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Do pragmatic signals affect conventional metaphor understanding? A failed test of deliberate metaphor theory

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Abstract

Different signals, or tuning devices, in language, including certain discourse markers, comparatives, intensifiers and semantic metalanguage, sometimes accompany verbal metaphors. Some scholars have claimed that these signals give evidence of ''deliberate metaphor'' use on the part of speakers and writers. So, understanding these particular uses of metaphor requires people to infer deliberation, which leads them to pay greater notice to these figures and enhances their understanding of the cross-domain mappings motivating metaphorical utterances. Many linguistic analyses argue that deliberate metaphor is a critical part of metaphor use, yet no empirical study has explored whether people really infer greater deliberation and cross-domain mappings when encountering so-called pragmatic signals of metaphor. The present study tested this idea and did not find evidence in support of the deliberate metaphor proposal. This conclusion raises serious doubts about the psychological validity of the idea that some metaphors are produced and understood as being deliberate.

Keywords: Metaphor; Conceptual metaphor theory; Deliberate metaphor

1. Introduction

Do pragmatic signals influence people's understanding of verbal metaphor? This article reports the findings of a psychological study that explicitly investigated this question. Consider the following conversational exchange:

> Mark and Larry were old friends who had not seen each other for several years.
> Mark was telling Larry about his marriage.
> Mark said, ''We experienced many problems early on after we got married.''
> ''My wife and I always seemed to argue about even the littlest thing.''
> Larry replied, ''This must have been difficult for both of you.''
> ''Have things improved over time?''
> Mark replied,
> ''We really have come a long way since the wedding.''

Most people readily understand Mark's final reply to express the idea that his marriage has improved over time, thus providing an implicit ''yes'' to Larry's question. One possibility is that people infer Mark's intended meaning through the recruitment of a relevant conceptual metaphor, in this case ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS.

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Under this view, listeners tacitly recognize that ''come a long way'' in this context reflects metaphorical meaning because of the cross-domain mapping between marriages and physical journeys. An enormous body of research from cognitive linguistics, psycholinguistics and cognitive neuroscience provides empirical support for this claim (Gibbs, 2011a; Gibbs and Colston, 2012).

Some scholars, however, have argued that phrases such as ''come a long way'' do not really convey metaphorical meaning because they are so conventional and familiar (Jackendoff and Aaron, 1991; Pinker, 2007; Steen, 2008). People may not necessarily be aware, consciously or otherwise, that the statement ''We really have come a long way since the wedding'' expresses metaphorical meaning in the above context. Many conventional metaphors may have once expressed metaphorical meanings that were widely understood as such by speakers and listeners. But over time, these conventional phrases, such as the ''come a long way'' phrase, have become literalized and are simply understood without any recruitment of conceptual metaphorical knowledge.

It is not clear, though, how this latter view of conventional metaphor explains the psycholinguistic findings showing that people typically recruit cross-domain knowledge when interpreting verbal metaphors, both conventional and novel (Gibbs, 2011a). Still, critics of conceptual metaphor theory have gone on to argue that certain use of conventional metaphor may be metaphorically awakened in particular discourse contexts. Imagine a slightly different version of the above conversational exchange between Larry and Mark:

> Mark and Larry were old friends who had not seen each other for several years.
> Mark was telling Larry about his marriage.
> Mark said, ''We experienced many problems early on after we got married.''
> ''My wife and I always seemed to argue about even the littlest thing.''
> Larry replied, ''This must have been difficult for both of you.''
> ''Have things improved over time?''
> Mark replied, ''Well,''
> ''We really have come a long way since the wedding.''

Does the addition of the discourse marker ''Well,'' before Mark's final reply, alter our understanding of what Mark aims to communicate? There is a long tradition of study on discourse markers, such as ''well,'' that has explored the pragmatic functions of discourse markers and other pragmatic signals in discourse (Blakemore, 2002; Fraser, 1990). In recent years, however, some metaphor scholars have claimed that speakers and writers sometimes explicitly signal their deliberate intent to use metaphor through various pragmatic signals (Goatly, 1997; Steen, 2008). For example, speakers may signal that they are using metaphor by including different discourse markers (e.g., ''well,''), comparatives (e.g., ''like''), intensifiers (e.g., ''actually,'' ''quite,'' or ''utterly''), words that indicate specific kinds of meaning (e.g., ''literally,'' ''metaphorically''), as well as phrases expressing meta-comments on the speaker's communicative intentions (e.g., ''so to speak,'' ''one might say,'' ''a figure of speech''). These various discourse devices may generally be understood as ''pragmatic signals'' that act to alert listeners and readers to the special, metaphorical nature of what people say. Under this view, in the above conversation between Larry and Mark, the use of words such as ''well,'' ''like,'' ''literally'' or ''one might say,'' may alert listeners to a speaker's deliberate, even conscious, use of an otherwise clichéd, conventional metaphor (e.g., ''come a long way''). People presumably pay closer attention to the underlying cross-domain mapping originally motivating the conventional metaphor when these pragmatic signals are present.

One immediate difficulty with the proposal that people sometimes use specific pragmatic signals to alert others to their use of metaphor is that these devices are not at all specific to metaphor (Gibbs, 2011b). Words and phrases such as ''well'' ''like,'' and ''one might say'' are found throughout spoken discourse, and not just restricted to use with metaphor. One study examined a large corpus of language for the presence of so-called ''signals'' or ''tuning devices'' for metaphor and found that these are employed with non-metaphorical language 60% of the time (Shutova and Teufel, 2010). These observations cast doubt on any one-to-one link between specific pragmatic signals and metaphorically used words or expressions.

2. Deliberate metaphor theory

The idea that speakers and writers sometimes explicitly signal their use of metaphor has become a major topic of debate, especially in regard to the possibility of ''deliberate metaphor.'' This theory suggests that some instances of verbal metaphor should be characterized as being ''deliberate'' in both their production and interpretation (Steen, 2008, 2011, 2013). Under this view,

> ''a metaphor is deliberately used when it is expressly meant to change the addressee's perspective on the referent or topic that is the target of the metaphor, by making the addressee look at it from a different conceptual domain or space, which functions as a conceptual source. In such cases as 'Juliet is the sun,' this is precisely what is being asked of the addressee. The utterance expresses a blatant falsehood, while drawing attention to the new

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> information presented at the end of the sentence that causes the falsehood, 'sun.' It cannot be anything but a deliberate invitation for the addressee to adopt a different perspective of Juliet from a truly alien domain that is consciously introduced as a source for reviewing the target'' (Steen, 2008:222).

Psycholinguistic research suggests, contrary to the above account, that people do not typically understand metaphors by first automatically noting semantic anomaly (Gibbs, 1994). Still, speakers may, nonetheless, wish to highlight the special, cross-domain perspective inherent in novel metaphors. According to the deliberate metaphor view, however, speakers and listeners do not typically infer cross-domain mappings for most uses of conventional metaphor.

> ''However, when somebody utters 'we have come a long way' to talk about a relationship, it is quite dubious whether the addressee is in fact being asked to actually change their perspective on the topic of the sentence (the speaker's relationship), or whether the speaker wishes to change the perspective. Current cognitive linguistic analysis of the language and the conceptual structures would suggest that such a perspective change might have to go from the domain of relationships to the domain of journeys. Yet most language users might find this an odd and probably distracting suggestion'' (Steen, 2008:222).

The final comment in this excerpt ignores the linguistic, psycholinguistic and cognitive neuroscience research showing that people, in fact, often infer cross-domain mappings when they understand conventional metaphorical language. One possibility, though, is that ''it is quite possible for people to use conventional metaphor very deliberately . . . where deliberate metaphor use is signaled by word play and other added rhetorical devices'' (Steen, 2008). For instance, speakers may awaken conventional metaphors and highlight their implied cross-domain mappings, through the use of different pragmatic signals, such as seen in the second conversational context above when Mark included ''Well,'' before stating the conventional expression ''we have really come a long way since our wedding.'' Including a relevant pragmatic signal essentially turns a conventional metaphor into one that is specifically interpreted as deliberate and conveying cross-domain meaning.

The deliberate metaphor hypothesis is, again, in direct contrast to the linguistic, psycholinguistic and cognitive neuroscience evidence on conceptual, even embodied, metaphorical mappings when people interpret both conventional and novel metaphorical expressions. One possibility, however, is that the psycholinguistic studies showing the recurring presence of conceptual metaphors in verbal metaphor interpretation may actually reflect deliberate metaphor understanding. For instance, the dozens of psycholinguistic studies in support of conceptual metaphor theory may have included pragmatic signals that alerted experimental participants to a deliberate, cross-domain reading of different idioms, proverbs, and other conventional metaphors. But a re-examination of the language stimulus employed in these psycholinguistic studies provides no indication of any of the pragmatic signals typically associated with deliberate metaphor use, with the exception of some studies that explored people's understanding of extended verbal metaphors in context.

It is surprising, though, that no empirical data have been advanced to explicitly show that certain pragmatic signals specifically influence people's interpretations of metaphor. Noting that some instances of metaphor, conventional or not, can be accompanied by certain pragmatic signals is insufficient to establish that these devices have direct effects on what people understand. Advocates of deliberate metaphor theory have still tried to outline the exact set of signals that provide evidence of deliberate metaphor use in discourse. For example, Krennmayr (2011:154–155) suggests that researchers may search for deliberate metaphor in texts by considering the following set of questions:

(a) Is the metaphorical unit signaled (e.g., by a simile or other signaling device)?
(b) Is the metaphorical unity in the form of A = B?
(c) Is the metaphorical unit expressed directly?
(d) Is the metaphorical unit novel?
(e) Is the metaphorical unit surrounded by metaphorical expressions from compatible semantic fields, which are somehow connected?
(f) Is the metaphorical sense of the unit particularly salient through, for example, alluding to the topic of the text?
(g) Does the metaphorical unit participate in word play?
(h) Does the metaphorical unit elicit rhetorical effects, such as, for example, persuasion or humor?[1]

Krennmayr's extensive analysis of written news reports showed, in fact, that people rarely signal their metaphors, with the exception that news writers sometimes use related, or extended, metaphors (i.e., several expressions within a text that

[1] Note how some of these questions refer not to cues in the text, but to effects on the listener or reader (e.g., regarding persuasive or humorous effects). Is it the case that all instances of persuasive or humorous metaphor must necessarily be understood as deliberate? Furthermore, note that the use of extended metaphor is also seen as a reliable signal of deliberation (i.e., where several metaphorical expressions are used, which are all motivated by the same underlying conceptual metaphor or cross-domain mapping). But how is this idea consistent with the claim that mixed metaphors (i.e., verbal metaphors often motivated by different underlying conceptual metaphors) also serve as a marker of deliberation (Steen, in press)?

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are motivated by a single underlying conceptual metaphor). Other attempts to identify deliberate, or ''purposeful,'' metaphors in discourse examined texts for the presence of different pragmatic signals and then, once these were found, simply concluded that speakers/writers must have had some deliberate or purposeful intent to produce a metaphor for audiences to infer cross-domain mappings (Charteris-Black, 2012; Nacey, 2013). Deliberate metaphors may include ones that are highly conventionalized, which again, ''need to be marked by some supra-segmental features in talk or orthographic feature(s) in writing'' (Cameron, 2003:101). Although deliberate metaphor is often equated with creativity, corpus analyses also reveal many cases of novel metaphor that are not marked by pragmatic signals and many instances of conventional metaphor that are accompanied by pragmatic signals (Nacey, 2013).

3. ''Come a long way'': a case study experiment

The present study explored whether people interpret a single conventional metaphor differently when seen alone in discourse compared to when it is accompanied by varying pragmatic signals, presumed to be markers of deliberate metaphor. My specific interest was to determine if people viewed the conventional metaphorical statement ''We really have come a long way since the wedding'' as conveying a stronger degree of cross-domain mapping (related to the ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS conceptual metaphor) when this is seen in the presence of specific pragmatic signals (e.g., ''well,'' ''like,'' ''literally,'' ''one might say''). Furthermore, do people interpret a conventional metaphorical utterance as being more poetic and conveying more certainly about what the speaker is trying to communicate, than when no other pragmatic cues are available? Finally, do people think more about a metaphorical statement when it is accompanied by a pragmatic signal than when they see it without such a signal?

There are, at least, two broad hypotheses that can be tested in this context. First, the deliberate metaphor hypothesis explicitly suggests that employing different pragmatic signals should enhance people's understanding of the cross-domain mapping underlying the verbal metaphor. Deliberate metaphor theory assumes that conventional metaphors do not evoke their original cross-domain mappings (e.g., ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS), But encountering a conventional metaphor with a pragmatic signal should alert listeners to a speaker's deliberate attempt to call attention to some cross-domain mapping. This should, therefore, increase listeners' understanding that the statement ''We really have come a long way since the wedding'' (a) is related to the ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS, conceptual metaphor, (b) is particularly poetic or creative, (c) expresses the speaker's certainty in what he wanted to say, and (d) is intended to get the listener to think about the topic in a different way.

The conceptual metaphor hypothesis maintains that people readily infer cross-domain mappings for many conventional metaphorical expressions, regardless of whether or not these are accompanied by specific pragmatic signals thought to highlight deliberate metaphor use. People should not, necessarily, interpret ''We really have come a long way since the wedding'' as expressing more complex cross-domain mappings when seen with pragmatic signals than without. Pragmatic signals may have various functions in discourse, again as many scholars have previously noted. But these words and phrases do not directly signal a speaker's special deliberative communicative intentions in regard to cross-domain metaphorical mappings.

This study only employed a single metaphorical utterance (e.g., ''We really have come a long way since the wedding'') at the end of different discourse contexts. Participants read only one context and utterance to avoid the build-up of associations that may possibly occur when encountering many instances of a metaphor or contexts employing different pragmatic signals. Furthermore, one-half of the participants viewed discourse contexts ending with a speaker's non-metaphorical reply ''We really are doing much better since the wedding.'' This non-metaphorical condition was included to examine whether various pragmatic signals truly work to enhance deliberate metaphor understanding and not just any instance of language, metaphorical or otherwise.

4. Methods

4.1. Participants

192 University of California, Santa Cruz undergraduate students, majoring in Psychology, participated in the study as part of an unrelated classroom project.

4.2. Materials, design, and procedure

Each participant was presented with a single talk exchange between two friends, Larry and Mark, ending with either Mark's metaphorical or non-metaphorical reply to Larry's previous question. The conversational exchanges either included no explicit pragmatic signals, or one of the seven different pragmatic signals that have been mentioned in the

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deliberate metaphor literature. These specific endings of the eight contexts are listed below (the first four lines, shown below, were present for all contexts, except for the extended version):

Beginning
Mark and Larry were old friends who had not seen each other for several years.
Mark was telling Larry about his marriage.
Mark said, ''We experienced many problems early on after we got married.''
''My wife and I always seemed to argue about even the littlest thing.''

Conventional Metaphor Alone (''Alone'')
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied,
''We really have come a long way since the wedding.''

Extended Metaphor In Discourse Added (''Extended'')
Mark and Larry were old friends who had not seen each other for several years.
Mark was telling Larry about his marriage.
Mark said, ''We ran into many obstacles early on after we got married.''
''My wife and I never could get passed even the smallest disagreements.''
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied,
''We really have come a long way since the wedding.''

''*Well*'' *Added (''Well'')*
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''Well,''
''We really have come a long way since the wedding.''

''*Literally*'' *Added (''Literally'')*
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''Literally,''
''We really have come a long way since the wedding.''

''*Like*'' *Added (''Like'')*
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''It is like,''
''We really have come a long way since the wedding.''

''*One might say*'' *Added (OMS)*
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''Well, one might say,''
''We really have come a long way since the wedding.''

Calling Attention to Perfect Phrase Added (''PP'')
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''Well, there is a perfect phrase to capture this.''
''We really have come a long way since the wedding.''

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Calling Attention to Possible Deliberation Added (''Say the Following'' or ''STF'')
Larry replied, ''This must have been difficult for both of you.''
''Have things improved over time?''
Mark replied, ''I can say the following.''
''We really have come a long way since the wedding.''

One half of the participants received one of the eight conversational contexts above, and the other half read the same story contexts ending in the non-metaphorical paraphrase ''We really are doing much better since the wedding.'' Twelve students were randomly assigned to read each of the 16 (8×2) types of conversational contexts.

After reading their respective story context, and either a conventional metaphor or a non-metaphorical final statement, participants were instructed that they were to give their ratings of agreement with the following seven statements, specifically in regard to their understanding of what Marks said at the end (i.e., either the metaphor or the non-metaphorical statement). Participants were instructed to give their ratings of agreement on a 1–7 scale (1 indicating strong disagreement and 7 indicating strong agreement). The seven statements, presented below, were intended to elicit participants' interpretations of Mark's final utterance:

1. Mark was exactly sure what he wanted to say about his marriage.
2. Mark's statement implied that his marriage was now making more progress than earlier.
3. Mark's statement implied that his marriage was now built on a strong foundation.
4. Mark's statement was creative or poetic.
5. Mark's statement implied that he and his wife moved to a new home during their marriage.
6. Mark's statement was intended to compare his marriage to taking a physical journey.
7. Mark consciously wanted his listener, Larry, to think hard about the meaning of his final statement.

The entire study took around 5 min to complete for each participant.

5. Results and discussion

Participants' ratings of agreement for each of the seven statements were calculated both when they read a conventional metaphor or a non-metaphorical utterance. These mean ratings are presented and discussed below (the higher the rating, the greater the agreement) for each of the seven statements. All specific comparisons reported were analyzed using two-tailed protected *t*-tests.

Statement 1 Mark was exactly sure what he wanted to say about his marriage.

The purpose of Statement 1 was to evaluate whether different pragmatic signals alter people's perceptions of the speaker's certainty in what he stated, both when using metaphorical and non-metaphorical language. Deliberate metaphor theory suggests that specific signals should highlight the metaphorical (i.e., cross-domain mapping) nature of a speaker's statement and that listeners should have some appreciation of a speaker's certainty in deliberately uttering a specific kind of meaning. But the results presented in Table 1 are inconsistent with this prediction.

Participants stated that Mark was no more sure of what he wanted to say when he included ''well,'' ''like,'' ''literally,'' one might say,'' or ''there is a perfect phrase to capture this,'' than when he stated a conventional metaphor alone. Seeing Mark's final metaphorical reply after reading related metaphorical expressions also did not enhance people's judgments of Mark's certainty regarding what he wanted to say. People gave slightly higher ratings of agreement when ''literally'' or ''I can say the following'' were included, but these did not differ significantly from the ratings seen for conventional metaphors alone.

The pattern of results differed somewhat when participants read Mark's non-metaphorical utterance. People found Mark to be more certain of what he wanted to say when he made a non-metaphorical utterance alone than when ''like'' was first mentioned, $t(22) = 2.69$, $p < .025$. Similarly, people found Mark to be more certain of his message when it appeared alone than with an ''I can say the following'' remark preceding it, $t(22) = 2.13$, $p < .05$. The use of ''literally'' also enhanced people's impressions of Mark's certainty compared to when he used ''like,'' $t(22) = 3.44$, $p < .01$.

Table 1
Results for Statement 1.

	Alone	Extended	''Well''	''Literally''	''Like''	''OMS''	''PP''	''STF''
Metaphorical	3.67	3.58	3.42	4.25	3.50	3.67	3.67	4.25
Non-metaphorical	3.42	2.75	2.83	3.75	1.92	2.58	2.75	2.58

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Finally, people did not give significantly higher ratings regarding Mark's certainty in saying what he did when employing a metaphorical reply compared to a non-metaphorical one.

These results, overall, do not support the idea that different pragmatic signals enhance people's appreciation of a speaker's deliberative certainty when using a conventional metaphor.

Statement 2 Mark's statement implied that his marriage was now making more progress than earlier.

Statement 2 was included to assess whether people had greater appreciation of the underlying conceptual metaphor, ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS, when they read the conventional ''come a long way'' statement accompanied by specific pragmatic signals. Responding to Statement 2 demands that participants infer that the marriage was being conceived as a physical journey. If people made an additional inference about this underlying conceptual metaphor when reading Mark's metaphorical utterance, accompanied by specific pragmatic signals, then they should give higher ratings of agreement to Statement 2 than when they saw the conventional metaphor alone.

As Table 2 demonstrates, however, people did not agree more with Statement 2 given the presence of different pragmatic signals than seeing Mark's conventional metaphor alone. In fact, people gave the same or slightly lower ratings of agreement when they also saw ''well,'' ''literally,'' ''like'' and ''there is a perfect phrase to capture this'' before Mark's metaphorical utterance than when they saw the verbal metaphor alone. None of these differences reached statistical significance. People did give significantly higher ratings of agreement to Statement 2 when they saw Mark's metaphorical reply alone than when preceded by ''I can say the following,'' $t(22) = 10.76$, $p < .001$. Overall, though, there is simply no data to suggest that people encountering different pragmatic signals have an enhanced understanding of the conventional metaphor, which subsequently alerts them to the physical journey metaphor motivating Mark's ''come a long way'' metaphorical remark.

Table 2
Results for Statement 2.

	Alone	Extended	''Well''	''Literally''	''Like''	''OMS''	''PP''	''STF''
Metaphorical	5.75	5.75	4.67	4.92	5.00	5.75	5.42	3.00
Non-metaphorical	6.25	5.25	4.92	5.42	5.17	5.58	5.83	5.08

When people read Mark's non-metaphorical reply, they gave lower ratings of agreement to Statement 2 when it was accompanied by ''like,'' $t(22) = 2.45$, $p < .025$, ''literally,'' $t(22) = 1.90$, $p < .10$, and ''I can state the following,'' $t(22) = 1.93$, $p < .06$, than when they read Mark's non-metaphorical reply alone. People also gave marginally significant lower ratings of agreement to Statement 2 when they saw Mark's non-metaphorical reply in an extended metaphor context than when by itself, $t(22) = 2.05$, $p < .06$.

The responses to Statement 2 indicate that people do not experience an enhanced understanding of the cross-domain mappings motivating Mark's conventional metaphorical reply when seen with different pragmatic signals. As seen in the psycholinguistic literature, people readily infer conceptual metaphors (i.e., cross-domain mappings) when they encounter conventional metaphors in discourse without additional clues to a speaker's presumed deliberative intent to highlight that mapping.

Statement 3 Mark's statement implied that his marriage was now built on a strong foundation.

Mark originally stated, in one main condition, that his marriage had ''come a long way,'' which is related, again, to the ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS metaphor. However, Statement 3 above asked people to think of Mark's marriage using a different conceptual metaphor, ROMANTIC RELATIONSHIPS ARE PHYSICAL BUILDINGS. Deliberate metaphor theory would predict that people do not usually understand the ''come a long way'' expression via a conceptual metaphor, but should be more open to this interpretation given the presence of different pragmatic cues. On the other hand, if people really inferred the PHYSICAL JOURNEYS metaphor when understanding the ''come a long way'' utterance, then they should be resistant to characterizing Mark's marriage in terms of a different metaphorical mapping regardless of the pragmatic signals accompanying Mark's final remark (Table 3).

Table 3
Results for Statement 3.

	Alone	Extended	''Well''	''Literally''	''Like''	''OMS''	''PP''	''STF''
Metaphorical	3.25	3.83	3.08	3.25	3.58	4.08	3.25	2.33
Non-metaphorical	3.58	2.83	3.17	3.17	2.50	2.75	3.42	2.50

Participants' ratings of their agreement to Statement 3 did not differ significantly between when they saw the ''come a long way'' expression alone and when it was accompanied by ''well,'' ''literally,'' ''like,'' or ''I can say the following.'' People gave slightly higher ratings of agreement to Statement 3 having first seen the final utterance accompanied by an extended metaphor context and the ''one might say'' comment, but these differences were not reliable. The ratings for the

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conventional metaphor alone were marginally higher than when Mark's reply was preceded by the ''I can say the following'' expression, $t(22) = 1.84$, $p < .10$. These findings are generally consistent with the existing empirical evidence that people infer conceptual metaphors when reading conventional metaphorical statements alone and do not better understand the conceptual metaphorical motivations for ''come a long way'' when accompanied by various pragmatic signals.

The results for when people read Mark's non-metaphorical remark alone revealed slightly higher ratings of agreement to Statement 3 than when they saw this utterance accompanied by any of the pragmatic signals. Only the ratings for the ''like'' or ''there is a perfect phrase to capture this'' conditions were marginally lower than that seen for the non-metaphorical reply alone, $t(22) = 1.48$, $p < .10$; $t(22) = 1.84$, $p < .10$, respectively.

Statement 4 Mark's statement was creative or poetic.

Does seeing a conventional metaphor along with some pragmatic signal makes it appear more creative or poetic? Table 4 suggests that there may be some support for this possibility.

Table 4
Results for Statement 4.

	Alone	Extended	''Well''	''Literally''	''Like''	''OMS''	''PP''	''STF''
Metaphorical	2.25	2.42	2.83	3.50	3.17	3.17	3.57	2.17
Non-metaphorical	2.17	3.08	1.92	3.33	1.75	2.58	3.42	1.50

People gave significantly higher ratings of agreement to Mark's metaphorical expression when it was seen with ''literally,'' and ''There is a perfect phrase to capture this'' than when they read Mark's reply alone, $t(22) = 2.47$ and 2.57, both $p < .05$, respectively. The difference in ratings for the metaphorical statement alone and the other pragmatic signal conditions were not statistically reliable. At least some pragmatic signals may, therefore, highlight the possibility that speakers may be more creative or poetic in terms of what they metaphorically say. However, the earlier results suggest that this enhanced sense of creativity is not due to the sudden inferring of some underlying comparison between a romantic relationship and a physical journey.

The ratings of agreement to Statement 4 were quite mixed when people read Mark's non-metaphorical remark. People found Mark's metaphor alone to be less poetic than when it was accompanied by ''literally,'' $t(22) = 2.14$, $p < .05$, and the phrase ''there is a perfect phrase to capture this,'' $t(22) = 2.16$, $p < .05$. The other differences between the ratings for the non-metaphorical utterance alone and the different pragmatic signals did not approach significance.

Statement 5 Mark's statement implied that he and his wife moved to a new home during their marriage.

Statement 5 was included in the study for two purposes. First, it was useful to get participants' ratings for statements in which they were not likely to be strongly in agreement with, primarily to insure that people were actually paying attention to the content of what they were reading (i.e., and to not always be giving high ratings of agreement to each statement in the questionnaire). Second, one of the pragmatic signals, ''literally,'' may possibly be interpreted not as a marker of metaphor, but as a true indication of some non-metaphorical intent (e.g., that the couple really did physically move to some new location or house) (Table 5).

Table 5
Results for Statement 5.

	Alone	Extended	''Well''	''Literally''	''Like''	''OMS''	''PP''	''STF''
Metaphorical	1.25	1.17	1.75	2.25	1.17	1.42	2.33	1.50
Non-metaphorical	1.42	1.75	1.58	1.33	1.50	1.50	1.92	1.50

Participants gave higher ratings of agreement to Statement 5 when it was prefaced by the word ''literally'' and ''there is a perfect phrase to capture this'' than when they saw Mark's metaphorical reply alone, $t(22) = 1.90$, $p < .05$, and $t(22) = 1.99$, $p < .05$, respectively. Examination of the ratings for individual participants revealed a slight bi-modal distribution of responses in the ratings for ''literally'' as some people interpreted Mark's final ''come a long way'' quite literally, as if the couple really did move elsewhere during the course of their marriage. These results do not support the contention that ''literally'' necessarily marks an upcoming utterance as having a metaphorical meaning, as sometimes suggested by advocates of deliberate metaphor theory.

The ratings of agreement to Statement 5 were all quite low when people read Mark's non-metaphorical statement, and none of these significantly differed from one another.

Statement 6 Mark's statement was intended to compare his marriage to taking a physical journey.

Statement 6 was, perhaps, the most critical one in evaluating the claim that certain pragmatic signals should greatly enhance people's awareness of the cross-domain mapping underlying the use of a specific verbal metaphor (Table 6).

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Table 6
Results for Statement 6.

	Alone	Extended	"Well"	"Literally"	"Like"	"OMS"	"PP"	"STF"
Metaphorical	5.00	4.00	2.67	4.00	2.67	3.17	3.92	2.92
Non-metaphorical	1.92	2.75	1.92	3.17	2.92	2.33	2.50	2.33

Most notably, people gave higher ratings to Statement 6 when they read Mark's conventional metaphorical expression alone than in any other context, with significant differences being found between the alone and "well," $t(22) = 4.31$, $p < .001$; "like," $t(22) = 2.72$, $p < .025$, "one might say," $t(22) = 2.64$, $p < .025$; and "I can say the following," $t(22) = 4.05$, $p < .001$ conditions. These results strongly suggest that people inferred the ROMANTIC RELATIONSHIPS ARE PHYSICAL BUILDINGS conceptual metaphor when reading Mark's "we really have come a long way" reply and that various pragmatic signals, argued to enhance some appreciation of a cross-domain mapping, do not accomplish this at all. This is a key failure of the deliberate metaphor hypothesis.

Participants' ratings for the cross-domain Statement 6, having read Mark's non-metaphorical reply alone, were, unsurprisingly, low. People did, however, give higher ratings of agreement to the physical journey question when they saw Mark's non-metaphorical reply with "literally" than when they saw his final statement alone, $t(22) = 2.11$, $p < .05$. This latter finding makes sense given the earlier noted observation that some participants interpreted Mark's use of "literally" to signal a completely non-metaphorical interpretation of the story context.

Not surprisingly, people gave significantly higher ratings of agreement to Statement 6 having read the conventional metaphor alone than its non-metaphorical counterpart, $t(22) = 4.97$, $p < .001$. A similar pattern was observed when people gave higher ratings of agreement to the conventional metaphor in extended metaphor contexts than to the non-metaphorical reply in an extended metaphor context, $t(22) = 3.88$, $p < .01$.

Overall, there is no evidence that people perceive a speaker's deliberate intention to highlight a cross-domain mapping motivating a conventional metaphorical expression given the presence of particular pragmatic signals.

Statement 7 Mark consciously wanted his listener, Larry, to think hard about the meaning of his final statement.

Some metaphor scholars have, once more, claimed that certain pragmatic signals are used to explicitly call attention to a speaker's or writer's metaphorical meaning, especially in regard to consideration of that metaphor's implicit or explicit cross-domain mapping. If this were correct, then people should recognize that the speaker, Mark, explicitly wanted them, as audience, to "think hard about the meaning of his final statement" when it was accompanied by various pragmatic signals of metaphor (Table 7).

Table 7
Results for Statement 7.

	Alone	Extended	"Well"	"Literally"	"Like"	"OMS"	"PP"	"STF"
Metaphorical	3.83	3.75	3.33	3.75	4.00	3.42	3.75	2.92
Non-metaphorical	3.00	4.67	2.75	3.83	4.25	3.58	3.83	4.25

However, the ratings for Statement 7 did not differ significantly between when people read Mark's conventional metaphor alone and any of the other conditions. Seeing a pragmatic signal, such as "well, "literally," "one might say" or "there is a perfect phrase to capture this" did not lead people to feel any need to think more about Mark's intended meaning. When people read "I can say the following" they even gave marginally lower "thinking hard" ratings than when Mark's uttered his metaphorical reply alone, $t(22) = 1.72$, $p < .10$.

Some pragmatic clues with Mark's non-metaphorical reply appeared to enhance people's "thinking hard" ratings compared to when they read his final reply alone. Thus, people gave significantly higher rating when "like" and "I can say the following" were included than when not, $t(22) = 2.13$, $p < .05$ and $t(22) = 1.90$, $p < .05$, respectively. People also gave higher ratings here when they saw Mark's non-metaphorical reply within an extended metaphor context than when alone, $t(22) = 2.88$, $p < .05$.

In general, seeing pragmatic signals did not suggest to participants that they were supposed to think harder about Mark's metaphorical statement compared to when they read his metaphorical reply alone.

6. Conclusion

All of the arguments in favor of the deliberate metaphor hypothesis have adhered to a specific research strategy. First, scholars hypothesize that particular pragmatic signals, or tuning devices, indicate the possible presence of deliberate metaphors. Second, a search is undertaken for these signals in discourse, including large corpora, when these

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accompany verbal metaphors. Third, the detection of pairings between pragmatic signals and verbal metaphors is assumed to be evidence of deliberate metaphor use, something that listeners and readers must, even tacitly, acknowledge as part of their pragmatic understanding of some metaphorical word, phrase, or expression. Finally, a more elaborate analysis of a speaker's or writer's presumed rhetorical goals is conducted, all done in light of the assumption that listeners or readers really did infer deliberativeness as part of their understanding of a metaphor's pragmatic meaning in context.

Some deliberate metaphor analyses appear, on the surface, to be convincing, at least in the sense that some discourse may reflect a speaker's or writer's attempt to highlight the cross-domain underpinnings of particular verbal metaphors. The problem, though, is that there has been no empirical evidence to show that people really infer particular kinds of meanings believed to be associated with deliberate metaphor. Purely linguistic, or descriptive, analyses are useful for formulating hypotheses about both speakers and listeners' states of mind, but they do not offer credible evidence on the communicative impacts that some metaphors may have in context.

The present study tested the deliberate metaphor hypothesis by examining what people consciously understood when encountering conventional metaphors with, and without, various pragmatic signals presumed to be markers of deliberate metaphor. Most of the data from this study did not confirm the main empirical predictions of the deliberate metaphor view, especially its claim that pragmatic signals enhance people's interpretation of cross-domain mappings underlying the meanings of conventional metaphors. Furthermore, there was no evidence to suggest that people adopted an expectation to think differently or harder about a particular verbal metaphor given the presence of so-called pragmatic signals of deliberate metaphor. In many cases, people more readily drew cross-domain mappings as part of their understanding of a conventional metaphor alone than when it was accompanied by specific pragmatic signals. These results are consistent with the experimental literature demonstrating that people ordinarily recruit cross-domain mappings (i.e., conceptual metaphors) as part of their fast-acting understanding of metaphorical language, even when those metaphors are conventional (e.g., ''We have really come a long way since the wedding'').

There may be various reasons why people frequently found conventional metaphors accompanied by pragmatic signals to be less compelling that they did for the same metaphors without such signals. One possibility is that the use of words such as ''well,'' ''like,'' ''one might say,'' and even ''there is a perfect phrase to capture this,'' suggests some hesitancy on the speaker's part concerning what is about to be stated. In the present study, the use of ''literally'' pushed some listeners to interpret a conventional metaphor in a more literal manner (e.g., the married couple actually moved to a new location). Similarly, uttering ''one might say'' or ''I can say the following'' may alert listeners to the possibility of alternative ways in which a speaker's message could have been articulated. Reading or hearing such signals act to decrease one's impression that a speaker deliberately created or used a metaphor, and that metaphor alone, for a specific rhetorical purpose.

A different possibility is that people's strong association of conceptual cross-domain mappings with conventional metaphors may be strong enough to outweigh any benefits that a pragmatic signal may have in highlighting the cross-domain mapping for the listener. The use of different signals in such situations may increase one's suspicion about the relevance of that verbal metaphor, at least in some contexts. This suggestion is, in any event, consistent with the body of psycholinguistic evidence showing the strong, automatic recruitment of conceptual metaphors when people encounter linguistic conventional metaphors in many situations (i.e., including different kinds of conventional metaphor, different experimental tasks, and methods of analysis).

Of course, the present findings do not completely refute deliberate metaphor theory. People's impressions of the creative or poetic nature of a conventional metaphor can be enhanced by the prior use of signals such as ''literally'' or ''There is a perfect phrase for this.'' The combination of different pragmatic signals in one context may, hypothetically, work to enhance the impression of deliberativeness on a speaker's part. Although the present findings showed that a single use of different signals sometimes decreases certainty about a speakers' aims, including one to alert people to cross-domain mappings, combinations of these devices should also be studied to see what effect, if any, they have on verbal metaphor understanding. Moreover, the present results do not deny the possible impact that pragmatic signals may have on verbal metaphor understanding besides those claimed by deliberate metaphor theory. As mentioned earlier, many pragmatic theories highlight the importance of pragmatic signals in altering listeners to what speakers are trying, in-the-moment, to accomplish when talking. Even if the pragmatic signals argued to be directly relevant to marking metaphor appear with many other aspects of language, these signals may still play some role in shaping people's expectations about what speakers, and writers, are trying to do. It seems doubtful, though, that these signals are directly tailored toward alerting people to the presence of deliberate metaphor per se.

Most discussions of deliberate metaphor assert that people signal their listeners about the deliberativeness of an upcoming verbal metaphor. Yet these signals sometimes appear after verbal metaphors, novel or otherwise, have already been encountered and interpreted (e.g., ''We really have come a long way, so to speak, since the wedding''). Does the presence of a pragmatic signal after a verbal metaphor act as an instruction to go back and reinterpret the metaphor? Even when pragmatic signals precede verbal metaphors, it is unclear, within deliberate metaphor theory, when the judgment of

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deliberation is made (before or after the metaphor has been interpreted), or how this judgment affects the online processing of verbal metaphor.

There may be several other reasons to not completely reject deliberate metaphor theory. First, pragmatic signals may be relevant in alerting people to the cross-domain mappings within novel metaphors, such as Romeo's ''Juliet is the sun.'' An empirical test of this idea is clearly required. It is still fair to critically ask, however, if a pragmatic signal does not alert people to the cross-domain mapping within a conventional metaphor, how would these devices alter the online processing of a novel metaphor? Second, the present study examined only a subset of the pragmatic signals often suggested to be markers of deliberate metaphor. Other signals, and again perhaps in combination, should also be empirically studied. Third, there may be other ways of assessing people's judgments of deliberativeness and their abilities to infer cross-domain mappings than were explored by the ratings obtained in the present study. Fourth, there may be more sensitive online methods for examining people's fast-acting, and possibly rapid-fading, inferences about deliberation and cross-domain mappings. Online methods, which examine the moment-by-moment processing of metaphor, may be important to employ when investigating the possible influence that pragmatic signals play in the interpretation of metaphor, even if these signals do not operate to inform people of deliberation or cross-domain mappings. Asking people about their conscious interpretation of verbal metaphor appears, nonetheless, to be a reasonable first step in testing the predictions of deliberate metaphor theory, especially given the claim that ''deliberate metaphor affords conscious metaphorical cognition'' (Steen, 2013).

The main impact of the present research is to raise serious doubts about the psychological validity of deliberate metaphor theory and its claims about verbal metaphor understanding (also see Gibbs, 2011b). Moreover, the weight of evidence from psycholinguistics shows how conventional metaphors are interpreted via cross-domain mappings, a fact that is contrary to a fundamental axiom of deliberate metaphor theory. The burden now lies squarely with proponents of deliberate metaphor theory to both explain the experimental research on conventional metaphor understanding and empirically demonstrate that pragmatic signals really lead to enhanced judgments of deliberation about metaphoricity and cross-domain mappings during the production and interpretation of metaphorical language.

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