On the generalizability of subjective opinions: Predicates of personal taste and multidimensionality

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Predicates of personal taste (PPTs, e.g. *fun*, *tasty*) express an individual's (typically the 1st-person speaker's) subjective opinion–i.e., the opinion expressed by PPTs is linked to an attitude holder (Lasersohn 2005 i.a.). Crucially, Moltmann (2010) and Pearson (2013) claim that, contrary to what is often assumed, PPTs go beyond a simple 1st-person interpretation (see also Snyder 2013, Collins 2013). According to Pearson (2013:121), "PPTs such as *tasty* are used to make statements *about whether something is tasty to people in general*, based on first person experience" (emphasis added). Pearson and Moltmann formalize the generalizing force of PPTs with a generic operator, but Lasersohn (2005) argues against a genericity-based 'people in general'-type approach.

Given these disagreements about genericity with PPTs, we conducted two studies: **Exp1** assesses the presence and empirical robustness of the generalizing effect of PPTs, and **Exp2** compares them to another class of subjective adjectives (non-PPT multidimensional adjectives). To understand the source of potential generalizing effects, we manipulated the episodic vs. generic nature of the sentence, and whether it was a main clause or embedded under *think* or *find*. (We do not directly test if PPTs involve a *gen* operator. We assess their generalizing force by testing to what extent they are interpreted as applying to 'people in general,' as Pearson and Moltmann posit.)

Exp1: We manipulated (i) the generic/episodic nature of the critical PPT-containing sentences and (ii) whether the PPT-containing clause is a main clause or embedded under *think*/*find* (Table 1). Participants (48 native English speakers) saw items like ex(1), and typed in a number to indicate how many aliens share the opinion. The study had 30 targets, each about a different 'thing', described with a different PPT, presented in a Latin-Square design with 51 fillers. Nonce words and an alien planet were used to avoid bias from opinions about real things. The only cues for judging generalizability (how many share the opinion) is the linguistic packaging and the adjective.

(1) *Example item in [generic/main clause] condition. (All items had different nonce words)*

We are visiting an alien planet. You overhear one of the aliens say: **Hixes are fun.**

If we randomly select 100 aliens from this planet, how many of them do you think share this alien's opinion about hixes?[1]

Table 1.	Main clause	Embedded under *think*	Embedded under *find*
Generic	(a) *Hixes are fun.*	(b) *I think hixes are fun.*	(c) *I find hixes fun.*
Episodic	(d) *That hix was fun.*	(e) *I thought that hix was fun.*	(f) *I found that hix fun.*

Hypotheses for generic/episodic manipulation: We manipulated whether the critical sentence was episodic (simple past, *that* modifying nonce noun, (1d-f)) or generic (present tense, bare plural subject, (1a-c)), to test two competing hypotheses:

Hyp1: *Generic sentence generalize.* Given that generic sentences, by definition, involve generalization, they may be perceived as more generalizable than episodic sentences. Thus, participants should respond with higher numbers to generic than episodic sentences.

Hyp2: *Episodic sentences generalize.* In contrast, one might expect episodic sentences to be more generalizable: Generic sentences do not require the speaker to have direct experience or even to agree with the generic statement (Moltmann 2010, Pearson 2013) and allow exceptions. In contrast, episodic sentences with PPTs strongly signal that the speaker has direct experience of the relevant kind (and agrees with the sentence). These properties, combined with psychological findings that (i) direct experience has a stronger effect on attitudes than less direct information (e.g. Regan/Fazio 1977, DeLamater 2004) and (ii) humans tend to assume that one's personal experiences generalize to others (e.g. Epley/Caruso 2009), lead to the prediction that PPTs in *episodic sentences* would be viewed as more generalizable.

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[1] In episodic conditions, the question had the form "…share this alien's opinion about the hix?"
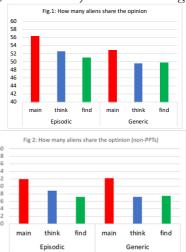
Hypotheses for matrix clause/*think*/*find*: We also test whether embedding a PPT under *I think/ thought* (1b,e) or *I find/found* (1c,f)–explicitly linking it to the speaker–influences the strength of the generalization, compared to PPTs in main clauses (1a,d). We compare two hypotheses:

Hyp3: *Self-reference increases generality.* Social psychologists have found that many aspects of the source person (e.g. trustworthiness and expertise) influence processing of attitudes (e.g. Briñol/Petty 2009). If the source person explicitly affiliates themselves with a specific opinion, this may be seen as boosting their commitment to the opinion and thus their reliability. If someone holds an opinion so strongly that they explicitly (linguistically) identify themselves as the opinion-holder, then – assuming that the generalizing a PPT claim is *rooted in the speaker's first-person experience* (as argued by Pearson and Moltmann)– a strengthened indication of the speaker's first-person commitment could strengthen the generalization as well (*'increasing generality by self-reference'*). Under this view, embedding under *I think/thought* or *I find/found* strengthens the generalizability effect of PPTs – perhaps more strongly with *find,* given that it signals subjectivity (e.g. Saebo 2009)

Hyp4: *Self-reference decreases generality.* Alternatively, *delimiting* an attitude by anchoring it to a specific individual may weaken the generalizability effect: explicit mention of one individual's mental state can signal that it is *not* a general claim. If it were general, we would not delimit it to one specific individual (e.g. according to the Maxim of quantity, Grice 1975). This '*delimiting generality by self-reference'* hypothesis predicts PPTs in main clauses that do *not* explicitly mention the speaker to be judged more generalizable than in embedded (*think/find*) contexts.

Fig.1: How many aliens share the opinion

Results: Fig.1 shows the mean number of aliens (out of 100) that people said share the opinion expressed in the critical sentence. **Episodic sentences are more generalizable than generic ones, regardless of clause structure** (lmer, z-scores, main effect, p's<.02), supporting the '*Episodic sentences generalize*' hypothesis. Clause structure also matters: **PPTs in main clauses are more generalizable than PPTs under *think* (p<.001) or *find* (p<.001**; *think* and *find* do not differ, p>.2). This holds for both episodic and generic conditions. We attribute this to *explicit self-reference weakening the generality effect* (Hyp4).

Fig 2: How many aliens share the optinion (non-PPTs)

In addition, 95% CIs suggest that when PPTs are *unembedded* (1a,d), the number of aliens judged to share the opinion is meaningfully greater than 50/100, but not in the other conditions . This suggests that PPTs, in main clauses, are interpreted **as applying not only to the speaker, but also to more than half of people/aliens in general.**

Exp2: According to Hyp2, the finding that *episodic sentences generalize* stems from PPTs in episodic sentences strongly implying 1st-person experience, unlike generic sentences which do *not* require the speaker to have 1st-person experience. Exp2 takes a closer look at this, building on claims that PPTs differ from other multidimensional adjectives such as *healthy, intelligent* in that– though both are subjective–*only PPTs* require the judge to be an **experiencer** (McNally/Stojanovic 2017, Bylinina 2014). If Hyp2 is on the right track, then–given claims that the experiencer is not a required part of the semantics of **non-PPT multidimensional adjectives**–we predict *no difference in the generalizability of episodic vs. generic sentences* with such adjectives. Exp2 tested this (48 new people) with the same design as Exp1, with PPTs replaced with non-PPT multidimensional adjectives.

Exp2 **results** (Fig.2) confirm our prediction: *Self-reference weakens the generality effect* (p's<.001) but there is **no** *episodic/generic difference* (p's>.25) with these adjectives. (Moreover, the bars in Fig1 are numerically higher than in Fig2, supporting the genericity of PPTs.) **In sum**: We provide experimental evidence for PPTs having a generalization effect in *unembedded contexts*–supporting analyses of PPTs as involving genericity–and being more generalizable in *episodic* than generic sentences. *Non-PPT multidimensional adjectives*–claimed to not require experiencer judges–do not exhibit the episodic vs. generic contrast, supporting our hypothesis that the role of 1st-person experience is critical for the generalizability of PPTs in episodic contexts.