A PLEA FOR EXPLANATION

JOHN COLLINS
https://orcid.org/0000-0001-8526-3683
University of East Anglia
Department of Philosophy
United Kingdom of Great Britain and Northern Ireland
john.collins@uea.ac.uk

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Abstract: The paper responds to Duffley's hypothesis that syntactic phenomena are explicable by the ways in which constructions are used. A model of explanation will be offered, and on this basis 'tough' constructions and the general counterfunctionality of syntax will be discussed.

1. Introduction

Duffley (2020) conceives of linguistic meaning as the content expressed by tokens of signs for a community of speaker-hearers. The content is determined by the exercises of the varied cognitive capacities of the agents in their use of the signs in social interaction. Thus, Duffley rejects generative syntax and truth-conditional semantics, for both offer a certain kind of underlying univocity, whereas Duffley sees irreducible occasion-sensitive interaction.

I shall make a plea for generative-style explanation. I shall not seek to defend truth-conditional semantics; in fact, I

endorse much (but not all) of Duffley's negative assessment of traditional semantics, at least if it is conceived of as specifying contents for sentences in a way that is mostly unconstrained by features of the occasions on which tokens of the sentences are uttered (Collins, 2007, 2020). Yet this is a perfectly respectable position in linguistics and philosophy, and is the one Chomsky, at least, has long held (cf., Chomsky, 1977, 2000). At any rate, my focus will be on syntax.

2. Explanation

Duffley takes himself to be in the business of explanation:

> [A] properly articulated linguistic semantics, together with the requisite pragmatics, goes a very long way towards explaining the relational processes involved in the building of syntactic sequences in natural language (ibid., p. 44)

So, semantics in Duffley's sense explains syntax. I just don't see this. Let me first say something general about explanation before zooming in on language.

Explanation comes in many guises, but for theoretical explanation, at least one traditional conception of the *goal* is to render the target phenomena necessary, given specifiable factors. To be sure, such a conditioned can be considerably weakened to, but, minimally, to explain *p* is to exclude not-*p*, i.e., a theory doesn't explain *p*, if the theory is perfectly consistent with not-*p*. Complications abound once we reflect on the nature of evidence and 'best theory' selection, but it can be agreed that good science tells us not just what has or will happen, but also why such and such didn't happen and why it won't happen. The contrast is with description.

Kepler's demonstration of elliptical orbits from the data of the firmament was an astonishing achievement. It was only with Newton, however, that one could properly see it as description. Newton showed why the orbits must be elliptical, and reciprocally explained what would happen and why to an orbiting body should its gravitational foci disappear, i.e., in abstraction from other influences, the body would fall into an inertial rectilinear motion at a tangent from its previous orbit. None of that follows from anything Kepler said. Note that Newton managed to do this by, following Galileo, fundamentally abstracting from phenomena via appeal to principles whose content cannot be cashed out descriptively (for example, inertial motion is only possible in a universe with a single object; hence, Galileo described inertia as 'imperceptible'). One can always go deeper. Why should gravitational attraction be inversely proportional to the square of the distance? Why not the cube? Newton couldn't say, but not being complete does not impugn explanation. Newton explained phenomena in a way Kepler didn't precisely because he understood them through the lens of how things must be, given the application of general abstract laws.

Closer to home, consider familiar rewrite rules of the kind still found in some introductory texts:

(1)a PP $\rightarrow$ P NP

b NP $\rightarrow$ N (PP)

Taken by themselves, these tell us various things, such as branching is binary, phrases are endocentric (XP is headed by an X), and PPs can embed PPs. Attributing something like (1) to a speaker-hearer at least gives us a handle on why any agent competent with (2a), *must* be competent with the other structures formed by the same rules:

(2)a The girl behind the boy is blonde
b The boy behind the girl behind the boy is blonde
c The girl behind the boy behind the girl behind the boy is blonde, etc.

But this is little more than description, for rewrite rules can be formulated as ternary, non-endocentric, and as non-embedding. The rules are chosen to fit or describe the phenomena, and some such rules are bound to be available given that the background system of rewrite rules is highly unrestricted.

The history of generative syntax can be viewed as the effort to approach explanation, and even go deeper in the sense of asking why syntax is the way it is, as opposed to some other way. In short, one has three levels: (1) identification of the phenomena (no easy task; think Kepler); (2) explanation (why do we find this phenomena but not that; think Newton); and (3) why is the underlying system that does the explaining the way it is. A crucial constraint on these efforts in linguistics is that children acquire their language under conditions of poverty of stimulus. Whatever the child grasps, therefore, is not induced from the phenomena; indeed, the relevant phenomena are not even available to the child. The right question to ask of learning is how little data the child requires, for even if a child, contrary to fact, is inundated with relevant data, she might well ignore it.

Duffley appears blind to constraining explanation to account for acquisition, for language on his model is as theoretically interesting as Tuesdays or being Australian (Ayers Rock, kangaroos, BBQs) or the class of objects covered by my home insurance. This is a mistake. Let us consider an example.

3. Displacement

A high-level phenomenon that has preoccupied generative syntax from its inception is the relation between displacement and gaps; that is, items occur in places at the surface where they don't belong semantically, and where they do belong semantically constitutes a gap that cannot be filled by another item. Consider:

(3)a Bill is easy to please
b Bill is eager to please

(3a) is a case of so-called *tough*-movement: *Bill* is interpreted as the object of *please*, and the subject of the infinitive is arbitrary. Bill is thus predicated of the complex property of an arbitrary other finding it easy to please him. (3b) reverses the roles. The object of *please* is arbitrary, and the subject of the infinitive is *Bill*. The generative tradition treats such phenomena as calling for a syntactic explanation in terms of a displacement relation involving phonologically null items that occupy the gaps. Duffley offers an alternative:

> [T]he differences between them are not at all 'syntactic,' but can be accounted for by the meanings of their components (the infinitive, the preposition *to* and the adjective) together with pragmatic factors having to do with our knowledge of the way the world works (ibid., p. 109)

In essence:

> The basic distinction between 'subject=subject' or 'subject=object' adjectives lies in whether it is a characteristic of the subject or of the object which is relevant for conditioning the movement to the

> actualization of the infinitive's event. In a case such as *This wood is hard to cut,* it is the nature of the wood which determines whether it is easy or hard to move the actualization of cutting with the wood as the object targeted by this action. (ibid., p. 117)

Duffley surveys lots of corpus data on how people apparently use the relevant constructions in the wild. It remains wholly unclear how anything is explained; in particular, three questions arise, which Duffley doesn't address: Why do speaker-hearers use these gappy constructions to express the relevant meanings? How do the relevant meanings exclude other conceivable constructions as impossible? How do children acquire these structure-meaning pairs under poverty of stimulus conditions? Also, the semantic generalisation Duffley offers is dubious.

On the first question, the issue is why the constructions are so much as available. Given they are available, they will have whatever meaning they have, but this doesn't help any. Why isn't one obliged to be explicit?

(4)a For someone to please Bill is easy

b Bill is eager for himself to please someone or other

Well, if deletion willy-nilly is available, and explicitness is generally non-obligatory, then there is no mystery. Yet, deletion willy-nilly is not an option:

(5)a Bill is too frail to lift the box
b Bill is too frail to lift

Note that (5b) has a *tough* construal, not an elliptical construal. It might be thought that we can delete (/don't

need to be explicit) when a co-referential term is subject, rendering the predicate reflexive. But this doesn't work.

(6)a Everyone is easy to please
b Everyone is eager to please

The gaps here linked to the quantifier DP are construed as variables bound by the non-referential subject.

Generative theory provides a simple answer: movement is a syntactic option, and so can be realised without being under any semantic constraint. One consideration in support of this is that 'gaps' license further gaps in a way that mere semantic association cannot do:

(7)a Bill is easy to please without offending [on the construal of Bill being pleased and not offended]
b *Bill is eager to please without offending [on the construal of whoever is pleased is not offended]
c *Bill dismissed the book without reading

My point here is not to endorse a particular account of movement or parasitic gaps, but only to indicate that there are genuine phenomena that indicate gaps beyond what is catered for by the communicative role of a sentence; after all, the intent of (7c) is obvious, but a pronoun is still required (…*without reading it*), unlike with (7a-b).

On the second question, if the meaning of the adjectives, rather than syntax, explains the properties of the constructions, they should exclude other constructions. Thus:

(8)a *Bill is easy to please Sam

b *Bill is eager for Sam to please [on the construal of Bill being pleased]

Why can't (8a) mean, to adopt Duffley's idiom, that it is the nature of Bill that determines whether it is easy or hard to move to the actualization of pleasing Sam? Similarly, why can't (8b) be understood as Bill being desirous to move to the actualization of being pleased by Sam?

Thirdly, the acquisition of *tough*-constructions and raising and control counterparts pose quandaries for acquisition. Chomsky (1970) found that children often produce a control reading for *tough*-constructions, a result replicated by Anderson (2005). In general, *tough* and raising constructions are late acquired, and this might be because of the relative complexity of the syntax in relation to the semantics, i.e., a non-agentive relation between subject and adjective. This hypothesis is corroborated by Becker (2015), who found that children switch between construals of a nonsense adjective (*tough* or control) on the basis of the (in)animacy of the surface subject. This finding indicates that children employ (in)animacy to fixate on the syntax, i.e., inanimate subjects are data for displacement in the way animate subjects aren't. In contrast, on Duffley's model, there is nothing to expect as regards the pattern of acquisition, and so the model offers no help to understand the complexities witnessed.

Finally, Duffley's generalisation about the meanings of the relevant adjectives appears to be false. His idea is that a *tough* construction expresses the thought that it is the nature of the thing to which the subject refers that makes it resistant or not to the realisation of the event the verb specifies. That *seems* to work OK for simple cases, but consider:

(9)a The wood is hard to cut with this blunt saw
b The wood is hard to cut

The impediment to the realization of the actuality the verb specifies is the saw, *not* the wood, which might be quite soft (Compare: *The soup is hard to drink with this stupid sieve*), i.e., (9b) doesn't follow from (9a). The syntactic and semantic properties of (9b), however, are part of the very properties of (9a); that is, the linguistic properties of (9b) are invariant over the adjunction of the PP. Therefore, whatever is invariant to *X is hard to Y* appears not to bear on the nature of *X*. What is the invariant meaning? Well, why assume this is specifiable in speech act terms? The syntax determines the argument structure, and offers a partially interpreted structure that can be used in various ways. That there is such variation doesn't cast doubt on an invariant syntax that shapes possible interpretation; on the contrary, that there is a shape to the variability of what we can communicate nigh-on entails an invariant syntax.

Generally, in distinction to Duffley's approach, syntactic theories have been focused on these very issues. The job is not just to catalogue meanings with constructions, but to explain the pairing to the exclusion of other conceivable pairings. One might or might not be satisfied with the efforts made, but failure of theories does not make the phenomena themselves go away. As it is, Duffley's pairing of signs with meanings appears to exclude nothing whatsoever and offers no insight into acquisition.

4. A general problem

A general problem with Duffley's approach is that it appears unable properly to account for unacceptable constructions that express perfectly fine thoughts. This feature is sometimes referred to as the 'counterfuctionality' of language. Vacuous quantification and island violations provide ready examples:

(10)a *Who does Bill love Sam?
b *Which book did you meet the man that wrote?

These can be truthfully answered, so should be OK, but are not. Thus, if Bill does love Sam, then (10a) can be truthfully answered by citing anyone whosoever; if Bill doesn't love Sam, then the only true answer can be 'No-one'. In effect, then, (10a) should just be an odd way of asking if Bill loves Sam, which we may render as:

(11) Which person is such that Bill loves Sam?

Yet (10a) is not merely odd, but unacceptable; it just doesn't mean the same as (11). Syntax provides an answer to why the perfectly good thought is syntactically excluded by *wh*-movement. If *wh*-items are quantifiers, then they must relate to at least one position within a predicative structure which is interpreted as a variable bound by the item. The position is consequently either a gap or a pronoun:

(12)a Who does Bill love?
b Who thinks he loves Sam?

Hence we find the ready logicese paraphrases:

(13)a Which person x is such that Bill loves x
b Which person x is such that x thinks x loves Sam

The problem with (10a) is now clear: there is no position within the predicative structure that can be construed as a bound variable, for both positions are occupied by proper names. This is a syntactic fact, however, for there is no semantic interdiction against vacuous quantification, i.e., it is the necessity of a structural relation between the *wh*-item and a predicative position that precludes vacuous quantification.

Similar remarks hold for (10b) and other island violations, but with a twist. In such cases, there is an otherwise suitable gap in the predicate but still it cannot be bound; that is, (10b) is not paraphraseable as:

(14) Which book *x* is such that you met the man that wrote *x*

The broad phenomenon here is that certain environments ('islands') preclude a position in that environment to be bound by a quantifier outside of it (and other such relations of construal). Relative clauses are such environments. The standard generative reasoning is that this is a clear structural condition that rules out an otherwise perfectly fine thought from being expressed. There are, to be sure, alternative explanations of island phenomena, involving processing demands (cf., Sprouse and Hornstein, 2013) and information structure (cf., Goldberg, 2006). There is, however, a certain conceptual virtue in the syntactic explanation, or, at any rate, the effect being explained as an interface result of syntax and semantics. This is because the explananda are not why island violations are unwitnessed or hard to process when presented, but why they simply don't express the content they should on analogy to closely related structures. Although the island-violating thoughts, as it were, are perfectly coherent and expressible by other means, no amount of debriefing or familiarity with them allows for the expression of the content. Of course, if such a counterfunctional feature were isolated to islands, then we might think of them as a quirk, but the feature is quite broad. Furthermore, islands occur throughout the world's languages realised in a somewhat variable fashion. Since explanation is the goal, whatever account is offered can't be ad hoc or consistent with the non-existence of islands or inconsistent with acceptable long-distance movement. For instance, a claim that nominal complement islands are due to a focus-topic mismatch (Goldberg, 2006) does not generalise

to co-ordinate structures. Of course, there might be no unitary phenomenon, but we can't assume that to be the case.

As a curious example of counterfuctionality in a quite different domain, consider the interaction of disjunction with agreement:

(15)a Bill or Sam is likely to come
b The men or the women are likely to come
c *The men or Sam is/are likely to come

One might wonder why on earth there is agreement at all, since it does not aid communication, and speaker-hearers will use (15c) unthinkingly. Again, the oddity of the phenomenon invites a search for explanation, not mere description.

5. Conclusion

Duffley is certainly correct that at the level of what is communicated, a great many factors converge to determine meaning. No-one in generative syntax need deny that, and most don't. Like with any complex phenomenon, the goal is to fractionate it to see how parts interact, a methodology that has worked with astonishing success in physics, chemistry, and biology. When it comes to language, there is no a priori reason to abandon scientific method, and the mere complexity of the phenomena gives us no steer on the truth. Indeed, if Duffley is right, language is an outlier, an emergent phenomenon resting upon various cognitive capacities without itself being a distinctive capacity, more like dancing than seeing. Maybe, but mere complexity of data and signs having what communicative content they have give us no reason to think so.

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