canonical manner and result verbs, and thus it seems clear that the relevant components that give rise to these behaviors are the same. [...] these verbs [manner of killing verbs] really do encode exactly the type of content found in both pure manner and pure results.

Thus, in one of its possible many senses, manner simply relates to carrying out an action, and this sense is also encoded in canonical manner verb such as *run*, *wipe* or *sweep*. Of course, the manner meaning can be more complex in other verbs, but the canonical manner component stays constant, i.e. that of performing an action. Other manner verbs such as *run* or *swim* have a more detailed manner since they encode an action (in this case, a manner of movement) in a specific way (running differs from jogging, walking and swimming since the movement of the legs and hands and pace are different). In this respect, RHL (p. 33) note that "verbs of non-scalar change [manner verbs] need not always be so specific about the precise changes [manners] they involve." Hence, manner verbs can encode specific manners of actions or leave this manner of action not so specified, yet regardless of the degree of specification, manner verbs always encode an action.

In a similar vein, one could object to the claim that *murder* verbs encode a manner of action by arguing that it is possible to provide "actual" manners of action (i.e. murder someone by poisoning/shooting/hanging/etc. them). I argue that this is parallel to the fact that one can also provide more specific manners with some canonical manner verbs such as *exercise* (e.g. exercise by running/swimming/jumping/etc.). However, the fact that *exercise* can be modified by more specific manners does not mean that it does not encode a manner of action; it simply tells us that its manner is highly unspecified (as with other manner verbs like *work*). As a matter of fact, RHL (p. 33) note that the manner of action in *exercise* is not so specific:

> The verb *exercise*, for example, requires an unspecified set of movements, whose only defining characteristic is that they involve some sort of activity, typically physical, but on occasion mental.

Thus, this low degree of specificity of the manner of action is found in *murder*. Although it is true that you can murder someone by poisoning/shooting/crucifying/etc. them, these means are just extra modifiers of the manner of action encoded, i.e. carrying out an intentional action, and they simply provide the specific means the subject employs when performing the intentional action encoded by the verb.

In short, I have isolated a manner of action that is common to all *murder* verbs. However, this does not exclude the possibility that some *murder* verbs have, apart from this unspecified manner of action, more specific lexical entailments regarding the manner of action. For instance, it seems that *slay* not only refers to a manner of action related to an intentional action, but it also seems to involve violence or even the use of a sharp object.

(35) ??John slew the dragon by poisoning it (cf. John slew the dragon with this magic sword).

Similarly, *massacre* also appears to have some more specific lexical entailments than simply encoding an intentional action, i.e. it also refers to magnitude of killing (Husband 2011).

(36) #John massacred Tom/the citizen (cf. John massacred all the men/all the citizens).

In short, as expressed above, what is relevant is whether a verb encodes an action, and this is the case for *murder* verbs (and for any other manner verb) as I have argued, employing the diagnostics as laid out in BKG and RHL, that *murder* verbs are simplex verbs and yet have both manner and result entailments.

4 Conclusion

This paper has focused on what I have called *murder* verbs in order to argue that it is possible for some simplex verbs to encode both a manner of action and a result state. Subsequently, this poses a problem for MRC as a constraint on the entailments that can be encoded in a single root, as I have argued that *murder* verbs encode a manner of action, i.e. an intentional action, and a result state, i.e. the death of their patients, which contrasts with *kill* as it only encodes a result state.

The analysis of *murder* verbs as manner-result encoding verbs has consequences for the role that intentionality and agent entailments play within the analysis of verb meaning, as intentionality appears to have more significant consequences than previously acknowledged. As it has been argued, encoding intentionality, i.e. agent entailments, appears to be sufficient to induce manner properties, since such entailments are responsible for inducing the manner properties in *murder* verbs.

Lastly, I agree with BKG and Mateu and Acedo-Matellán (2012) that MRC does hold at the event structure level in that a single root cannot be inserted into two different positions, or the same event structure cannot have more than one root. Thus, at this level there exists a complementarity between manner and result. However, the data seem to show that, contra RHL, manner and result can be both part of the lexical entailments of some roots. This strongly suggests that MRC is contrary to fact, as roots generally encode a result state by leaving unspecified how such result state was brought about or they encode a manner of action without specifying any result state from that action, but there are clearly some roots that encode a manner of action that brings about a result state.

5 References

Acedo-Matellán, V. & J. Mateu. (2014). From syntax to roots: A syntactic approach to root interpretation. Alexiadou, A., H. Borer & F. Schäfer (eds.), *The Syntax of Roots and the Roots of Syntax*, Oxford University Press, Oxford, pp. 14-32.

Acquaviva, P. (2008). *Lexical plurals: A morphosemantic approach*. Oxford: Oxford University Press.

Acquaviva, P. (2014). The roots of nominality, the nominality of roots. Alexiadou, A., H. Borer & F. Schäfer (eds.), *The Syntax of Roots and the Roots of Syntax*, Oxford University Press, Oxford, pp. 33–56.

Alexiadou, A., E. Anagnostopoulou & F. Schäfer. (2015). *External arguments in transitivity alternations: A layering approach*. Oxford: Oxford University Press.

Arsenijevic, B. (2010). On the syntactic nature of manner-incorporation. [Ms].
Ausensi, J. (2019). Revisiting the elasticity of verb meaning and the *way*-construction in English. Espinal, M. T., E. Castroviejo, M. Leonetti, L. McNally & C. Real-Puigdollers (eds.), *Proceedings of Sinn und Bedeutung 23*.
Ausensi, J. (to appear). Unaccusativity and the *way*-construction in English. *Linguistic Analysis* (Special Issue)
Beavers, J. (2008). Scalar complexity and the structure of events. J. Dölling, T. Heyde-Zybatow & Martin Schäfer (eds.), *Event structures in linguistic form and interpretation*, Walter de Gruyter, pp. 245-265.
Beavers, J. (2011). On affectedness. *Natural Language and Linguistic Theory* 29, pp. 335-370.
Beavers, J. & A. Koontz-Garboden. (2012). Manner and result in the roots of verbal meaning. *Linguistic Inquiry* 43:3, pp. 331-369.
Beavers, J. & A. Koontz-Garboden. (2017). Result verbs, scalar change, and the typology of motion verbs. *Language* 93:4, pp. 842-876.
Borer, H. (2003). Exo-skeletal vs. endo-skeletal explanations: Syntactic projections and the lexicon. Polinsky, M. & J. Moore (eds.), *Explanation in linguistic theory*, Stanford: CSLI, pp. 31–67.
Borer, H. (2005). *Structuring sense*. Oxford: Oxford University Press.
Dowty, D. R. (1991). Thematic proto-roles and argument selection. *Language* 67, pp. 574-619.
Férez, P. C. (2007). Human locomotion verbs in English and Spanish. *International journal of English studies* 7, pp. 117-136.
Goldberg, A. E. (1995). *Constructions: A construction grammar approach to argument structure*. University of Chicago Press.
Goldberg, A. (1996). Making one's way through the data. Shibatani, M. & S. A. Thompson (eds.), *Grammatical constructions: their form and meaning*, Oxford: Oxford University Press, pp. 29-53.
Goldberg, A. (2001). Patient arguments of causative verbs can be omitted: the role of information structure in argument distribution. *Language Sciences* 23, pp. 503-524.
Goldgerg, A. E. (2010). Verbs, constructions and semantic frames. Doron, M. M. Rappaport Hovav & I. Sichel (eds.), *Syntax, Lexical Semantics, and Event Structure*, Oxford: Oxford University Press, pp. 39-58.
Grano, T. (2016). A coercion-free semantics for intend. Proceedings of the Chicago Linguistic Society 51, pp. 213-223.
Hay, J., C. Kennedy & B. Levin. (1999). Scalar structure underlies telicity in 'degree achievements'. *Proceedings of SALT 9* .
Husband, E. M. (2011). Rescuing manner/result complementary from certain death. *Proceedings of the Chicago Linguistic Society 47*.
Israel, M. (1996). The Way Constructions Grow. Goldberg, A. E. (eds.), *Conceptual Structure, Discourse and Language*, Standford, CA: CSLI Publications, pp. 217-230.
Jackendoff, R. (1992). Babe Ruth Homered His Way into the Hearts of America. Wehrli, E. & T. Stowell (eds.), *Syntax and the Lexicon. Syntax and Semantics 26*, Academic Press Inc, pp. 155-178.
Kennedy, C. & L. McNally. (2005). Scale structure, degree modification, and the semantics of gradable predicates. *Language* 81, 345-381.
Kennedy, C. & B. Levin. (2008). Measure of change: The adjectival core of degree achievements. McNally, L. & C. Kennedy*Adjectives and Adverbs: Syntax, Semantics and Discourse*, Oxford: Oxford University Press, pp. 156-82.
Kearns, K. (2000). *Semantics*. New York: St. Martin's.
Kiparsky, P. (1997). Remarks on denominal verbs. Alsina, A., J. Bresnan & P. Sells (eds.), *Complex Predicates*, Stanford: CSLI, pp. 473-499.
Lemmens, M. (1998). *Lexical perspectives on transitivity and ergativity: Causative constructions in English*. John Benjamins Publishing Company.
Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. Chicago: University of Chicago Press.
Levin, B. (2017). The elasticity of verb meaning revisited. *Proceedings of Semantics and Linguistic Theory 27*, pp. 571-599.
Levin, B. and T. Rapoport. (1988). Lexical Subordination. In *Proceedings of the Chicago Linguistic Society 24*, pp. 275-289.

Levin, B. & M. Rappaport Hovav. (1991). Wiping the slate clean. *Cognition* 41, pp. 123–151.
Levin, B. & M. Rappaport Hovav. (2006). Constraints on the Complexity of Verb Meaning and VP Structure. Hans-Martin, G., S. Beck, R. Eckardt, R. Musan & Barbara Stiebels (eds.), *Between 40 and 60 puzzles for Krifka*, Berlin: ZAS.
Levin, B. & M. Rappaport Hovav. (2013). Lexicalized meaning and manner/result complementarity. Arsenijević, B., B. Gehrke & R. Marín (eds.), *Studies in the composition and decomposition of event predicates*, Springer Netherlands, pp. 49-70.
Levin, B. & M. Rappaport Hovav. (2014). Manner and result: The view from clean. Pensalfini, R., M. Turpin & D. Guillemin (eds.), *Language Description Informed by Theory*, John Benjamins Publishing Company, pp. 337-358.
Marantz, A. (1992). The way construction and the semantics of direct arguments in English. Wehrli, E. & T. Stowell (eds.), *Syntax and the Lexicon. Syntax and Semantics 26*, Academic Press Inc, pp. 155-178.
Mateu, J. & V. Acedo-Matellán. (2012). The manner result complementarity revisited: A syntactic approach. Cuervo, M.C. & Y. Roberge (eds.), *The end of argument structure? Syntax and semantics 38*, New York: Academic Press, pp. 209–228.
Ramchand, G. (2014). On structural meaning vs. conceptual meaning in verb semantics. *Linguistic Analysis* 39, pp. . 1–2.
Rappaport Hovav, M. & B. Levin. (1998). Building verb meanings. Butt, M. & W. Geuder (eds.), *The projection of arguments: Lexical and compositional factors*, Standford, CA: CSLI Publications, pp. 97-134.
Rappaport Hovav, M. & Beth Levin. (2010). Reflections on manner/result complementarity. Doron, E., M. Rappaport Hovav & I. Sichel (eds)., *Syntax, lexical semantics, and event structure*, Oxford: Oxford University Press, pp. 21-38.
Rappaport Hovav, M. (2008). Lexicalized meaning and the internal structure of events. Rothstein, S. (eds.),*Theoretical and crosslinguistic approaches to the semantics of aspect*, Amsterdam: John Benjamins, pp. 13-42.
Rappaport Hovav, M. (2014). Building scalar changes. Alexiadou, A., H. Borer & F. Schäfer (eds.), *The Syntax of Roots and the Roots of Syntax*, Oxford University Press, pp. 259-281.
Rappaport Hovav, M. (2017). Grammatically relevant ontological categories underlie manner/result complementarity. *Proceedings of IATL 32*.
Reinhart, T. (2002). The theta system – an overview. *Theoretical Linguistics* 28, pp. 229–290.
Rooryck, J. & G. V. Wyngaerd. (2011). *Dissolving Binding Theory*. Oxford: Oxford University Press.
Salkoff, M. (1998). Analysis by Fusion. *Linguisticae Investigationes* 12:1, pp. 49-84.
Solstad, T. & O. Bott. (2017). Causality and Causal Reasoning in Natural Language. Waldmann, M.R. (eds.), *The Oxford Handbook of Causal Reasoning*, Oxford: Oxford University Press, pp. 619-644.
Talmy, L. (1985). Lexicalization patterns: semantic structure in lexical forms. Shopen, T. (eds.), *Language typology and syntactic description III: Grammatical categories and the lexicon*, Cambridge: Cambridge University Press, pp. 57-149.
Tenny, C. (1994). *Aspectual roles and the syntax-semantics interface*. Dordrecht: Kluwer.
Van Valin, R. D. Jr. & D. P. Wilkins. (1996). The case for 'effector": Case roles, agents, and agency revisited. Shibatani, M. & S. A. Thompson, *Grammatical constructions: Their form and meaning*, Oxford: Oxford University Press, pp. 289–322.
Van Valin, R. D. Jr. (2005). *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press.
Zlatev, J. & P. Yangklang. (2004). A third way to travel: The place of Thai in motion-event typology. Strömqvist, S. & L. Verhoeven (eds), *Relating events in narrative 2: Typological and contextual perspectives*, Mahwah, NJ: Lawrence Erlbaum, pp. 219–257.