Agents are anti-telic

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There are roughly three ways of defining Agents in the literature. The ***first*** one treats all external arguments as bearing a semantically underspecified θ-role, defined as a participant in a *causing* event. *Volitionality* is used to further classify this underspecified θ-role into more specific types. Agents are defined as volitional participants in causing events (Levin and Rappaport Hovav 2005: 70).

The ***second*** one suggests that Agents are simply participants in *causing* events (while Causers are *causing* events themselves) (e.g., Pylkkänen 2002). *Volitionality* has been argued as a property common to all Agents. Therefore, it is an *identifying* rather than a *defining* property of Agents.

The ***third*** one has never been explicitly formulated in the literature but is implicit in many works (e.g., Folli & Harley 2005). It suggests that Agents are participants in *act* events (while Causers are participants in *causing* events). This is illustrated in (1a), which represents the neo-Davidsonian adaptation of Rappaport Hovav and Levin's (1998) lexical semantic template for activities in (1b).

(1) a. $\lambda x \lambda e.[\text{Agent}(e, x) \ \& \ \text{ACT}(e) \ …]$ b. $[\ x \ \text{ACT}_{<MANNER>} \ ]$

This definition predicts that Agents may correlate with some identifying properties of act events. This prediction is borne out. I propose that one such identifying property of act events is *anti-telicity* (the impossibility of being licensed in telic predicates). This implies that the third definition should be preferred. I argue that Agents, as arguments licensed by act events, are also *anti-telic* and cannot appear with telic predicates. After reviewing arguments for using volitionality to identify Agents, I discuss its problems and argue that *anti-telicity* is a better identifying property of Agents than *volitionality*.

Agent/Telicity Connections. The first two definitions of Agents both use volitionality to identify Agents. This is motivated by the observation that the syntactic behavior of certain predicates varies depending on the volitionality of their external arguments. According to Demirdache and Martin's (2015) *Agent Control Hypothesis* (ACH), for a class of **telic** predicates that select Agents or Causers, they have a *zero change-of-state* reading only if their external arguments are **Agents**. In the Mandarin data (2a–b), the predicate *zhe na gen shuzhi* 'snap that branch' is telic (an achievement), as indicated by the adverbial 'in an instant,' and encodes the result that "the branch broke." (2c) shows that when the subject is *volitional* (*Xiaohong*), the predicate can be *atelic*, as indicated by the adverbial "for a long time," and the *zero change-of-state* reading is available. However, when the subject is *non-volitional* ("the big wind"), the predicate cannot be *atelic*, and only the *change-of-state* reading is available. (2) thus supports the ACH *if* Agents are identified with volitionality.

(2) a.   *Xiaohong*   yizhayandegongfu jiu   zhe-le   na gen shuzhi.   *telic*
            Xiaohong   in.an.instant   at.once   snap-PFV that CL   branch
            'Xiaohong snapped that branch in an instant.'

     b.   *dafeng*   yizhayandegongfu jiu   zhe-le   na gen shuzhi,   *telic*
            big.wind in.an.instant   at.once   snap-PFV that CL   branch
            'The big wind snapped that branch in an instant.'

     c.   *Xiaohong/*dafeng*   zhe-le   na gen shuzhi   haojiu   *atelic*
            Xiaohong/*big.wind   snap- PFV   that CL   branch   very.long
            Literally: 'Xiaohong/The big wind snapped that branch for a long time.'

Problems. Identifying Agents as *volitional* external arguments faces a few problems. ***First***, Folli & Harley (2008) point out that although the sole arguments of unergatives are often analyzed as Agents, they are not always volitional (e.g., unergatives involving involuntary bodily processes such as *sneeze*; also see Levin and Rappaport Hovav's (1995) sound emission verbs such as *whistle*). ***Second***, if Agents are all volitional, the sole arguments of unergatives should behave differently, especially with respect to *telicity*, depending on their *volitionality*. However, both *volitional* and *non-volitional* arguments of unergatives can only appear in *atelic* predicates. In Italian, unergatives select the auxiliary 'have', while

unaccusatives select 'be'. In (3a), the verb 'roll' behaves like an unergative, and since the PP 'under the table' can only be interpreted as locative in this case, and since only the *for X time* adverb is allowed, the predicate must be atelic. In (3b), the same verb behaves like an unaccusative, and since it takes a directed motion PP 'into the goal' and is only compatible with the *in X time* adverb, it must be telic.

(3) a. La   palla   ha rotolato **sotto** **il** **tavolo** per/*in un secondo. *atelic*
        the   ball   has rolled   **under** **the** **table** for/*in a   second
    b. La   palla   è   rotolata **nella** **rete** *per/in un secondo. *telic*
        the   ball   is rolled   **into.the** **goal** *for/in a   second

(4) patterns exactly with (3). While the subjects in (3) are non-volitional, the ones in (4) are volitional.

(4) a. Luisa   ha corso   **nel**   **parco** per/*in un'ora. *atelic*
        Luisa   has run   **in.the** **park** for/*in an hour
    b. Luisa   è   corsa   **a**   **casa** *per/in un'ora. *telic*
        Luisa   is run   **to** **house** *for/in an hour

An Alternative. In (2), we see two factors at play: the **volitionality** of an external argument and the **telicity** of a predicate. We can follow the first two definitions of Agents in identifying *volitional* external arguments as Agents and explore their connections to telicity, which has been argued to be problematic. Or we can identify Agents with *anti-telicity* (the impossibility of being licensed in telic predicates) and explore their connections to volitionality.

Now a caveat on the definition of anti-telicity is in order. Strictly speaking, *anti-telic* arguments only appear in *atelic* predicates, while *non-anti-telic* arguments can appear in *atelic* or *telic* predicates. However, (2–4) suggests that the relevant concept of anti-telicity is a special case in the sense that *non-anti-telic* arguments should only appear in *telic* predicates, with *anti-telic* arguments still only appearing in *atelic* predicates.

The table below illustrates the difference between the two ways of identifying Agents. [±vol], [±a-t], and [±t] stand for volitionality, anti-telicity, and telicity. Notably, volitionality and anti-telicity are doubly dissociated, with an external argument capable of being volitional without necessarily being anti-telic (see (2a) and (4b)), and vice versa (see (3a)). This implies that volitionality and anti-telicity are independent of each other, and the latter can by no means be reduced to the former.

	[–vol], [–a-t] (2b), (3b)	[+vol], [+a-t] (2c), (4a)	[+vol], [–a-t] (2a), (4b)	[–vol], [+a-t] (3a)
Ag:[+vol]	Non-Agent	Agent	**Agent**	**Non-Agent**
Ag:[+a-t]	Non-Agent	Agent	**Non-Agent**	**Agent**

Consider now the relation between Agents and volitionality under the new way of identifying Agents. (2) demonstrates that volitionality is *necessary* but *insufficient* for identifying an argument as an Agent. The ACH can then be reformulated as (5). However, the unergative pattern illustrated in (3) and (4) implies that there is no significant correlation between Agents and volitionality. (5) is then subject to lexical variation, as only certain verbs require their Agent subjects to be volitional.

(5) Only volitional arguments are allowed to be Agents.

Therefore, the pattern in (2) is also captured if Agents are identified with anti-telicity. Crucially, under this view, the problems with unergatives disappear. Both volitional and non-volitional arguments of unergatives are now Agents, and the connections between Agents and telicity are also explained.

Implications. I argue that Agents are anti-telic because they are participants in *act* events (following the third definition of Agents) and *act* events are anti-telic. In other words, Agents inherit anti-telicity from *act* events. Since anti-telicity is aspectual in nature, it would be hard to justify why Agents have this property under the first two definitions of Agents, which do not aspectually distinguish Agents from other θ-roles. This indicates that the third definition of Agents is more promising.

Conclusion. Agents are often identified with volitionality. However, this approach does not account for why volitional and non-volitional arguments of unergatives behave exactly the same and are both

typically analyzed as Agents. In contrast, identifying Agents with anti-telicity avoids this issue and readily accommodates the observed volitionality restriction with some verbs.

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