REPLY TO JOHN COLLINS' "A PLEA FOR EXPLANATION"

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Abstract: Reply to John Collins A Plea for Explanation.

1. A plea for a realistic view of explanation

Since Collins charges the account proposed in *Linguistic Meaning Meets Linguistic Form* with being non-explanatory, a few words must be said in this reply about what scientific explanation is and what it is not. Collins defines theoretical explanation as "rendering the target phenomenon necessary," thereby not just telling us what has happened or what will happen, but also "why such and such didn't happen and why it won't happen." This is asking far too much of science, however, as it would require that one prove universal negative propositions such as *Angels do not exist*. This is an impossible task as it would require an exploration of the entire universe in all of its dimensions. As Schick and Vaughn (2013) put it, "To prove a universal negative, you

would have to exhaustively investigate all of time and space. Since none of us can do that, demanding such an investigation of anyone is unreasonable." Moreover, as pointed out by John Stuart Mill, no amount of observations of white swans can allow the inference that all swans are white; and indeed black swans were observed in 1697 when Willem de Vlamingh's expedition explored the Swan River in Western Australia. Collins himself concedes that Newton was unable to provide any reason why gravitational attraction should be inversely proportional to the square of the distance between the two objects undergoing the attraction and not to the cube of the distance, but maintains nevertheless that "not being complete does not impugn explanation." This contradicts the definition he gives of scientific explanation as rendering the target phenomenon **necessary** however: something which is necessary is true in **all** possible worlds, i.e. it requires completeness of coverage. In actual fact, scientific explanation is never complete, and this is why science is always evolving. This is even truer in the case of the science of linguistics due to the fact that its object is not reducible to the more manageable purely quantitative level.

2. Offering a replacement for displacement

The thrust of Collins' criticism of *Linguistic Meaning Meets Linguistic Form* is focused on just one type of construction involving what generative syntax treats in terms of displacement and syntactic gaps, i.e. the occurrence of items in places in the surface structure which do not correspond to the underlying logical structure posited by generative grammar (called Logical Form). The type of construction in question can be illustrated by the well-worn examples in (1) and (2) below:

(1) John is easy to please.

(2) John is eager to please.

The Logical Forms proposed for these two sequences are as follows (Pietroski 2015):

(1') {John$_i$ [is easy { e [to please (_)i]}]}

(2') {John$_i$ [is eager { (_)i [to please e]}]}

In (1'), *John* is claimed to have moved from the position of object of the verb *please* in an underlying structure *e pleases John* to that of subject of the main clause *is easy*, leaving behind a trace which accounts for the interpretation that John is the one who is easily pleased. In (2'), on the contrary, *John* is claimed to have moved from the position of subject of the verb *please* in an underlying structure *John pleases e* to that of subject of the main clause, thus accounting for the interpretation that John is the one seeking to please other people. The linguistic configuration of these two sequences is exactly the same however: Proper Noun + *is* + Adjective + *to* + Infinitive. It is demonstrated in Duffley (2014: 93-106) that, on the linguistic level, in both cases the adjective expresses a property of the subject defined relative to the movement (expressed by *to*) to the realization of the action (expressed by the infinitive). Thus in an utterance like (1) easiness is construed as a property of the subject of the verb *is* which conditions the way an agent can move to the actualization of the action of pleasing, and one infers that it is when John is the patient of the pleasing that he exercises this conditioning effect, since it is the character of the person that one is trying to

please which determines whether it is easy or hard to achieve the realization of the action of pleasing. On the other hand, in (2) the adjective *eager* denotes a property of John which involves a strong desire on his part to move to the actualization of the infinitive's event, a semantic configuration which implies a reading in which John is the one trying to do the pleasing.

Collins claims that my account does not constitute an explanation because it does not explain why speakers use these gappy constructions to express the relevant meanings. The short answer to that question is that speakers use these constructions because they are capable of conveying the messages that speakers wish to convey. Further details as to how this is cashed out will be given below in the discussion of particular examples. The second reason alleged by Collins to demonstrate that my meaning-based account is not explanatory is that it does not answer the question: "How do the relevant meanings exclude other conceivable constructions as impossible?" This question presupposes the definition of explanation that has been disqualified above in the introductory section of this article because it asks of science something which the latter is unable to deliver – the job of science is to explain **what is**, not what is not. Moreover, there do exist other conceivable constructions that can convey more or less the same meaning as some of the gappy constructions under consideration; thus (3) below conveys a similar message to (1):

(3) To please John is easy.

This is perfectly explainable in linguistic-semantic terms: in (3), moving to the actualization of pleasing John is construed as requiring little effort; in (1), easiness is

construed as a property of John which allows an agent to move to the actualization of the action of pleasing with little effort when John is the patient targeted by this action. There is thus a relation of mutual logical entailment between these two utterances. Lastly, Collins claims that the semantic generalization offered by my account is dubious. This criticism is grounded however on a misunderstanding of my proposal, as he takes me to be saying that in *tough*-constructions like (1) "it is the nature of the subject that makes it resistant or not to the realization of the event the verb specifies." As a counterexample to this generalization, he cites (4) below:

(4) The wood is hard to cut with this blunt saw.

Collins observes that here the impediment to the realization of the sawing is not the wood, which might be quite soft, but rather the saw. Be that as it may, what I actually claim is that 'hard' is a quality manifested by the subject 'wood' with respect to the movement to the actualization of 'cutting with this blunt saw' with the wood in question as the patient of that action. This is not the same thing as interpreting 'hard' as an inherent property of the wood itself. I concede that the sharpness of the cutting instrument conditions whether the object to be cut is easy or hard to cut, but in my account the quality of hardness is construed with respect to the ability to move to the actualization of the cutting, and not as applied to the wood considered in and for itself. Properly understood, the account proposed in *Linguistic Meaning Meets Linguistic Form* therefore has no problem dealing with an example such as (4).

Collins asks why constructions such as (2) and (3) are so much as even available and why we do not have to specify

the agent and the patient of the pleasing in (2) and the agent of the pleasing in (3), as is done in (5) and (6) below:

(5) Bill is eager for himself to please someone or other.

(6) For someone to please Bill is easy.

Regarding (2), the reason for the non-expression of the agent of *please* has already been given above: the adjective *eager* denotes a property of John which involves a strong desire on his part to move to the actualization of an event, and a linguistic-semantic configuration in which *please* is construed as the endpoint of the movement signified by *to* will obviously imply that John is the one chafing to do the pleasing. As for the non-expression of the patient of *please*, this has to do with our world-knowledge of the fact that there are certain types of personality which lead their possessor to try to be agreeable to everyone they meet. The non-expression of the patient is thus connected to the fact that the message the speaker wishes to convey concerns no specific person as patient of the pleasing; if the patient referred to was specific, on the other hand, it would have to be explicitly designated, as in:

(7) Bill is eager to please Mary.

This explains why an utterance such as (8) is much less natural than (2):

(8) Bill is eager to lift.

Such an utterance would make one wonder what it is that Bill is eager to lift, and would only be conceivable in a

situation where that information was recoverable from the context, as in:

(9) By the end of the week the heavyweights were eager to lift and had grown impatient and angry. Training had gone well for both Frank and Dave.
(https://www.cuplc.co.uk/suzanne-and-lucy-head-to-british-bench-press-world-classics)

As for the non-expression of the agent of *please* in (3), the reason why it can be left implicit is similar to the reason why the patient can be left implicit in (2): in both cases, the non-expressed participant is generic. If one wishes to make reference to a specific agent, the latter must be explicitly expressed, as in:

(10) For Mary to please Bill is easy.

Collins argues that generative theory provides a simple answer to the question as to why certain participants can be left implicit in certain cases, in that gaps created by syntactic movement rules are not governed by semantic constraints but by syntactic ones. In support of this position, he cites the fact that the patient gap of *please* being filled by *Bill* in (1) licenses an additional patient gap that *Bill* can fill with respect to another verb such as *offend*, as in (11):

(11) Bill is easy to please without offending. [on the construal of Bill being pleased and not offended]

While the example he gives is somewhat odd, such constructions are attested:

(12) Keep your sheets neatly folded and colour coded or marked so that various sizes are separated and organized and easy to find without opening up entirely before making the bed. (https://www.cbc.ca/stevenandchris/decor/how-to-make-a-bed)

Collins contrasts this case with the unacceptability of a similar construction based on (2), which is purported to lack a parasitic syntactic gap since *Bill* is the subject of both *is eager* and *please*:

(13) *Bill is eager to please without offending. [on the construal of whoever is pleased is not offended]

His argument founders however on the fact that constructions such as (13) are in fact attested:

(14) The father who is able to correct without discouraging is the same one who is able to protect tirelessly. (https://www.washingtonpost.com/news/morning-mix/wp/2015/02/06/how-a-chatty-pope-keeps-the-vaticans-press-office-on-its-toes/)

(15) Claire was always kind and eager to help without judging. (https://www.legacy.com/us/obituaries/journalinquirer/name/claire-gagner-obituary?pid=147585165)

Collins then asks why a sequence such as (16) below cannot mean that it is the nature of Bill that determines whether it is easy or hard to move to the actualization of pleasing Sam:

(16) *Bill is easy to please Sam.

The reason for the unacceptability of (16) lies simply in the meaning of the adjective *easy*: the latter denotes a passive property, that of requiring little difficulty or effort to do, and not an active quality, as required by the import he attributes to (16). A similar question is asked concerning the impossibility of (17) conveying the idea that Bill is the one supposed to be pleased:

(17) *Bill is eager for Sam to please.

The reason for this is simply the meaning of the linguistic configuration 'for x to do y': due to the meaning of the preposition *for*, this configuration construes Sam as the prospective agent of the pleasing, a construal that can also be observed with an adjective that has passive meaning like *easy*:

(18) Bill is easy for Sam to please.

Consequently, one must conclude that it is the meaning of the adjectives rather than syntactic considerations that explains the properties of the constructions, as claimed in *Linguistic Meaning Meets Linguistic Form*.

3. Why acquisition of *tough*-constructions is tough

Regarding the argument concerning language acquisition, i.e. the fact that learning *tough*-constructions and raising and control structures poses quandaries for children, it is not necessary to conclude that it is the complexity of their syntax that causes the problem. On the account proposed

in *Linguistic Meaning Meets Linguistic Form*, there is a lot of implicit pragmatic inferencing involved in the interpretation of these structures, and it can be plausibly argued that this is what makes them more difficult to acquire. On this view, Becker (2015)'s finding that children switch between *tough*-construction and control construals based on the animacy of the surface subject is not surprising. Inanimates are typically patients rather than agents: it is well known that in split-ergative languages inanimate participants are inherently more patient-like and take ergative marking. This guides the interpretation towards the *tough*-construction type reading, whereas the presence of an animate subject favours a subject control reading, as can be seen in the contrast between (19) and (20) below:

(19) The cookies are ready to eat.

(20) The guests are ready to eat.

Consequently, Becker's findings do not constitute incontrovertible evidence 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." My meaning-based model is quite capable of explaining this data.

4. Acceptable thoughts but unacceptable constructions?

Collins claims that a general problem with the approach taken in *Linguistic Meaning Meets Linguistic Form* is that "it appears unable properly to account for unacceptable constructions that express perfectly fine thoughts."

Vacuous quantification (21) and island violations (22) are cited as examples of this:

(21) *Who does Bill love Sam?

(22) *Which book did you meet the man that wrote?

Collins holds that both of these questions can be truthfully answered and so should be acceptable, but they are not. (21), for instance, is purported to be a possible expression of the perfectly fine thought conveyed by (23):

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

Now to me (23) is just as uninterpretable as (21), so this is not really a case of a "perfectly fine thought" in the first place. As for (22), it is purported to be precluded by an island constraint: the claim is that syntactic environments such as relative clauses preclude a position inside them from being bound by a quantifier outside them. A first problem with this claim is that island violations are possible; I can easily imagine someone saying (24) or (25):

(24) What kind of statement do you remember the person who says?

(25) Which rules are you the most furious with the child who breaks?

What is more, these express the perfectly fine thoughts 'What kind of statement *x* do you remember the person who says *x*' and 'which rule *x* are you the most furious with the child who breaks *x*'. Consequently, it is not true that island violations "simply don't express the content they should."

Furthermore, the two cases cited above support the information-structure account proposed by Goldberg (2006) and the processing account proposed by Sprouse and Hornstein (2013) rather than a syntactic explanation. Goldberg (2006: 135) formulates her information-structure generalization as follows:

> Backgrounded constituents may not serve as gaps in filler-gap constructions.
>
> (Backgrounded constructions are islands.)

Backgrounded constituents are neither the primary topic nor part of the focus domain of a sentence. Relative clauses, noun complements, presupposed adjuncts, parentheticals, and active ditransitive recipients are not part of the focus domain of the clause and are therefore backgrounded. Elements involved in filler-gap constructions are positioned in discourse-prominent slots and it is pragmatically anomalous to treat an element as at once backgrounded and discourse-prominent; the basic intuition is that sentences are about something and only the something which the utterance is about is salient enough to be extracted. Thus (24) and (25) are pragmatically coherent because remembering a person who makes a certain kind of statement and being furious with a child who breaks certain rules can be construed as presupposed, normal reactions to a situation, allowing focus to be placed on the requested-to-be-specified identity of the particular kind of statement that one remembers the utterer of and of the particular rules that the addressee is the most furious with the breaker of. In (22), on the other hand, without prior context it is not possible to presuppose that the addressee has met the author of the particular book being asked about. However, if the utterance situation was one where the questioner

knew that the hearer had met the author in question but could not remember the name of the book that the latter had written, (22) would be readily interpretable.

This dovetails with Sprouse and Hornstein's (2013: 13) observation concerning the strangeness of (26):

(26) *Which book did you laugh before reading?

They note that people don't usually laugh before the act of reading, and thus it is unclear why the reference to a book matters for the laughing event. Chaves and Putnam (2021: 90-91) concur with this observation:

> Indeed, a closer look at experimental items from past English experiments like those in (115) below from Sprouse et al. (2012) suggests that the low acceptability of tensed adjunct island violations is – at least in part – due to the plausibility of the experimental items. More specifically, due to the fact that the matrix predication and the adjunct's predication cohere very poorly, and therefore describe rather unusual situations. For example, people don't routinely faint when something is forgotten on stage, as in (115a), or typically sneeze if dog owners leave something open at night, as in (115b). These sentences do not describe particularly plausible situations.
>
> (115a) *What do you faint if the actors forget on stage?
> (115b) *What do you sneeze if the dog owner leaves open at night?
> (115c) *What do you cough if the tourists photograph in the exhibit?

(115d) *What do you laugh if the heiress buys at the auction?

Now compare with the more acceptable examples in (116), all of which express prototypical states of affairs, i.e. becoming upset after losing something, understanding a topic better after reading a book about it, and so on.

(116a) Which toy did Timmy get really upset when he lost?
(116b) Which book will Sue understand linguistics better if she reads?
(116c) Who would Robin be really happy if she could speak to?
(116d) What would Mia be impressed if Robin cleaned?
(116e) What did Tom get mad because Phil forgot to say?

In the propositions in (116) the matrix verb expresses a psychological state and the embedded clause expresses key information about that state, rather than circumstantial information.

Chaves and Putnam (2021: 57) also put forward a more general objection to a unitary syntactic explanation of island constraints in that they show the evidence to be strongly suggestive of an eclectic account wherein different island constraints are due to different combinations of factors, so that it is a delicate task to determine whether a given extraction constraint is due to syntax, semantics, pragmatics, processing, or some combination thereof.

5. Conclusion

In his concluding remarks, Collins suggests that I am abandoning scientific method and treating language as an outlier, a phenomenon that depends upon various cognitive capacities without itself being a distinctive capacity. I plead guilty on the second count, along with the growing host of researchers who ascribe to the cognitive approach to language. As Ronald Langacker (1987: 13) argues,

> (…) a convincing case has not yet been made for a unique linguistic faculty. To put it contentiously, language has appeared special and unassimilable to broader psychological phenomena mainly because linguists have insisted on analyzing it in an inappropriate and highly unnatural fashion; once the many layers of artifact are removed, language starts to look more natural and learnable in terms of what we know about other facets of human cognitive ability.

As for the first count, there is no reason why a methodology that has worked with success in the **material** domains of physics, chemistry and biology should be applicable to an object with a fundamenatal **non-material** dimension (i.e. meaning) such as language.

Attempts to apply empiricism to the analysis of meaning lead to a complete impasse. In an introduction to this type of approach to semantics, Portner (2005: 11) argues that "meanings are not internal to language, are not in the mind, and are not merely social practices. Rather, they are based in language- and mind-external reality." Consequently, "the reason that the word *dog* means the same thing for you and for me is not that we have the same mental constructs

relating to the word. Rather, it's because of our intention to apply the word *dog* to the same things out there in our environment, namely the dogs." A number of considerations indicate however that we cannot explain meaning directly in terms of objects out there in the physical world rather than in terms of ideas in the mind.

First off, as a native speaker of English I only know a handful of real live dogs. How then can I apply the word *dog* to an unfamiliar canine that I meet on the street, of which I have had no previous experience? One might reply that this can be done on the basis of a similarity between the new referent and the dogs that I do already know. But in that case one must invoke the mental process of making a judgment of similarity, and this is precisely the kind of thing that the formal-semantic definition was intended to avoid. Another aspect of this problem is the fact that the set of real dogs in the world is in a state of constant flux. New dogs are born every minute and old dogs die; the approximately 52-million-member set is constantly changing. Does that imply that the meaning of the word *dog* itself is constantly fluctuating?

The referential definition of the noun *dog* also encounters the problem that this word is not always used to refer to a *canis familiaris*. Thus in (27) below, reference is made to a movie:

(27) That movie was a dog.

The resultant message here is the expression of a pointedly negative opinion about the movie's quality. How is a use like this possible however if the meaning of *dog* is the set of real dogs? The import of (27) is not to place the thing referred to in the same set as Fido, Snoopy and Max, but

rather to suggest an uncomplimentary comparison between the movie and a dog. According to Ricoeur (1978: 229-232), an analogy like this mediates between purely univocal reference, on the one hand, and sheer equivocity on the other, combining a literal 'is not a dog' with a metaphorical 'is a dog'. But if the meaning of *dog* is the set of real dogs, how can we apply this word to a referent that is not a dog? And metaphors are not rare quirks of usage: Steen et al. (2010) found that 14% of the words in their corpus of news broadcasts, conversations, fiction and academic texts conveyed metaphorical meaning.

To make matters worse for the empiricist approach to meaning, there are also non-metaphorical nouns that do not point to any referent outside the mind, such as the subject of the sentence below:

(28) Ideas have consequences.

Negative existential statements also indicate the existence of a non-material realm and its relevance for natural language. Thus the speaker who utters (29) below is saying that in their opinion there is no referent corresponding to the concept 'God':

(29) There is no God.

This implies however that the speaker has a concept of God, and knows that they can evoke this concept in ordinary speech to make statements that are comprehensible to other speakers of the English language, even though for them this word has no actual referent.

The extensional definition of the meaning of a noun or noun phrase as corresponding to a referent or a set of

referents runs into other sorts of problems as well. Thus while the two referentially-equivalent noun phrases *the tallest building in New York* and *One World Trade Center* can be substituted for one another in (30) below, as would be expected if they had the same meaning, this is not the case in (31) and (32):

(30) a That office tower is the tallest building in New York.
b That office tower is One World Trade Center.

(31) a The new tower they are building will be the tallest building in New York.
b The new tower they are building will be One World Trade Center.

(32) a Mary thinks that her new office is in the tallest building in New York.
b Mary thinks that her new office is in One World Trade Center.

The reaction of formal semantics to this fact is to argue that the meaning of the two noun phrases changes from their use in (30) to that in (31)-(32): (30) is treated as an "extensional context" in which the meaning of the noun phrase is its referent; (31)-(32) are analyzed as "intensional contexts" in which the noun phrase's meaning is its "sense". This term from Frege denotes the way in which the referent is arrived at rather than the referent itself: in *the tallest building in New York*, the referent is reached via its property of superlative tallness among the buildings of New York; in *One World Trade Center*, the route to the referent goes through the name with which the building was christened after it was built. Invoking 'sense' however amounts to admitting that the connection between the sign

and the referent is mediated by the mind of the speaker, a fact which is confirmed by the observation that it is verbs like *think* that create intensional contexts in uses like (32) above: the content of Mary's thought is not the same if she thinks her new office is in the tallest building in New York as if she thinks that it is in One World Trade Center. Intensional contexts thus highlight the fundamental inadequacy of the definition of the meaning of a noun as a referent or set of referents. The fact that they require a "repair strategy" (Zimmermann and Sternefeld 2013: 196) in the form of a redefinition of the meaning of the category of nouns in terms of something mental indicates that materialism cannot be carried through consistently in the analysis of meaning.

Consequently, it is not the mere complexity of the data which requires an adjustment to the scientific methodology applied to language – rather it is the very nature of the object of the science of linguistics. While some might think that this entails that linguistics cannot be a science, I would hold that meaning conforms to the first and most basic scientific requirement that the object under study must be intersubjectively observable, i.e. there must be a consensus of all competent observers as to what the object is. This criterion ensures that the object is not merely a product of one person's purely subjective view of things or the fruit of someone's imagination. Indeed, linguistic meaning satisfies this criterion with flying colours: the meaning of a word is necessarily the object of a consensus among the members of the community who speak the language to which the word belongs, as otherwise it could not serve as an instrument for communication within that community. Language can therefore be the object of scientific inquiry, but the methodology applied to it must take into account

the fact that meaning is not a material reality, something which generative linguistics fails to do.

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