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Anyone for non-scalarity?[1]

PATRICK J. DUFFLEY
Université Laval

and

PIERRE LARRIVÉE
Aston University

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This article examines the status of scalarity in the analysis of the meaning of the English determiner *any*. The latter's position as a prime exemplar of the category of polarity-sensitive items has led it to be generally assumed to have scalar meaning. Scalar effects are, however, absent from a number of common uses of this word. This suggests that *any* does not involve scales as part of its core meaning, but produces them as a derived interpretative property. The role of three factors in the derivation of the expressive effect of scalarity is explored: grammatical number, stress and the presence of gradable concepts in the NP. The general conclusions point to the importance of developing a causal semantic analysis in which the contributions of each of the various meaningful components of an utterance to the overall message expressed are carefully distinguished.

1 Introduction

Certain polarity-sensitive items have a range of interpretations that has provided an enduring subject of fascination for linguists. One such object of wonder is the observation that modal positive contexts produce free-choice readings with these items, while negative contexts induce negative polarity readings, as illustrated by the following pair of examples with the polarity item *any*, which will be the focus of our discussion:

(1) From where he was, he could see any stragglers.
(2) From where he was, he couldn't see any stragglers.

Whereas *any* has an interpretation that could be paraphrased by *no* in the second sentence, it could be rendered by a universal quantifier in the first one. Since Horn (1972), this contextual variation has been assumed to depend on polarity-sensitive items evoking end-points of scales, the latter being exploited by modals to yield universal readings and reversed by negation to yield negative values. According to this view, scalarity would be part of the core meaning of *any*. At the same time, various observers have suggested that the core meaning of *any* seems to involve the arbitrary choice of some entity in a relevant set: Horn himself (2000a: 168–9) provides a list of

[1] Former versions of this article have benefited from observations by two anonymous reviewers and the editor of an American journal, and from comments by two reviewers of this British journal – one of whom was Larry Horn, many of whose considerations have been included as footnotes in the final version as a way of pursuing the dialogue on the topic. He and the other colleagues concerned are the object of our gratitude, and should not be blamed in any way for any of the views expressed by the two authors in their equal contribution.

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commentators, to which could be added Dayal 2004, Farkas 2005, Tovena and Jayez 1999, Jayez and Tovena 2004. Arbitrariness would even appear to constitute the focus of negation in examples such as (3):

(3) You can't send just any postcard to Vanuatu

which suggests that only certain types of postcards will satisfy Vanuatuan postal service requirements, i.e. the choice cannot be arbitrary.

The core meaning of the paragon of polarity-sensitive items would thus seem to include both arbitrariness and scalarity. Yet, clearly, the evocation of an arbitrary member of a set and that of an extreme value on a scale are distinct concepts, and so both cannot define the content of *any* at the same time and in the same respect. This entails that they must intervene at different stages in the production of the message conveyed by utterances containing *any*, and must stand in some kind of relation to one another that needs to be clarified. If scalarity is taken as the defining property of *any*, an explanation is required as to how arbitrariness effects come about; if arbitrariness is taken as basic, the question of where scalar impressions come from must be answered. It is this ambivalence as to the specific semantic content of *any* in present-day English that we will attempt to adjudicate. We will adopt an unabashedly empirical position, our strategy consisting in identifying examples of the free-choice and negative polarity senses from ordinary usage that reveal one semantic dimension but are incompatible with the other. We do not purport to propose an exhaustive analysis of the semantic content of *any*, nor a complete determination of the effects derived from it on the level of the messages it can be used to express, nor an account of the relation of *any*'s content to distributional constraints. Before proposing any definitive definition of *any*, let alone a formal one, it would seem desirable, and perhaps even necessary, to resolve the ambivalence between the scalarist and arbitrarist views, a question that still remains to be clarified nearly forty years into the modern investigation of the semantics of this polarity item. Resolving this question therefore constitutes an important step towards defining the core meaning of *any* and understanding the contextual effects which are derived from its use in various types of contexts. A complete explanation of this determiner's uses would require the identification of all of the determinants of the contextual effects observed in utterances containing *any*. This would presuppose a definitive definition of the latter and a full comprehension of all of the pragmatic strategies involved in its use, a task which goes well beyond the more modest pretensions of this study. Such a definition would also have to explain the distributional limitations on polarized items, a long-standing issue that is also beyond the scope of this article. The findings of this study do, however, have important implications for future work on *any* and on polarity phenomena in general, as well as for general semantics, as they help delineate the division of labour between the semantics of the linguistic items of which an utterance is composed and the pragmatics of contextual enrichment and the inferencing processes necessary in order to grasp the speaker's intended message.

The article is organized as follows. Section 2 provides a historical overview of the assumptions that have led to the current ambivalence in the analysis of the meaning of

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any. Section 3 discusses free-choice and negative polarity uses that cannot be accounted for in a scalar analysis of this item. The merits of analyses relying on the concept of arbitrariness are discussed in section 4. How the notion of arbitrary choice could yield scalar effects is the subject of a non-formal semantic discussion in section 5, which looks at three possible determining factors in the derivation of scalar discursive effects: the linguistic features of grammatical number, stress and gradability. The argument that *any* evokes the possibility of arbitrary choice, from which scalarity is a derived effect, is summed up in the conclusion, which insists on the importance of the argumentation presented in this study for polarity sensitivity and semantic analysis in general.

2 How *any* got a reputation for being scalar

The question of polarity sensitivity is profiled against the background of the notion of scales (Horn 1972; Gazdar 1979). This notion emerges from Grice's well-known conversational maxims and Ducrot's analogous laws of discourse. Both the Gricean maxim of quantity and Ducrot's law of exhaustivity stipulate that a speaker will convey all the information at his disposal that is necessary for the purposes of the conversational exchange. Thus if a speaker says that Jane is a good researcher, it is reasonable to infer that she is not a bad one, and equally reasonable to believe that she is not an excellent one, since if that were the case the speaker would have been expected to say so. These inferences are reversed by negation: if Jane is said to not be a good researcher, she will normally be understood not only to not be excellent, but to be downright bad. Negation thus affects the positive and negative terms of a pair of antonyms asymmetrically: if Jane is claimed to not be a bad researcher, she may be implied to be a good one, but one might also infer that she is only so-so, i.e. neither good nor bad. Negation of the positive term normally implies assertion of the negative one; negation of the negative term, on the other hand, yields an equivocal value ranging from an intermediate value to the positive pole of the opposition (Horn 1989; Levinson 2000: 127–9).

Scales of ordered sets of values interact in a meaningful way with negation, and negative polarity items seem to generally involve such scalar models. Scalarity is a salient feature of the superlative expressions shown by Fauconnier (1975, 1978) to give rise to striking pragmatic inferences based on scalar reasoning. Thus in some affirmative contexts, a minimum-value expression such as *the faintest noise* can convey a universal quantification, as in *Jim can hear the faintest noise*, while a total negation can be suggested in a negative context, as in *Jim can't put up with the faintest noise*. Similar contextual variation is found with maximum-value expressions, ranging from *Jim can put up with the loudest noise* (universal quantification) to *Jim can't hear the loudest noise* (total negation). While various situations may be involved having to do with factors such as the subject's hearing capacity or the surrounding noise level, the interpretations in both types of context concern an extreme position on a scale, as indicated by the possibility of modifying the superlative by *even*. The application of negation to such a scalar position is used as a means of negating all lower values on the scale.

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Similar interpretative distinctions are observed with *any*, as in (4) and (5) below, which have led to the assumption that it too is amenable to a scalar analysis:

(4) Jim can put up with any noise.
(5) Jim can't hear any noise.

The hypothesis that polarity-sensitive expressions occupy extreme positions on a scale was further developed by Michael Israel in his 1998 thesis. Israel discerned an additional condition for negative polarity status besides that of evoking an end-point on a scale: the notion of emphasis. The fact that only emphatic minimal scalar expressions such as *the least* are able to cover the whole of a scale accounts for their being licensed in negative polarity contexts. Understating minimal scalar expressions such as *some*, which assert less than one might have expected, do not allow the sort of inferences required in such contexts. These inferences can be carried by *any*, however, which is therefore claimed to belong to the category of emphatic scalar expressions.

The view that *any* is a scalar item has been put forward notably by Laurence Horn, who from the 1990s on, in collaboration with Young-Suk Lee in 1995 in the first publication, has proposed a full-fledged development of the analysis of *any* first sketched in his 1972 thesis (see Lee and Horn 1995; Horn 2000a, 2005). The Gricean model developed by Horn uses scales to analyse items which give rise to implicatures, such as the determiner *some*, the modal auxiliary *can* and the adjective *warm*. In their use in neutral assertive contexts, such items often communicate a backgrounded rejection of another proposition. Thus *I like some of Pasolini's films* implies that the speaker does not like all of them; *You can visit the Guggenheim* means that the suggested museum outing is not obligatory; *The verveine is warm* implies that it is not hot. The opposition between one position on a scale and other possible positions would explain these background negations.

Scales are proposed by Lee and Horn to account for the meaning of *any*, which is treated as an indefinite and compared to the indefinite article. Thus the existential reading of the article is paralleled by the negative polarity use of *any*:

(6) There wasn't a tree in sight.
(7) There wasn't any tree in sight.

Both uses concern quantity, i.e. individuals. The generic reading of the indefinite article and the free-choice use of *any*, on the other hand, are claimed to refer to kinds rather than individuals:

(8) A five-year-old knows that wrestling is fake.
(9) Any five-year-old knows that wrestling is fake.

Horn's analysis converges with that of Kadmon and Landman, who in their 1993 paper propose an analysis of *any* along the two dimension of strengthening and widening. Strengthening is the property by which *any N* entails *a N*; widening extends the reference of *N* even to atypical members of the category denoted by the noun. Thus asserting that one does not have any matches is claimed to evoke a reference even

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to atypical exemplars, such as wet matches, an impression that would not be created by the assertion that one does not have a match, reference with *any* being intuitively broader than with the simple indefinite.

The intuition of a widening effect is captured by Lee and Horn through the postulate that the notion of indefiniteness in the meaning of *any* is associated with an underlying *even*: it is the notion that even the least likely exemplar is included in the predication that extends the set to include atypical members. The presence of the notion of *even* in the meaning of *any* also implies the presence of a scale. Free-choice *any* evokes the lowest point on a scale of kinds and can be paraphrased by *even* + superlative,[2] as in:

(10) Any puppy is cute.
'Even the ugliest puppy is cute.'

NPI *any* denotes the lowest point on a scale of quantities and can be paraphrased by *even a single* (for count nouns) and *even a bit/even the least bit* (for mass nouns), as in:

(11) There isn't any person available now.
'There isn't even a single person available now.'
(12) There isn't any food in the refrigerator.
'There isn't even the least bit of food in the refrigerator.'

The presence of scalarity with *any* would be supported by the parallel behaviour of its paraphrases with respect to modification by *whatsoever* and *at all* for all usages[3] and by *absolutely* and *almost* for free choice. This would evidence a scalarity absent from the indefinite article, which does not support these modifications. The hypothesis that scalarity percolates from an underlying *even* also finds comfort in the observation that this particle is a common morphological component of the equivalents of *any* in various languages (Haspelmath 1997: 157), Hindi being a well-documented case (cf. Lahiri 1998, 2001).

The unitary nature of *any* is accounted for in this approach by the fact that the combination of indefiniteness and the evocation of the lowest point on a scale underlie all of the uses of this determiner, with the NPI/FC distinction being explained by the application of the scalar notion to the domain of 'quantity' versus 'kind'. In later work, Horn has focused on an additional semantic property of *any*, described by the term

[2] 'The actual analysis would be closer to "A puppy, even the X-est, is cute", where X is contextually provided and functions essentially like a free variable; "X-est" will be the extreme value on the relevant scale', as indicated by Horn.

[3] Horn reminds us that this fact supports the unified treatment of *any* put forward in his 1972 thesis: 'The point is that **both** NPI and FC *any* license *whatsoever* and *at all,* while no other determiners/quantifiers, either universal or existential, do – other than *no(ne),* which is of course the neg-incorporated version of *any*:

I didn't see {anyone/*everyone/*someone} whatsoever.
{Anyone/No one/*Everyone/*Someone} at all can solve that problem.

This was taken to be the strongest single argument for uniting the two *any*'s, and in Lee and Horn 1995 for accounting for this property in terms of the end-of-scale component of the meaning of *any*.'

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'indiscriminacy' (2005: 185). This aspect of *any*'s semantics is claimed to be reinforced by the adverb *just* in usage such as (13):

(13) This isn't just any sport utility vehicle.

Here *just any* is used to convey the proposition, which is then denied, that the predicate holds for an arbitrarily chosen value on the scale of sport utility vehicles, including one at the scalar end-point (Horn 2000a: 175).

The notion of scalarity is thus a central component of the meaning of *any* in the analyses proposed by Lee, Horn, Israel and Fauconnier, and is implied by the Kadmon and Landman treatment. These analyses are inspired by a new understanding of Gricean principles, a comparison between *any* and other polarized items such as superlatives, as well as by paraphrases using other polarity expressions. The centrality of scalarity is re-examined in the next section.

3 Down-scaling *any*

Is *any* inherently scalar? This question meets with a highly relevant observation in a comprehensive study of indefinite pronouns by Haspelmath (1997: 121), who points out that interrogatives with scalar end-point indefinites are 'somewhat odd', so that a question such as *Did you hear the slightest noise?* 'could hardly be meant as an information question, because it is very unlikely that the speaker should be interested about an extreme value'. This difficulty is also acknowledged by Krifka in his 1995 study, in which he concludes that information questions with NPIs are about 'maintain[ing] an equilibrium between the informational value of the positive and negative answer' (1995: 254). This would suggest that the NPI itself does not denote an extreme value on a scale in this type of use, as this would lead to a rhetorical question in which 'the speaker minimizes the *a priori* possibility for a positive answer' (see also Gutiérrez-Rexach 1998; van Rooy 2003): a question such as *Did you hear the slightest noise?* would only make sense with stress on *slightest* and in a situation where the speaker wishes to ascertain with certainty that the person being interrogated, who has already denied hearing any noise, really did not hear even the slightest noise. Guerzoni (2004: 320–5; see also Heim 1984) notes also that whereas questions with *any* can be used as neutral requests for information, questions with minimizers such as *Does Sue have the slightest idea how hard I am working?* are biased towards a negative answer.

These observations have significant import for the analysis of uses of *any* in interrogative contexts such as (14):

(14) Did you hear any noise?

Contrary to questions with end-point scalars, such sentences usually do have the force of neutral information-seeking questions. Since information questions do not normally bear on scalar end-points, a scalar analysis of *any* is highly problematic in this environment. By itself, this use of *any* would be sufficient to call into question the scalar account. However it is not an isolated case. Other commonplace instances of NPI

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and free-choice readings also appear to be incompatible with a scalar interpretation. Examples from both domains are given below.

3.1 Non-scalar NPI uses

Besides the interrogative in (14) above, the scalar paraphrase by means of 'even the least/even a single' also encounters difficulties in its application to other common uses of *any* in standard polarity contexts. Three such cases are given below:

(15) If you find any typos in this text, please let us know.
(16) You can pull out of the driveway. I don't see any cars coming.
(17) We checked the wiring before we made any changes to the electrical box.

(15) is simply an invitation to inform the authors in case there might be typos in the text; in contrast with *some*, *any* is not associated with any presumption in favour of the existence of typos, but rather with a provision for coverage of potential slip-ups in case they might exist. While (16) might be argued to be paraphrasable by means of 'even a single', this paraphrase would only be the equivalent of this sentence if uttered with stress on *any*. The non-stressed version does not involve any insistence on not having seen the minimal possible quantity of cars. Similarly in (17), the unstressed version of *any* does not bring to mind the notion that there was not even a single change to the electrical box, even though this paraphrase could be substituted *salva veritate* for *any changes* in the sentence in question. The fact that the non-scalar readings are possible shows that the evocation of a scalar end-point can be absent from these common negative polarity uses of *any*, and the same goes for the free-choice contexts cited below.

3.2 Non-scalar FC uses

Free-choice contexts are not always amenable to a superlative + kind-expression paraphrase either. Here are a few examples:

(18) Pick any card.
(19) Hitting any key will reactivate the screen.
(20) Any American got special treatment at the border.

In (18) there is absolutely no idea of some cards being more or less selectable than the others, and so a paraphrase by 'even the least likely to be chosen' does not work. In (19) all of the keys on the keyboard are equally valid candidates for reactivating the screen. And in (20) it was sufficient to be an American to get special treatment at the border.

4 Finean arbitrariness and scalarity

The paraphrase just given for (20) is reminiscent of the notion of arbitrariness proposed by Tovena and Jayez (1999) as the key to understanding the unity underlying the

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free-choice and polarity uses of *any*. As elaborated by Fine (1985), arbitrariness concerns the irrelevance for the truth of a given proposition of individual variants. According to Tovena and Jayez, free-choice *any* applies arbitrariness to individuals, which become 'arbitrary objects' in Fine's sense of having their individuality treated as irrelevant in favour of some generic property which they satisfy wholly and exclusively. Applied to (21) below, this means that it is only because it is on the reading list that a given book *b* is read, and not because of its intrinsic interest or clarity:

(21) Mary read any book on the reading list.

In the polarity-sensitive use of *any*, arbitrariness is applied to events or propositions rather than to individuals: a proposition I is arbitrary with respect to a proposition J if J entails I and any individual variant of I. Arbitrariness is here fundamentally equivalent to the logical notion of dependency: an object is arbitrary if its choice is solely dependent on a certain property and not because of other properties it might have, so one object with the desired property can be chosen arbitrarily just as well as any other. This is connected, according to Tovena and Jayez, to the unprovability of a negative statement such as (22):

(22) Mary did not read any book.

There are infinitely many possible events of reading book *b* which are excluded by a judgement such as *Mary did not read b*, thus making this judgement unverifiable by direct observation. All of the possible events negated by a sentence such as (22) are treated by means of *any* as individual variants of the event-type 'read a book'; these individual events are therefore irrelevant to the truth of the proposition, any one of them being replaceable by any other with the same properties. In this view, modification by *whatsoever* and *absolutely* extends the number of relevant entities of choice, and modification by *almost* restricts it, without there being any need to refer to scales.

Scalarity may, however, be accounted for by arbitrariness. If a given book is said to be read by virtue of the fact that it is on the reading list, then it has not been read in virtue of its intrinsic interest, clarity or any other property it might have. These properties may be unevenly distributed among the books in question, which can then be more or less likely to be read by Mary. This may yield a ranking of books according to the likelihood of their being read by Mary, which produces an interpretation akin to a scalar effect. While scalarity cannot be a necessary consequence of arbitrariness, in view of the existence of non-scalar uses of *any* in both polarity (15–17) and free-choice (18–20) contexts, arbitrariness could explain scalarity. The arbitrariness hypothesis thus seems to provide a broader account of the uses of *any* than does the scalar view. What is more, it offers the potential to explain scalarity effects. These effects can be favoured by various linguistic factors in the utterance, three of which are considered in the following section.

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5 Conditions for scalarity

The story so far is that, contrary to what is suggested by paraphrases containing superlatives and minimizers, *any* does not always evoke an extreme position on a scale of values. An information question such as (23):

(23) Would anyone like a coffee?

simply indicates that each person within earshot is treated equally as a possible candidate for wanting more coffee. Scalar effects can however be produced under certain conditions.

One such condition is the presence of stress on *any*, a factor recognised by Krifka[4] (1995; see Beaver and Clark 2008 for a more general treatment of the role of stress for meaning). Whereas an unstressed *any* in a sentence such as (24) below simply evokes the obligation to remove whatever dirt there might be:

(24) Any dirt has to be removed,

placing stress on *any* would produce the effect of evoking the low end-point of a quantity scale. Stress in English can have two values, 'contrast' (Rooth 1992) and 'intensification' or 'emphasis' (cf. Hirst 1977), as illustrated by (25) and (26) below:

(25) I want the BIG one (i.e. not the small one).
(26) That was one BIG animal, that moose!

Since *any* does not denote any particular quantity which could be contrasted with another quantity, we assume that stress is used emphatically when it occurs with this quantifier, placing emphasis on the notion of indiscriminate freedom of choice. Emphasizing this notion, moreover, creates the effect of inducing a pragmatic scale in the following way: if a speaker insists on the fact that *no matter what* dirt must be removed, this will logically entail the inclusion of even the tiniest speck of dirt. Of course, this amount is also implicitly covered in the unstressed use of *any*, but without focus on the fullness of the freedom of choice, the end-points of the scale are not given any particular status with respect to the other quantities in the range of reference, all of the latter being placed on the same footing as possible candidates to which the predication applies.

There is no stress on *any* in the imperative *Pick any card*, which has been used by Giannakidou (2001) and Horn (2000) as a counterexample to analyses associating free choice with some form of universal quantification (see also Larrivée 2007b). As expected also, there is no impression of a scale in such a use either, neither a quantitative one (*'even a single card') nor a qualitative one (*'even the card you would be least likely

[4] Horn draws our attention to work by Gene Rohrbaugh (2007) 'who devotes an entire paper and much of a later dissertation to this topic, arguing specifically that *any* is neither necessary nor sufficient to induce Kadmon and Landman-style widening, and that the role of *any* is really an epiphenomenon of the presence of focus stress (obligatory with free choice *any* and optional with NPI *any*)'.

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to pick'). The deck is not conceived here as being ranked in any particular hierarchy – all of the cards have the same status as eligible candidates for selection. If stress were to be placed on *any*, however, a scale could be created. This would correspond to a situation in which the hearer had shown some signs of treating certain cards (perhaps the ones on the top of the deck) as being unselectable. The speaker could then cancel the assumption of selectiveness by emphasizing the complete fullness of freedom of choice.[5] The fact that even the cards the hearer might suppose to be excluded from the possible range of choice are said to lie within it would be associated here with an ordering of the cards in terms of their selectability.

Conditionals and interrogatives follow the same pattern:

(27) (a) If you hear anything, wake me up.
(b) If you hear ANYTHING, wake me up.

(28) (a) Can you see anything?
(b) Can you see ANYTHING?

As pointed out by Haspelmath (1997: 125), there is a clear difference in meaning between the utterances with and without stress on *any*: in the (b) sentences 'a scale of alternative values is present of which the chosen value is the end-point'; in the (a) sentences 'no such scale is present'. The (a) sentences involve the applicability of the condition or question equally to all possible candidates which it might concern. Emphasizing the fullness of the freedom of choice as in the (b) sentences, on the other hand, leads to a focus on the extreme fringes of the range: 'even the slightest noise', 'even the fuzziest outline of a thing'. As Guerzoni (2004: 321) points out, in such contexts interrogatives are usually biased towards a negative answer rather than being neutral requests for information. This is because a question about a fringe value implies that the speaker has already received a negative response about core values and is double-checking the situation by inquiring about extreme values.

The use of unstressed *any* in negative contexts can also be argued to be non-scalar. Haspelmath (1997: 125) observes in this respect that both 'emphatic' and 'non-emphatic' indefinites are possible in direct negation, but admits 'it is not clear to me whether one can say that only the second involves a scale':

(29) (a) I didn't SEE anything.
(b) I didn't see ANYTHING.

If however the negation in (29a) is analysed as applying to whichever possibly chosen element one might like to consider within the range of things that could have been

[5] The example *Pick any card* 'normally invokes no scalar ordering (nor, indeed, any sort of widening), although if it comes after the addressee has just asked whether he's limited to choosing just some particular subset of cards ("Any picture card?") then it will indeed induce a scale (or widening) – but in precisely those contexts, *any* will be obligatorily focused'. The following exchange is proposed by Horn as illustrating the point:

A: Pick any card.
B: Any face card?
A: ANY card.

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seen by the speaker, there is no need to invoke the presence of a scale to explain the production of the effect of total negation. To be sure, the negation of the minimal quantity on the scale of things possibly seen by the speaker ('not even one thing') is logically equivalent to (29a). But such an equivalence is situated on the level of the end achieved (the message of a total negation) and not on that of the linguistic means used to achieve this end. The account proposed here has the advantage of showing how usage in negative contexts fits into the overall pattern of the uses of *any* and its interaction with the feature of stress. The unambiguous impression of a scale observed with the stressed use of *any* in (29b) can be explained by means of the same principles as those applied to the other types of context discussed above.

To sum up the discussion of the role of stress, one could say that it activates a potential for scalarity in the notion of indiscriminate arbitrariness expressed by *any*. The notion of a possibility of complete freedom of choice within a range has the potential to give rise to a scalar impression if something causes focus to be brought to bear on the fringe of the range. One factor associated with such a focus is placing emphasis on the fullness of freedom of choice, which can provoke the inference that even the outer fringes of the range are covered.

The production of a scalar impression can also be due to the grammatical number of the noun following *any*.[6] The role of the noun's grammatical number in a noun phrase introduced by *any* is to specify whether the possible candidates for selection are to be extracted from the range singly or in groups. This can be seen in the contrast between (30a) and (30b):

(30) (a) She'll marry any blonde with a million dollars.
(b) ?* She'll marry any blondes with a million dollars.

Only the first sentence makes sense in a monogamous culture, as it signifies a free choice ranging over singulars and not plurals. Because of *any*'s meaning, in some cases the end result on the level of the message expressed may be basically the same whether the selectable candidates are extracted singly or multiply, as can be seen from the sentences in (31):

(31) (a) He didn't get any question in Section B right.
(b) He didn't get any questions in Section B right.

Since all of the questions, whether they be considered one by one or in subsets, are covered as cases which, if adverted to, are negated, the resultant message is that of total negation in both of these sentences. This is not to say, however, that the two utterances are exactly equivalent: (31a) produces the impression of a stronger negation, associated with the notion of a quantitative scale ('not even one'). The second sentence with the plural noun could simply be a factual report on how many questions the student got right in Section B on the exam, in which case there would be no stress

[6] 'The role of number is indeed significant. Lee and I noticed we kept needing to change number on our *any* examples when we moved from free choice (e.g. *Any owl hunts mice*) to plural (*I didn't see any mice/?mouse*).'

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on *any*. In contrast, the first sentence is difficult to imagine without stress on the determiner.

The relevant factor here is the default expectation with respect to a student's performance on a section of an exam, which is that normally at least a few questions should have been answered correctly. This default plurality is negated in (31b), which says that one can pull out whichever subset of questions one likes and the negation applies to it. The singular noun *question* in (31a), however, represents a departure from normal expectations. This entails that there must be some contrast between the actual situation and the norm which has led the speaker to envisage the possibility of getting questions right on the exam in terms of singular questions rather than in terms of groups of questions. Together with negation, this produces the impression that the person taking the test might have got at least one question in Section B right, but in fact did not. To our knowledge, the influence of the noun's grammatical number has not been taken into account in any study of *any* to date. The impressions involved are sometimes subtle, but cases such as (31) show that they are nonetheless real. The topic calls for an in-depth examination of usage which, unfortunately, cannot be undertaken here. More detailed research might for instance uncover the basis for Lee and Horn's (1995) intuition of scalarity in (32):

(32) Does Sue have any pen?

The authors cited get the impression here of 'even a single pen'. This could be due to the noun being in the singular: since usually people have more than one pen, if someone asks a question applicable only to whatever singular pen Sue might have, it could be because something has contradicted the default expectation and led the speaker to question whether Sue has even one pen.

A third factor which can give rise to a scalar interpretation is the presence of a gradable concept in the noun phrase introduced by *any*. This can be seen in the contrast between (33a) and (33b) below:

(33) (a) Any mechanic will tell you that a Toyota has a better engine than a GM.
(b) Any mechanic with a bit of sense will tell you that a Toyota has a better engine than a GM.

Whereas (33a) simply expresses the idea that you will get the same answer from whatever mechanic you might choose to ask, the presence of the quantitatively gradable notion in (33b) favours a scalar interpretation in which even the mechanic with the least bit of sense is covered by the speaker's assertion. The connection between gradability and scalarity is obvious and requires no further comment.

6 Conclusion

This article has examined whether the semantic content of present-day English item *any* in its negative polarity and free-choice uses is better conceived as evoking the

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extreme point on a scale of values or an arbitrary[7] choice of an entity in a set. The impression of the denotation of a scalar end-point has been demonstrated here to be a product of the interaction of *any* with contextual factors, and not part of its core meaning, as *any* can be used without this effect arising. This has been argued to be the case even in negative polarity environments, where it is the coverage of all of the various possibilities denotable by the noun rather than a position on a scale that is the actual import of the use of *any*. Likewise, the point of utterances with free-choice readings such as *Pick any card* or *Hitting any key will activate the screen* is to indicate that a random choice will do. The constancy of the arbitrariness effect suggests that it, rather than scalarity, is an inherent component of the semantics of *any.* This would explain why in free-choice uses the notion of arbitrariness can be negated to yield a reading of discrimination between entities (*You can't send just any postcard to Vanuatu*). The way in which arbitrariness gives rise to scalar effects has been examined in conjunction with the linguistic factors of stress, grammatical number and the presence of gradable concepts in the NP headed by *any*. Singularity seems a necessary albeit not sufficient condition for the conception of an extreme value when it contrasts with a default expectation of plurality. Stress lays emphasis on the arbitrary nature of the choice, thereby leading to a focus on the marginal values of the set and bringing into consideration extreme values to make it possible to envisage their scalar ranking. Gradability introduces a scalable concept admitting of various degrees of intensity, which interacts with arbitrariness to produce a focus on the fringe values of the scale.

This research has not explored sociological or psychological variation, which to the best of our knowledge does not have any impact on the issue of the semantic content of *any*. The diachronic evolution of this item also remains to be explored, to seek possible clues as to the historical path that has led to its current semantic status in the language. Because the semantics of specific items is presumably language-dependent to a significant degree, we are not making any claims as to the cross-linguistic situation of items similar to *any*. We do not contend that such items are not scalar, as there are clear examples of scalar polarity items across languages (Giannakidou 2007; Gutierrez-Rexach and Schwenter 2002; Hoeksema and Rullmann 2001; Jayez and Tovena 2004; Kratzer and Shimoyama 2002, Quer 1998; Saeboe 2001; Zepter 2003), and English superlatives certainly do seem to indicate an extreme value in a scalar model. Future

[7] Horn raises the question as to whether the notion of arbitrariness invoked by Tovena and Jayez based on Fine's work is the same as the notion of indiscriminacy that he has developed based on Haspelmath's earlier notion of depreciation. While this would require a separate study going beyond the scope of this article, it would seem that whereas Tovena and Jayez define arbitrariness in terms of the relation between the entities under consideration and the predicate, Horn focuses on the relations between the entities themselves, and on the indifference of one over the other. Haspelmath's notion of 'depreciative' also involves a qualitative dimension added to that of arbitrariness (as with *n'importe qui/quoi* in *N'importe qui peut y dire n'importe quoi*, which strongly suggests things of little value), but not identical to it (the same connotations do not attach to the English translation of the French utterance, *Anyone can say anything there*).

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research using corpus data would allow the frequency of the relevant readings of such items to be studied.

On a more general note, we speculate that the analysis of *any* as scalar may have as its source the paraphrase method. Minimizers and superlatives are often good paraphrases of *any*, and the former do denote extreme values on a scale as part of their literal content, which would naturally lead one to expect that *any* is equally scalar. Yet this is not always so. From (34):

(34) He does not trust any corporation, be it large or small,

it can be seen that both extremes of the scale are compatible with *any* at the same time. This is highly problematic for a scalar treatment that presumably assumes one extreme value per context (note that paraphrase by superlatives and minimizers would lead to contradiction here). Superlatives and minimizers also part company with *any* in other contexts, as the following sentences evoke two very different perspectives:

(35) He can grab the attention of any teenager.
(36) He can grab the attention of even a teenager.

Only the second sentence concerns human beings other than teenagers, the arbitrary choice denoted by *any* in (35) being limited to that group. Frequent paraphrase relations between items cannot, however, be taken to entail semantic identity: converging interpretations are dependent on elements that belong to the entire utterance and to other items in it. Thus one cannot attribute certain aspects of the message expressed by an utterance containing *any* (viz. scalarity) to *any* alone.

Hopefully the present study has made some contribution to the challenge of sorting out what *any* itself contributes to the expression of an intended message, and what is due to its interaction with other factors, taking into account the fact that an utterance is produced by a particular speaker in a particular situation to communicate a particular message. The importance of the matter transcends the analysis of the specific item considered in this study, however, and raises the question of polarity sensitivity in general. In the same way that the image of a figurative painting is identified through various elements such as light changes, directions and surfaces, a message is communicated through the convergence of various types of meaning-representations in a compositional way. These representations each have different roles in the production of the overall effect. Underspecified representations are stored as permanent items in memory and act as causes; more specific representations derive as effects produced by the interaction between linguistic items and pragmatic factors. The discernment of the status of the various semantic representations involved in the communication of a speaker's intended message is a necessary step towards a causal explanation of the production of meaning, as we have tried to illustrate here. The causes lying behind the conveying of a given message by a given utterance cannot be plausibly ascertained unless the contribution of each linguistic element contained in the utterance

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is elucidated. The fundamental possibility of a compositional semantic analysis is at stake here.

Authors' addresses:
Département de langues, linguistique et traduction
1030, avenue des Sciences-Humaines
Université Laval
Québec, QC
G1V 0A6
Canada
Patrick.Duffley@lli.ulaval.ca

School of Languages and Social Sciences
Aston University
Birmingham B4 7ET
UK
p.larrivee@aston.ac.uk

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