A pragmatic defense of the uniform analysis of English 'NP$_1$ V NP$_2$ RP' resultatives as raising constructions

Two main positions have been held in the literature concerning the syntax of 'NP$_1$ V NP$_2$ RP' resultative constructions. On the one hand, following Simpson (1983), numerous studies (e.g. C&R 1992, Wechsler 1997, R&L 1998) have assumed that one must syntactically distinguish control (a.k.a. subcategorized) resultatives from raising (a.k.a. ECM or nonsubcategorized) resultatives. On the other hand, following Kayne (1985), some studies (e.g. Hoekstra 1988, Müller 2002) have claimed that all resultatives are of the raising type. We will call the former the nonuniform analysis (NUA) and the latter the uniform analysis (UA). In this paper we give further empirical and analytical evidence in favor of the UA.

Obviously Ockham's razor makes the UA a priori more appealing. However a number of observations have led most recent research on English resultatives to abandon it in favor of the NUA, most importantly C&R's claim that obligatory transitive verbs cannot occur in the raising structure. Examples like (1a) have been claimed to only have an interpretation where the object is the patient, whereas (1b,c,d) have been claimed to be ungrammatical.

(1) a. He hammered the metal flat.
b. *He hypnotized the auditorium quiet. (C&R:(37a))
c. *The bears frightened the campground empty. (C&R:(37c))
d. *The clumsy child broke his knuckles to the bone.(R&L:(6b))

R&L claim more specifically that because change of state (COS) verbs must express two arguments, their object must be a subcategorized patient.

Yet recent corpus investigation has shown that both these claims are false: (2) provides an illustrative sample of counterexamples against the more specific COS restriction, where the object of a COS verb is not understood to be the affected patient of the verb in the event. These types of examples are frequent and easy to find. Native speakers find them completely natural.

(2) a. The creatures snapped and snarled, but their most diligent struggles couldn't break them free. (COCA)
b. When it's done, Aronzon cools it[=a glass bowl] slightly and then breaks it off the punty cleanly. (COCA)
c. Ceramic is less absorbent and the briquettes can be turned over and burned clean. (COCA)
d. a chemical is needed to burn the drawing into the metal plate (COCA)
e. The warm snap had melted the trees clean. (COCA)
f. The redheaded copper gives me a stern look that I'm sure has frightened a confession out of more than one criminal. (Googlebooks)

We take these examples to show conclusively that all these verbs must be able to enter the raising structure. We further maintain that this is the only structure available. This leads to two controversial predictions: (i) classical examples of putative control resultatives are in fact semantically ambiguous, so that (1a) is predicted to allow readings where the metal is not the patient of the hammering; (ii) examples like (1b,c,d) are unacceptable rather than ungrammatical, and have a well-formed semantic interpretation.

In order to make our claim plausible we provide a pragmatic explanation, based on the notion of prototypical scenario, of why certain well-formed semantic intepretations are not in fact available. We distinguish two cases.

Case 1. V is direct transitive, but NP$_2$ is not of a semantic type selected by V. No interpretation of NP$_2$ as patient is available, some alternative scenario must be sought for. Acceptability of such examples is directly correlated to the prototypicality and accessibility of the scenario according to which the referent of NP$_2$ can be brought into the resultant state RP by means of V-ing. (This reasoning also applies to cases where V is indirect transitive.) For direct transitive verbs that require an object with a patient role, only a highly accessible alternative prototypical scenario, where the implicit patient is easily retrievable, can make the

sentence acceptable.

Case 2. V is direct transitive, with an affected patient object, and NP_2 is of a semantic type selected by V. In this case the default interpretation is that the resultant state is obtained by acting on NP_2 (i.e. the 'control' interpretation). The default can be overridden only if V-ing NP_2 is not a plausible way of obtaining the resultant state. In such cases, only a highly accessible alternative prototypical scenario can make the sentence acceptable.

Case 1 is illustrated by the classical *drink the pub dry* type examples. We explain the contrast between (2a) and (1d) by the fact that there is an easily accessible scenario according to which living creatures desire to become free when bound and that the obvious way to do that is to break whatever binds them (viz. the implicit patient). On the other hand, there is no prototypical scenario where a child breaks things resulting in the bones of his knuckles being exposed (and no well-defined implicit patient). Similar considerations explain the acceptability of (2e,f) and unacceptability of (1b,c). Case 2 is illustrated by (1a) and (2,b,c,d). Consider (2b). Though a glass bowl is something that can be broken, it is obvious that in the context of glass blowing, breaking the bowl itself is not part of the scenario, rather breaking the attachment to the punty is. On the other hand, hammering on a piece of metal to get it flat is an easily accessible scenario and this makes any other interpretation highly unlikely (cf. Hoekstra 1988's 'shadow interpretation' idea).

The idea that resultative constructions must describe prototypical scenarios is argued to derive from Grice's maxim of manner (cf. the fact that lexical causatives require more prototypical scenarios than periphrastic causatives). Clearly, the prototypicality condition is a necessary but not a sufficient condition. Other conditions are beyond the scope of this study and we will concentrate on alternations between cases one of which is a natural resultative.

We propose two methods to test the protypicality of a scenario. A first pilot study of the pairwise degree of collocation (as indicated by the COCA's collocates function) between V, NP_2, and RP shows that strength of collocation correlates with acceptability of raising interpretations. A second pilot study indicates that judgments of naturalness of scenarios expressed without the use of a resultative construction similarly correlates with the acceptability of raising interpretations. For example in *She wiped/shook/blew/broke the crumbs off the table* both pilots indicate that *wiped* is by far the most prototypical, and *broke* the least, as expected.

Finally, we provide some theoretical arguments in favor of the UA. First, assuming that AP and PP resultatives are respectively obtained through associating verbs with the constructions of *make* and *put*, we argue that these are in fact raising verbs and that resultatives inherit their raising interpretation from them. Second, because English allows indirect object control, it is hard to understand why verbs with affected indirect objects can never enter resultative constructions with the affected argument expressed as an indirect object if control structures are available for resultatives. On the other hand, the uniform raising analysis predicts this, since there is no raising to indirect object in English.

References

Carrier, J. and J.H. Randall. 1992. The argument structure and syntactic structure of resultatives. *Linguistic Inquiry* 23, 173-234. (=C&R)

Hoekstra, Teun. 1988. Small clause results. *Lingua* 74, 101-139.

Kayne, Richard S. 1985. Principles of particle constructions. In J. Guéron, H.-G. Obenauer and J.-Y. Pollock (eds.), *Grammatical Representation*, Dordercht: Foris, 101-140.

Rappaport, Malka and Beth Levin. 1998. Building verb meanings. In Butt, Miriam and Wilhelm Geuder (eds.). 1998. *The Projection of Arguments: Lexical Compositional Factors*. Stanford: CSLI Publications, 97-134. (=R&L)

Müller, Stefan. 2002. *Complex predicates : verbal complexes, resultative constructions, and particle verbs in German*. Stanford, CA: CSLI Publications.

Simpson, Jane. 1983. Resultatives. In Lori Levin, Malka Rappaport and Annie Zaenen (eds.), Papers in Lexical-Functional Grammar, Bloomington: IULC, 143-157.

Wechsler, Stephen. 1997. Resultative Predicates and Control. *Texas Linguistic Forum* 38, 307-321.