Genericity in similarity*

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August 2022

Abstract

In this paper, I offer an account of similarity constructions involving 'like' and a nominal complement, such as 'be like *x*' / 'be like a *P*' and 'look like *x*' / 'look like a *P*'. I argue that these constructions have two key properties. **(1)** The first is that similarity predication amounts to predication of overlap of salient properties: I analyze 'is like *x*' as 'for relevant attributes, has the same value as *x*', where an attribute (e.g. 'color') denotes a partition over the universe of individuals, and possible values for such an attribute (e.g. 'red') correspond to cells of this partition. This is motivated by the fact that there seem to be grammatical devices that single out precisely what classes of properties are relevant, e.g. 'In terms of personality, she's just like her father'. This is partly in line with relevant work in semantics on clausal 'like' (Alrenga, 2010). It is also in the spirit of main accounts of similarity in psychology (Tversky 1977 a.o.), which view objects as sets of features and similarity as a set-theoretical relation between salient subsets of object features. **(2)** The second key feature of similarity talk is, I argue, that it involves generic quantification. This explains a range of data: first, it accounts for the reading of indefinites embedded in 'like' Prepositional Phrases: there is a reading under which 'John looks like a lawyer' is almost equivalent to 'John looks like a typical lawyer'. Second, it accounts for narrow-scope and almost conjunctive readings of disjunction in the scope of 'like': 'Mary looks like a lawyer or a judge' is almost equivalent (on its most accessible reading) to 'Mary looks like a lawyer and Mary looks like a judge'. Lastly, I observe that while the indefinite can receive a generic interpretation in simple similarity statements, it cannot be bound by quantificational adverbs in parallel sentences: 'John often looks like a lawyer' is not equivalent to 'John looks like most lawyers'. This is puzzling, since GEN is traditionally viewed as a silent quantificational adverb: if an indefinite can be bound by GEN, it should be bindable by overt quantificational adverbs as well. For instance, in 'a bird flies' the indefinite receives a generic interpretation. In the parallel sentence 'a bird often flies', under its most accessible reading, the indefinite is bound by 'often'. The sentence, then, ends up meaning that many birds fly. I solve this puzzle by assuming that generic readings of indefinites under similarity are not the result of adverbial generic quantification, but of genericity inherent to the lexical semantics of 'like'.

*This paper is in part a descendant of a Qualifying Paper that I wrote under the supervision of Salvador Mascarenhas, whom I thank for first encouraging me to work on this topic, as well as for countless discussions that played an essential role in the development of my ideas. I would also like to thank Benjamin Spector for his supervision and his substantial input at a later stage of this project. I also benefited from extremely useful comments from Gennaro Chierchia. Thank you to Philippe Schlenker for making me think hard about similarity between atomic individuals. Thank you as well to Diego Feinmann for pointing out the connection between 'like a *N*' constructions and genericity, and to Emmanuel Chemla, Jeremy Kuhn, and Keny Chatain for their very valuable comments. Thank you, finally, to the audiences of the 47th *Incontro di Grammatica Generativa.* and of the ESSLLI 2022 Student Session.

Contents

1 Introduction

Constructions such as 'like John' and 'like a lawyer' raise at least two questions. **(I)** First, what is the notion of similarity relevant to understanding expressions of comparisons in natural languages? In this paper I will argue, much in line with feature-based accounts of similarity in psychology (Tversky, 1977; Ortony, 1979), that the semantics of 'like' is context-dependent, and refers to contextually salient features shared by the two arguments. Concretely, I analyze 'is like x_e' as 'for relevant attributes, has the same value as x_e'', where an attribute is for instance 'color' and a value is for instance 'red'.

(II) Secondly, what is the status of the indefinite in 'like a *N*' PPs? An idea that underlies much work in psychology is that 'like a *N*' constructions correspond in a way or another to *assessments of similarity to a category*, by way of similarity to a prototype, to an exemplar, or so on (cf. Rips 1989; Gentner & Markman 1997; Hampton 1998, a.o.). Such an assumption leaves a number of questions open: why is it specifically the singular indefinite that triggers a 'similarity to a prototype' interpretation? In general, one would want to know how to articulate the connection between similarity to a category and similarity to an individual.

By contrast, I will argue that words expressing similarity do not inherently involve the comparison to a *category*. Instead, the indefinite receives a generic interpretation, and similarity itself is always understood to be similarity between *individuals*. The presence of genericity explains why, under its most available reading, (1) implies that the object looks like a *typical* gun.

(1) This object looks like a gun.

Whether there is a connection to prototypicality, then, depends solely on whether there is a connection between genericity and prototypicality, a deep question which I do not address in this work. Regardless, genericity provides, I argue, a suitable platform to give a single semantics for 'like' that covers both 'like *x*' constructions and 'like a *N*' constructions.

Before delving into the details of the two questions, it is worth discussing why understanding talk about similarity matters. The main motivation for this work is that fleshing out the connection between similarity and genericity has the potential to illuminate larger issues that concern the interaction between the structure of psychological representations and the grammar, for a number of reasons.

First, it has been alternatively argued and assumed both in psychology (Gelman *et al.*, 2003) and in semantics (Leslie, 2008, 2015; van Rooij & Schulz, 2020) that genericity is itself a linguistic phenomenon that entertains a privileged link to the structure of psychological representations. Thus seeing it pop up in talk about similarity is not without interest, given the relevance of similarity for theories of concepts and categories.

Second, similarity is intuitively involved in a number of other phenomena that are both traditionally problematic for semantic theory and interesting from the perspective of the semantics-psychology interface. To give only one example, privative adjectives have been repeatedly claimed to provide a vantage point over the structure of lexical items or even of non-linguistic concepts (Franks, 1995; Pustejovsky, 1998; Coulson & Fauconnier, 1999). These adjectives are in many cases paraphrased in terms of similarity (Del Pinal, 2015, 2018; Guerrini, 2021). For instance, one can view a fake gun as an object that, though it isn't a gun, is intended to look like one. And again, something cannot be a fake gun in virtue of being intended to resemble a specific, atypical gun. Assuming similarity is indeed involved in the semantics of privatives, this 'typicality condition' seems to further vindicate the presence of genericity in similarity.

Similarity also provides an exceptional testbed to understand unattended facets of generic quantification. I will show, from section 4.3 onwards, that indefinites under 'like' display a puzzling combination of properties. On the one hand, they can be bound by the generic quantifier.

(2) John looks like a lawyer.
$\approx$ John looks like a typical lawyer.

The generic quantifier is traditionally viewed as a silent quantificational adverb (Krifka *et al.*); as such, it is thought to only be able to bind an indefinite if the indefinite is in the Topic of a sentence (Chierchia, 1995, 2009; de Swart, 1996). But a number of facts suggests that complements of 'like' are always in the Comment of a sentence (see, a.o., Ortony 1979). And indeed, indefinites under 'like' cannot be bound by overt quantificational adverbs:

(3) John often looks like a lawyer.
$\not\approx$ John looks like most lawyers.

This is in contrast with what happens in characterising sentences:

(4) A bird flies.
$\approx$ A typical bird flies.

(5) A bird often flies. (under its most available reading)
$\approx$ Most birds fly.

What is going on with such greneric readings 'outside the Topic'? Looking at similarity allows us to investigate whether all genericity is adverbial, and if not, whether there are multiple types of generic quantification, as already suggested, for instance, by Greenberg (2004).

With this in mind, I turn to giving an overview of the main arguments for the two main components of my analysis.

1.1 Similarity as overlap of salient properties

Capturing similarity talk as overlap of relevant properties is motivated by the fact that *what* properties are relevant for a given similarity judgment can be modulated by context but also explicitly specified:

(6) a. She is like her father except in one respect.
b. In terms of objectives, this resolution broadly resembles the proposal now on the table.

This theoretical choice also coheres with psychological accounts of similarity like Tversky's (1977) classical feature-based theory. On this account, all objects in the domain are characterized by a set of features. For instance, a specific lion may be represented by a set of features:

Simba = {*lion-shaped, mane, yellow, lion-sized, carnivorous, sharp teeth*}

Similarity, then, is defined in terms of shared features, i.e. whether certain set-theoretical relations hold of pairs of object-denoting sets of features. In a given context, typically only a subset of the features of an object is relevant for similarity. This allows to deal with context-dependence: the selection of the features depends on certain interests and purposes. The more features of interest Simba shares with Aslan, the more similar he is to Aslan.

The context-sensitivity of Tversky's theory account allowed it to account for cases that Goodman (1972) had taken to speak for the theoretical intractability of similarity. Accordingly, indeed, judgments of similarity were a 'tricky business' because of their context-sensitivity:

> *Consider baggage at an airport checking station. The spectator may notice shape, size, color, material, and even make of luggage; the pilot is more concerned with weight, and the passenger with destination and ownership. Which pieces are more alike than others depends not only upon what properties they share, but upon who makes the comparison, and when.... Circumstances alter similarities.* (Goodman, 1972)

The account I present in this paper is in the spirit of Tversky's psychological account of similarity. I posit that for a given predication of similarity, only a contextually salient, often reduced set of similarity *criteria* is relevant. For instance, if I say that piece of luggage *a* looks like piece of luggage *b*, I may be referring exclusively to their color.

I do this with a twist: I formalize similarity criteria not as simple properties, but as partitions on the universe of individuals. For instance, 'color' is a partition, and the property 'blue' a cell in this partition. Intuitively, two things are similar with respect to color if they are in the same cell of the partition induced by 'color' (cf. Figure 1). This gives us an intuitive way to capture *what type* of property two objects share.

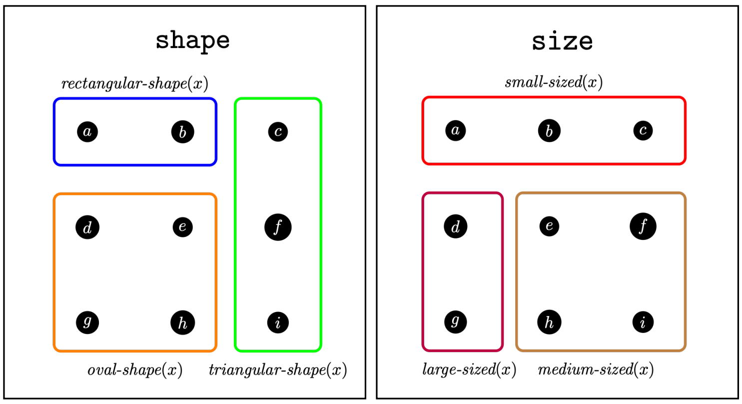

Figure 1: '*With respect to shape and size, piece of luggage* a *is like piece of luggage* b."

1.2 Genericity

Taking the indefinite to receive a generic interpretation explains a wide range of semantic phenomena related to 'like a *N*' constructions. For instance, these constructions are non-increasing. Suppose we are speaking about John, who is a notary in France, and that you ask me what tasks his job involves concretely. I answer:

(7) In many respects, he is like a British lawyer.

In this context, (8) does not follow from (7):

(8) $\not\models$ In many respects, he is like a lawyer.

Why is this? In a nutshell, I argue that in (7), 'British lawyer' goes in the restrictor of a generic quantifier.

(9) GEN[*x* is a British lawyer][John shares relevant properties with *x*]

I use GEN mostly as a black box, since its interpretation is a very broad and debated issue in itself (see for instance the introduction to Mari *et al.* 2012 for an extensive literature review). I will nevertheless refer to specific *desiderata* for an interpretation of GEN. For instance, the logical form in (9) predicts non-increasingness because the interpretation of GEN must ensure non-monotonicity independently (Krifka *et al.*; Asher & Morreau, 1995). In general, I will not provide an analysis of genericity, though I will argue that the similarity data sheds considerable light on genericity as a whole. Sentence (7) can then be paraphrased as follows:

(10) In general, if someone is a British lawyer, John shares relevant properties with them.

Once this is taken account of, *V* + 'like a *N*' constructions can be reduced to *V* + 'like x_e' with genericity on top. The strongest arguments for genericity in 'like a *N*' constructions are two: first, one can substitute 'a typical *N*' for 'a *N*' without changing the meaning by much. This is a variation on a test commonly used since Krifka *et al.*.

(11) a. In terms of culinary taste, John is just like an Italian.
b. ≈ In terms of culinary taste, John is just like a typical Italian.

Second, 'like a *N*' *PP*s, just like genericity, display narrow readings of disjunction:

(12) In terms of clothing, John is like a lawyer or a judge.

This reading, unlike the wide scope reading, implies that John dresses in a way in which *both* a lawyer and a judge dress - and the sentence is almost equivalent to its conjunctive counterpart:

(13) In terms of clothing, John looks like a lawyer and a judge.

It is known that generic sentences give rise to narrow scope readings of disjunction. There is a reading of the characterizing sentence in (14) which means that lawyers *and* judges generally wear a tie, suggesting there, as well, the disjunction can go into the restriction of GEN.

(14) A lawyer or judge wears a tie.

Something entirely parallel happens, I argue, in (12), which one can capture as in (15):

(15) GEN[x is a lawyer or x is a judge][John dresses like x]

I show in section 2 that none of the obvious alternative theories get this prediction right.

This paper is structured as follows: I start ruling out some obvious alternative theories in section 2. I show that treating 'like' as a simple modal expression of some sort does not work, both in the case of universal and of existential quantification over possible worlds. I also show that an ellipsis-based analysis, i.e. one that treats 'look like John' as 'look like John looks", makes wrong predictions.

Then, in section 3 I build up the first layers of the account: I start by giving the kernel of the analysis, namely 'is like x_e' as 'shares relevant properties with x_e'. I also show how 'like' can be embedded in other copular verbs, e.g. appearance verbs like 'look', to form constructions such as 'look like x_e'. This allows us to account for the differences between 'be like x_e' and 'look like x_e'.

In section 4.1, I give an analysis of the constructions I claim involve a generic interpretation of the indefinite, 'is/looks like a *N*'. I argue that a sentence like 'John is like a lawyer' can be formalized as $\text{GEN}\big(lawyer(x)\big)\big(john\ is\text{-}like\ x\big)$. I then discuss various aspects of this analysis. These include some problems, which I fix in section 5.

2 Discarding obvious alternatives

2.1 Modality

Are there simpler theories that spare us the need to resort to property sharing and genericity?

A first possibility is analyzing 'like' as a modal construction. There are at least two reasons why this is *prima facie* appealing. First, they seem to bear some link to experience: many verbs with which English expresses similarity are in the class of *experiential* predicates, which have been shown to be attitudinal (cf. Rudolph 2019). Second, similarity statements seem to be asymmetrical: the fact that (16a) and (16b) are not equivalent has long been noticed (Tversky, 1977) (but cf. 4.3 for an in-depth discussion of asymmetry).

(16) a. The son is like the father.
b. The father is like the son.

The difference can roughly be expressed as follows: (16a) suggests that the son takes on features of his father; (16b), instead, suggests that it is the father who takes on features of the son. I use 'suggest' because I will eventually show, in section 4.3, that these differences boil down to differences in information structure. Modulo these concerns, at least *prima facie* the difference between the two sentences seems to be most directly accounted for by a *de re-de dicto* asymmetry, roughly as follows. Without specifying the details, (16a) would state that the person who is the son in the *actual* world *is* the person who is the father in some '*similarity*' world (or *every* similarity world, depending on the account).[1] This would be in contrast with (16b), which would state the inverse: the person who is the *father* in the actual world *is* the person who is the *son* in some, or every, similarity world:

(17) $\iota x\big[\text{son}(x)(w)\big] = \iota y\big[\text{father}(y)(w')\big]$ for some/all w' (depending on the details) that are similarity worlds with respect to w.

However, such an account is not viable, as both existential and universal modality pose serious problems.
analyzing 'like' as a modal expression of universal force is a non-starter. In this case, (18a) would mean something like (18b):

(18) a. John is like Mary.
b. At all 'similarity' worlds, John is Mary.

This cannot work, since as soon as John is like more than one person, he *is* more than one person at similarity worlds, which I take to be completely undesirable.

(19) a. John is like Mary and Sue.
b. At all 'similarity' worlds, John is Mary and John is Sue.

If 'like' is instead taken to be an existential modal, trouble looms when predicting readings of disjunction. As we have already seen, sentences like (20) are ambiguous between a wide scope reading, which gives rise to scalar implicatures or ignorance implicatures, and a narrow scope reading, which entails that John looks like both a judge and a lawyer and implies that a judge and a lawyer look alike.

(20) John looks like a judge or a lawyer.
a. WIDE John looks like a judge or he looks like a lawyer
...and I don't know which / ...but not both.
b. NARROW John looks like [a judge or a lawyer]
$\models$ John looks like a judge and a lawyer
$\rightsquigarrow$ A judge and a lawyer look alike.

What really proves that the two readings are distinct is that the narrow reading in no way gives rise to ignorance or scalar implicatures. But the existential modality account predicts the reading in (20b) to be equivalent to the reading in (20a), since $\exists w.P(x)(w) \vee Q(x)(w) \leftrightarrow \exists w'.P(x)(w') \vee \exists w' Q(x)(w')$.
The account I will flesh out in detail in 4.2 predicts these two readings to be distinct: (20a) is captured as in (21a), and (20b) is captured as in (21b).

(21) a. WIDE: GEN[x is a judge][John looks like x] $\vee$ GEN[x is a lawyer][John looks like x]
b. NARROW: GEN[x is a judge or x is a lawyer][John looks like x]

To save the existential modality-based account, one may posit that 'a lawyer' in 'looks

[1]There are several ways in which one may analyze 'similarity' worlds; one is to take them to denote those worlds compatible with one's perceptual/phenomenal similarity judgments.

like a lawyer' receives a Free Choice interpretation of some sort. It is known that existential modality gives rise to narrow scope readings of disjunction in Free Choice interpretations: (22) is ambiguous between the wide scope reading in (22a) and the narrow scope reading in (22b), which gives rise to a free choice inference:

(22) You may have cake or ice cream.
   a. WIDE It either obtains that you may have cake or it obtains that you may have ice-cream (...and I don't know which).
   b. NARROW You may have cake or ice cream.
      $\rightsquigarrow$ You may choose.

The problem with such an analysis is that it predicts that constructions like 'look like' should receive a free choice interpretation whenever possibility modals do. A good candidate to look for a distinction between free choice interpretations and genericity is French 'soit...soit', which in unembedded contexts results in robustly exclusive interpretations of disjunction, under 'may' can still give rise to Free Choice inferences.

(23) Tu peux avoir soit de la tarte soit de la glace.
   You may have soit of the cake soit of the ice cream.
   'You may have either cake or ice cream.'
   a. WIDE It either obtains that you may have cake or it obtains that you may have ice cream.
   b. NARROW You may have either cake or ice cream.
      $\rightsquigarrow$ You may choose.

By contrast, in similarity constructions only the wide scope reading is available.[2]
However, it does not allow for narrow scope readings of disjunction in similarity statements.

(24) Il est comme soit un juge soit un avocat.
   He is like soit a judge soit a lawyer.
   'He is like either a judge or a lawyer'.
   a. WIDE Either he is like a lawyer or he is like a judge.

[2]The argument would have been more direct with English 'either...or', but 'either...or' allows both for Free Choice interpretations and for generic interpretations:

(i) **(Genericity)** Either a judge or a lawyer wear a suit.
   GEN(x is either a lawyer or a judge)(x wears a suit)

(ii) **(Free choice)** You may have either cake or ice cream.
   $\rightsquigarrow$ You may choose.

French 'soit...soit', instead, does not allow for generic interpretations, in contrast with regular disjunction:

(iii) Je mange avec plaisir une pomme ou une banane.
   I eat with pleasure an apple or a banana.
   'I enjoy eating an apple or a banana.
   $\approx$ GEN(x is an apple or a banana)(I enjoy eating x)

(iv) Je mange avec plaisir soit une pomme soit une banane.
   I eat with pleasure soit an apple soit a banana.
   'I either enjoy eating an apple or eating a banana.
   $\not\approx$ GEN(x is an apple or a banana)(I enjoy eating x)

b. #NARROW He is like [a lawyer or a judge].

(25) Il ressemble soit à un juge soit à un avocat.
He resembles soit to a judge soit to a lawyer.
'He resembles either a judge or a lawyer'.

a. WIDE Either he resembles a lawyer or he resembles judge.
b. #NARROW He resembles [a lawyer or a judge].

3 'Be like John', 'look like John'

3.1 'Be like John'

As expected, 'be like' is context-sensitive, as one can utter both (26a) and (26b) if respectively color or shape are contextually salient.

(26) a. This banana is like that lemon.
b. This banana isn't like that lemon.

The criteria underlying a similarity statement can be explicitly provided via 'with respect to' or 'in terms of' constructions. With a sentence like (27b), speakers can explicitly specify why there is a reading under which (27a) is not contradictory.[3]

(27) a. This banana is like that lemon and it isn't look like that lemon.
b. With respect to color, this banana is like that lemon; with respect to shape, it isn't like that lemon.

3.1.1 Analysis

The notion of attribute is helpful to formalize similarity criteria. Define an attribute as a set of mutually exclusive and collectively exhaustive properties, a partition (cf. one of the two partitions in Fig. 1) over the subset of individuals that satisfy the presupposition of the verb. A property is a value for an attribute to which it belongs.[4] For instance, suppose that

$$\underline{color}_{\langle s,\langle e,t\rangle\rangle,t} = \{red_{s,\langle e,t\rangle}, green_{s,\langle e,t\rangle}, \ldots\}.$$

Then, *<u>color</u>* is an attribute and *red* is a possible value for *<u>color</u>*.

[3] 'Respect to' phrases have been studied in the context of multidimensional adjectives by Sassoon (2013). She noticed that adjectives like 'healthy' license 'respect to' phrases, e.g. 'healthy with respect to blood pressure'. These phrases can 'fix' on what dimension the degree denoted by the adjective has to be evaluated. Looking at dimensions allows to make powerful typological generalization, e.g. the distinction between adjectives quantifying universally on dimensions – e.g. you are healthy just in case you are high enough on all health-relevant dimensions – and those quantfying existentially – e.g. you are sick if you are low enough in at least one health-relevant dimension.

[4] Similarity criteria are formalized in a very similar way by Umbach & Gust (2014), namely in terms of an equivalence relation. They look at constructions with 'similarity demonstratives' like 'such a car', and cash out similarity with the help of multi-dimensional attribute spaces, which are close to Gardenförs' conceptual spaces (Gärdenfors, 1998), except that they provide a qualitative similarity measure instead of a geometrical one. They make use of generalized measure functions, which map individuals point-wise into multi-dimensional attribute spaces, where the single attribute spaces denote nominal or metrical scales. Two individuals are similar, they argue, if they are indistinguishable with respect to a given set of dimensions.

I propose that x is like y iff a has the same value as b for a contextually salient set of perceptually accessible attributes. I here make the standard assumption that 'be' is a predicational copula that connects a subject x with a property, i.e. the property of sharing the same value for some salient attributes with y.[5]

(28) $[\![\text{like}]\!]^w = \lambda y.\lambda x.\forall \underline{A}_{\langle s,\langle e,t\rangle\rangle,t\rangle} \in \mathbf{D}_{\langle\langle s,\langle e,t\rangle\rangle,t\rangle,t\rangle}.\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{A} \wedge P(x)(w)\big) = \iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{A} \wedge Q(y)(w)\big)$

In words, x is like y iff for a set $\mathbf{D}$ of salient attributes $\underline{A}$, x has the same value as y, i.e. the property that is a member of $\underline{A}$ and holds of x is identical to the property that is a member of $\underline{A}$ and holds of y. An intuitive way to see this is that x and y fall in the same cell of the $\underline{A}$-induced partition(s) over the universe of individuals, as exemplified in Figure 1.[6] $\mathbf{D}$ can be provided by context or explicitly via 'with respect to' constructions.

In (28), $\mathbf{D}$ is a Free Variable in our metalanguage, the idea being that $\mathbf{D}$ receives its value from the context. A more explicit treatment, then, could lead us to include a contextual parameter as a parameter of evaluation of sentences (together with worlds), which would fix its value. Alternatively, it would be quite natural to treat in the same way as Von Fintel 1994 and Stanley 2022 treat Domain Restriction variables: that is, we could assume that $\mathbf{D}$ is represented in the syntax: 'like' would come with a covert 'relevant attributes' variable $\boldsymbol{X}$ in the object language, whose value would be determined by a (contextually determined) assignment function g, in which case what we call D would simply be $g(\boldsymbol{X})$.[7]

Moving on, to illustrate the account given above with a simple example, notice that an expression such as 'like that lemon' thus denotes a property, i.e. the set of individuals who are in the same cell as *that-lemon* for the relevant partition. I take the copula 'is like that lemon' to be predicational, and thus to simply pass through the predicate 'like that lemon'.

The entry proposed in (28), then, predicts that sentence (29) is true iff *this-banana* is in the same cell as *that-lemon* of the $\underline{\text{color}}$-induced partition, but not of the $\underline{\text{shape}}$-induced partition.

(29) With respect to color, this banana is like that lemon; with respect to shape, it isn't like that lemon.

[5] A notational point: to make (28) more intuitive, I make use of a mix of set talk and function talk. In other words, I write $P(x)$ for predicates applied to individuals (function talk) but I write $P \in \underline{A}$, instead of $\underline{A}(P)$, for second order properties applied to properties (set talk).

[6] Properly speaking an attribute isn't a partition, but a function from worlds to partitions; that is, $\underline{\textit{color}}$ may partition the universe of individuals differently at different worlds: an object that is e.g. red in the evaluation world may be blue at another world. What instead does not change is what properties are cells of a partition, viz. what properties are possible values for an attribute: at different worlds there aren't new colors added. What changes is only the distribution of colors over individuals.

[7] A variant of this approach captures cases of co-variation of the similarity respects with individuals. Consider the sentence below:

(i) Every student is like a lawyer (in one respect or another).

This sentence has a reading in which the respect in which the given individual is like a lawyer varies for each student. It is possible to accommodate such cases within my system, by assuming that the 'relevant attributes' variable is a *functional* variable that represents a function from individuals to such sets, along the lines of what has been proposed for functional domain restrictions in the scope of quantifiers (see, e.g., Partee 1989).

Formally, this means:

$$\forall \underline{A}_{\langle s,\langle e,t\rangle\rangle,t\rangle} \in \{\underline{color}\}_{\langle\langle s,\langle e,t\rangle\rangle,t\rangle,t\rangle} \big[\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{A} \wedge P(\textit{this-banana})(w)\big) = \iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{A} \wedge Q(\textit{that-lemon})(w)\big)\big]$$
$$\&$$
$$\neg\forall \underline{A}_{\langle s,\langle e,t\rangle\rangle,t\rangle} \in \{\underline{shape}\}_{\langle\langle s,\langle e,t\rangle\rangle,t\rangle,t\rangle} \big[\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{A} \wedge P(\textit{this-banana})(w)\big) = \iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{A} \wedge Q(\textit{that-lemon})(w)\big)\big]$$

Because $\mathbf{D} = \{\underline{color}\}$ and $\mathbf{D}' = \{\underline{shape}\}$ only contain one attribute each, we can simplify the formula:

$$\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{color} \wedge P(\textit{this-banana})(w)\big) = \iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{color} \wedge Q(\textit{that-lemon})(w)\big)\big]$$
$$\&$$
$$\iota P'_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{shape} \wedge P(\textit{this-banana})(w)\big) \neq \iota Q'_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{shape} \wedge Q(\textit{that-lemon})(w)\big)\big]$$

This account makes the welcome prediction that the fact that two objects look alike with respect to, say, color, does not entail that the speaker knows *what* their color is. In this sense, attributes truly allow to compare types of properties instead of properties simpliciter.

3.1.2 Comparison to Alrenga (2010)

Alrenga (2010) provided an analysis of clausal elements of ‘like’ such as ‘like John is’, remaining agnostic on whether the complements of constructions such as ‘like John’ and ‘like a lawyer’ are in fact base-generated as nominals or as reduced forms of clausal versions. The theoretical object is therefore not exactly the same, but the similarity my proposal bears to Alrenga’s makes it worth discussing. Alrenga takes ‘like’ to compare sets of properties, as in (30):

(30) a. Palo Alto is like I remember it (being).

b. $\exists P \in \mathbf{R}[P \in \{Q : \text{I remember Palo Alto being } Q\} \wedge P \in \{Q : \text{Palo Alto is } Q\}]$

Where **R** is a restriction to properties relevant in a given context. Beyond their shared spirit, I see three main differences between Alrenga’s view and mine.

First, while Alrenga remains agnostic on ‘like John’ and ‘like a lawyer’, I take the complements of such constructions to be in fact base-generated as nominals. Indeed, viewing these complements as reduced forms of clausal versions would overgenerate readings. To see this, let us first look at a well-known ambiguity that arises with reduced forms of clausal comparatives.

(31) John wants to write more articles than Mary.

a. John wants to write more articles than Mary wrote.

b. John wants to write more articles than Mary wants to write.

However, not all comparative prepositions yield this ambiguity. For instance, consider the case of Italian comparatives. Italian has two ways of expressing comparison: via the preposition ‘di’ and via the coordinator ‘che’ (see for instance Napoli & Nespor

1986). Italian sentence (32), featuring the clausal comparative 'che', is ambiguous between (32a) and (32b).[8]

(32) Gianni vuole scrivere più articoli che Maria.
Gianni wants write more articles than-CL Maria.
'Gianni wants to write more articles than Maria'

a. Gianni wants to write more articles than Maria has written.
b. Gianni wants to write more articles than Maria wants to write.

This very same ambiguity does not obtain with the preposition 'di':

(33) Gianni vuole scrivere più articoli di Maria.
Gianni wants write more articles than-N Maria.
'Gianni wants to write more articles than Maria'

a. Gianni wants to write more articles than Maria has written.
b. # Gianni wants to write more articles than Maria wants to write.

If 'like a *N*' are reduced clauses, then we expect it to behave more like Italian 'che' than like Italian 'di'. Specifically, a sentence like (34) to be ambiguous between reading (34a) and reading (34b); but we only observe (34a).

(34) John wants to look like Mary.

a. John wants to look like Mary looks.
b. # John wants to look like Mary wants to look.

I take this to show that the complements of 'like' in constructions such as 'like John' and 'like a lawyer' are in fact base-generated as nominals.

A second, more purely theoretical difference between Alrenga's account and mine is their quantificational force: while I take 'like' to universally quantify on attributes, Alrenga takes it to *existentially* quantify over properties. But existential force is too weak: in most contexts it is not sufficient that only one relevant property be shared by two arguments.

(35) Context: Some faculty members discussing applications for a job. For all applicants, they discuss and assess the following elements: the candidate's major; whether they have teaching experience; and whether they hold a PhD.

a. [Both candidate A and candidate B majored in linguistics, have teaching experience, and hold a PhD.]
-I think we should shortlist A.
-Well, then we should shortlist B, too.
-Why?
-Because she's like A.

b. [Candidate A majored in linguistics, has teaching experience, and holds a PhD. Candidate B majored in linguistics, but has no teaching experience and doesn't hold a PhD.]
-I think we should shortlist A.

[8] I illustrate the data in Italian because it provides a cleaner testbed than English in this respect. While English 'than' is alternatively claimed to be a nominal, clausal, or ambiguous comparative, Italian 'che' is specialized for clausal comparison while 'di' is specialized for nominal comparison.

-Well, then we should shortlist B, too.
-Why?
-# Because she's like A.

Although Alrenga's existential quantification over attributes is not adequate for affirmative sentences, it seems to adequately capture what happens under negation:

(36) a. John isn't like Mary.
b. $\nexists P \in \mathbf{R}. P \in \{\textit{John is } P\} \wedge P \in \{\textit{Mary is } P\}$

My account, instead, makes wrong predictions for negation, since it predicts that when multiple similarity respects are relevant, it is enough for two individuals to not share one of them to not be like one another:

(37) a. With respect to personality and appearance, John isn't like Mary.
b. $\neg\forall \underline{A} \in \{\textit{personality, appearance}\}.\iota P\big(P \in \underline{A} \wedge P(x)(w)\big) = \iota Q\big(Q \in \underline{A} \wedge Q(y)(w)\big)$

To sum up, while similarity statements have universal quantificational force in affirmative sentences, they seem to be interpreted existentially in the scope of negation. This looks like an instance of the phenomenon known as homogeneity, cf. Löbner (2000). Homogeneity is a property of many expressions in natural language, most notably of definite plurals:

(38) a. The presents are under the tree.
$\rightsquigarrow$ All of the presents are under the tree.
b. The presents aren't under the tree.
$\rightsquigarrow$ None of the presents are under the tree.

Križ (2015) and Križ & Spector (2021), for instance, capture these facts via (different forms of) trivalent semantics, which for a sentence like (38a) yield truth if all of the presents are under the tree, false if none of them are, and undefinedness in the cases in between. For similarity statements, I leave this as an open issue, but want to suggest that analogue approaches may yield the desired pattern. For simplicity, in the rest of this paper I will assume that 'like' universally quantifies over relevant attributes.

A third difference is that Alrenga takes 'like' to compare sets of simple properties, while I take it to compare the values two objects have for a set of relevant *attributes*, i.e. second order properties. The question then becomes: are the attributes that I postulated really necessary? I think that a careful examination of Alrenga's proposal shows that attributes are in fact necessary even for clausal 'like'.

Let us take a case in which the relevant similarity respects are overtly specified:

(39) a. With respect to size and architecture, Palo Alto is like I remember it.
b. With respect to size and architecture, Palo Alto is like San Francisco.

Reasonably, then, the set **R** of relevant properties for both sentences is the following:

$$\mathbf{R} = \{\textit{architectural-property}_1, \ldots, \textit{architectural-property}_n, \textit{size-property}_1, \ldots, \textit{size-property}_n\}$$

Let us leave aside that this would already be using second order properties (how does one determine whether a given property is a size property or not?). Under Alrenga's proposal, we expect the sentences in (39) to only be true if Palo Alto has at least one of the properties in **R**. This is undesirable, since it predicts that for sentence (39a) to be true, it is enough for Palo Alto to be like I remember it only with respect to architecture (and similarly, *mutatis mutandis*, for (39b)). In other words, sentences (39a) and (39b) would be *entailed*, respectively, by sentences (41a) and (41b):

(40) (41) a. With respect to architecture, Palo Alto is like I remember it.
b. With respect to architecture, Palo Alto is like San Francisco.

One could then think about changing the quantificational force and making it universal. This would not work with **R** as stated above, since it would predict that Palo Alto has all architectural and size properties at once. One could say that the differences between the sentences in (39) and (41) is purely pragmatic: why would one mention size properties if one weren't comparing them as well? But that is precisely the problem: if we look at simple properties, and not at attributes, we have no way of distinguishing, within **R**, what properties pertain to size and what pertain to architecture. Of course, it may not be impossible to find a way of specifying **R** so that, with a universal quantification over simple properties, the truth conditions turn out right. However, I think I have shown that due to the complications I mention above, such an account would not be obviously simpler than the one defended here.

3.2 'Look like John'

Notice that so far, an extensional semantics of 'like' would have been sufficient to capture 'is like *x*'. However, 'like' PPs can can be embedded in notoriously intensional verbs like experiential predicates such as 'look' and 'seem'. Consider for instance (42a) and (42b):

(42) a. In terms of clothing, John looks like Mary.
b. John seems like a nice guy.

Rudolph (2019) proposes that '*x* seems *P*' means 'in all worlds compatible with the perceptual evidence of the judge, *x* is *P*' and '*x* looks *P*' means 'in all worlds compatible with the *visual* evidence of the judge, *x* is *P*'. Then, (42a) can be paraphrased as follows:

(43) In all worlds compatible with the visual evidence of the judge, John is in the same cell of the clothing-induced partition cell as Mary.

3.2.1 Distinguishing similarity from appearance

Notice that similarity talk in itself is distinct from talk about appearances or experiences: there is such a thing as objective property sharing. That is why simple modal accounts of 'like' fail. While 'like a *N*' is certainly vague and context-dependent, it is not necessarily subjective and experiential.

In a way, then, I am arguing that the sentences in (44) are parallel to those in (45).

(44) a. With respect to personality, John seems like Sue, but he isn't like Sue.
b. Marriage seems like heaven, but once you're in it, it isn't like heaven.

(45) a. John seems French, but he isn't French.
b. Marriage seems nice, but once you're in it, it isn't nice.

A point that militates in favor of the non-experiential nature of similarity is that the 'to'-PP is an argument of subjective predicational copulas like 'look', but not of simple predicational copulas like 'be'. For one, (46a) sounds more natural than (46b).[9]

(46) a. Mary looks like Tom to John.
b. ? Mary is like Tom to John.

A second marker of argumenthood is the selection of specific prepositions (Rudolph, 2019; Stephenson, 2007). 'Proud', for instance, requires 'of' PPs, while 'pride' requires 'in' PPs:

(47) a. I am proud of / # in Mary.
b. I take pride # of / in Mary.

In this sense, 'be like' has a much less specific requirement than 'look like':

(48) a. Mary looks like Tom to/#for John.
b. Mary is like Tom ? to / ? for John.

This suggests that, though 'look like x_e' constructions are both modal and subjective, 'like' PPs in themselves do not introduce the subjectivity typical of experiential predicates.

3.2.2 Similarity embedded by appearance: an illustration

What are the truth conditions of a 'look like' sentence? In her dissertation, Rudolph captures predicate-embedding appearance/experiential predicates, e.g. 'look French', with the semantics in (49).[10] It is important to point out that nothing in my analysis hinges on Rudolph's specific analysis of appearance verbs such as 'look', 'seem', 'sound' and so on. I use Rudolph's account to illustrate how 'like' PPs can be embedded in copular verbs other than 'to be' because it is the only account on the market, but any account of predicate-embedding appearance verbs will do.

(49) $[\![\text{seem}]\!]^w = \lambda P.\lambda x.\forall w' \in B_p(j,w).P(x)(w)$

Where $B_p(x,w)$ are the best/most typical worlds compatible with x's perceptual evidence.[11] Of course, different appearance verbs like 'look', 'sound', 'smell' (and so

[9] Of course, relative truth is always an option. But notice that (46b) is good to the same extent as (i) is good:

(i) ? To John, Mary is a lawyer.

[10] For ease of notation, instead of lambda-abstracting the judge argument, I leave it as a free variable here.

[11] More precisely:

(i) a. **Typicality ordering**: For set of worlds X and set of "typical" propositions T,$\forall w, w \in X, w <_T w$ iff $\{p \in T : p(w) = 1\} \subset \{p \in T : p(w) = 1\}$
b. **Best visually accessible worlds**: Where $V(x,w)$ is the set of worlds left open by x's perceptual experience at w, $B_v(x,w) := \{w \in V(x,w) : \neg\exists w \in v[w < Tw]\}$

on) prompt different accessibility relations that refer to the worlds compatible with, respectively, visual, auditory, and olfactory evidence. Then, (50a) is analyzed as in (50b).

(50) a. Mary looks French.
b. $\forall w' \in V(j,w).French(Mary)(w)$

Keeping in mind that we analyzed 'like Mary' as property-denoting, I argue that, as a first approximation, something entirely parallel to (50a) happens in 'look like x_e' constructions.
Then, the truth conditions of (51a) are as in (51b).

(51) a. Bob looks like Carl.
b. $\lambda j.\forall w'.w \in V(j,w).\forall \underline{A} \in \mathbf{D}.\iota P\big(P \in \underline{A} \wedge P(Bob)(w')\big) = \iota Q\big(Q \in \underline{A} \wedge Q(Carl)(w')\big)$

In words, (51a) is true iff at all best/most typical worlds compatible with the judge j's visual perception, Bob has the same value as Carl for relevant attributes. Notice that importing Rudolph's treatment of appearance verbs would also allow us to account for cases of similarity relativized to a specific judge:

(52) a. Bob looks like Mary to John.
b. $\forall w'.w' \in B(John,w).\forall \underline{A} \in \mathbf{D}.\iota P\big(P \in \underline{A} \wedge P(Bob)\big) = \iota Q\big(Q \in \underline{A} \wedge Q(Mary)\big)$
c. 'at all best/most typical worlds compatible with the John's visual perception, Bob has the same value as Carl for relevant attributes'

3.2.3 An aside discussion: phenomenal versus epistemic embeddings of 'like' PPs

Rudolph captures experiential predicates like 'looks' as universally quantifying over worlds compatible with one's experience, viz. visual experience in this case, both when they embed a proposition and when they embed a predicate.

(53) a. PREDICATE-EMBEDDING $[\![\text{look}]\!] = \lambda P.\lambda x.\forall w' \in V(j,w).P(x)(w')$
b. PROPOSITION-EMBEDDING $[\![\text{look}]\!] = \lambda p_t.\forall w' \in V(j,w).p(w)$

This predicts that (51a), repeated below in (54a), ends up having the same truth conditions as (54b).

(54) a. Bob looks like Mary.
b. Bob looks like he is like Mary.

This is an unwelcome prediction: while in (54a) Bob's appearance directly resembles Mary's appearance, (54b) is compatible with indirect visual evidence pointing to a similarity between Bob and Mary.
Rudolph notices a similar prediction of her account, namely that (55a) and (55b) are equivalent.

(55) a. Mary looks French.
b. Mary looks like she is French.

While Rudolph takes this to be an appropriate prediction, it seems that (55a) and (55b) are not entirely equivalent: in the context in (56), (56a) seems appropriate, while (56b) doesn't.

(56) It is very clear that Bob is not French, and much indirect visual evidence points to him not being French: for instance, at some point he dropped his passport and we saw it was a German one. Suppose now that he puts on a Basque beret.

a. Bob looks French.

b. ?? Bob looks like he's French.

This seems to pertain to a distinction between *epistemic* and *phenomenal* uses of appearance verbs. Rudolph, while denying this distinction to hold for 'look', takes it to hold for verbs like 'taste' and 'sound'. To illustrate, in the context in (57), the phenomenal use of 'taste' forced in (57a) is weird, while the epistemic use forced in is appropriate.

(57) Context: Bob doesn't like good quality wine, but he's a very educated oenologist and can easily tell from taste when a whine is of good quality. He tastes a wine and says:

a. ?? This wine tastes good.

b. This wine tastes like it's good.

This difference carries over to sentences about similarity like (51a) and (54b). To see this consider (58a) and (58b):

(58) Context: As in (56).

a. Bob looks like a Frenchman.

b. ?? Bob looks like he is a Frenchman.

Sentence (58b) is not felicitous because suggests that Bob may be a Frenchman; instead, (58a) implies that Bob isn't a Frenchman.

Note that there are purely epistemic uses of 'look like x_e' and 'look like a N' constructions, as in (59a). And indeed, they end up being equivalent to their propositional versions: (59a) is felt to be equivalent to (59b):

(59) Context: I left my wallet at Mary's when I went to her party. The day after, she sends a friend, John, whom I don't know, to give it back to me. She describes her friend to me on the phone. Someone rings my bell, I open the door and say:

a. 'You look like John!'

b. 'You look like you are John!'

Then, it seems that while the epistemic use of 'look like' when embedding a 'like' PP can be treated on a par with sentence-embedding 'look like', its phenomenal use cannot.

This paper is about similarity, and not about appearance predicates; I will not offer a complete solution to this. But I want to sketch one simple way out, namely to cash out the two uses as simply deriving from two different accessibility relations, a possibility that Rudolph (2019) briefly mentions, too. I would suggest that epistemic uses of appearance verbs like 'look' feature an accessibility relation that returns the worlds (i) compatible with one's perception that are (ii) *candidates* for the actual world. One may worry that this brings appearance verbs too close to belief attitudes. However, candidate worlds *compatible with one's perception* are not necessarily candidates *tout court*, thus compatible with beliefs: beliefs are formed and held on other grounds beyond perception. I would suggest that such an epistemic-experiential accessibility relation is the only one available for sentence-embedding 'look like', but not for predicate-embedding 'look like', which is ambiguous between the epistemic and the phenomenal accessibility relation.

The phenomenal uses of appearance verbs would instead feature an accessibility relation that returns those worlds that make true most propositions compatible with one's perception, *regardless* of whether candidates for the actual world. This explains why someone can look French against all evidence of them actually *being* French. The same is not true for someone who looks like *they are* French, in which case there must be evidence pointing to them being French.

4 'Be like a lawyer', 'look like a lawyer'

4.1 Genericity

Similarity statements of the form 'be like a *N*" have two different readings. I will call them the specific and the general one.[12]

(60) John looks like a lawyer.

a. SPECIFIC: There is a specific lawyer such that John looks like them.

b. GENERAL: John has the general appearance of a lawyer.

I argue that while the specific reading involves a run-of-the-mill indefinite, in the general reading the indefinite receives a generic interpretation. Adding restrictors like 'typically' to a sentence and checking whether the meaning changes radically is a well-established test for genericity (Krifka *et al.*).

(61) GENERIC INDEFINITE

a. A bird flies.

b. $\approx$ Typically, a bird flies.

This test fails with 'like a *N*' PPs; I discuss this in 4.4. But this does not constitute evidence against genericity, since this test is bound to fail whenever genericity is not adverbial. For instance, consider (62) below. It has a clearly generic reading, but when we add 'typically', it modifies John-related events, not lawyer-related events:

(62) John is more competent than a lawyer.

(62) $\not\approx$ Typically, John is more competent than a lawyer.

Substituting 'a typical *N*' for 'a *N*', then, seems like a reasonable variation on this

[12]I now work with 'look like a *N*' constructions because they sound more natural, but the same results apply to 'be like a *N*' constructions.

test. Adding 'typical' to (63a) radically changes the meaning of the sentence: while in (63a) for all we know the bird that is flying could have had seven legs, sentence (63b) necessarily refers to a bird with two legs. The meaning of (64a) is instead roughly equivalent to the meaning of (64b): if I say that a bird flies, I am not thinking about seven-feeted birds.

(63) EXISTENTIAL INDEFINITE

a. A bird is flying.
b. $\not\approx$ A typical bird is flying.

(64) GENERIC INDEFINITE

a. A bird flies.
b. $\approx$ A typical bird flies.

Similarly for similarity statements: in (65a), John looks like a certain lawyer, who may or may not wear a suit. In (65b), John looks like a certain *typical* lawyer who, by virtue of being typical, necessarily wears a suit. Instead, zooming in on the general reading of similarity statements, (66a) is almost equivalent to (66b).

(65) SPECIFIC READING OF SIMILARITY STATEMENTS

a. John looks like a certain lawyer.
b. $\not\approx$John looks like a certain typical lawyer.

(66) GENERAL READING OF SIMILARITY STATEMENTS

a. John looks like a lawyer.
b. $\approx$John looks like a typical lawyer.

This explains why the general reading is non-distributive and generally non-monotonic – cf. (68) and (70) –, just like genericity (– cf. (67) and (69).

For instance, while if someone is a British judge they are both British and a judge, if someone *looks* like a British judge they do not necessarily look like a Brit, nor like a judge. Imagine for instance someone who wears a white, powdered wig: they do not look like a Brit, nor like a judge; but they do look like a British judge.[13]

NON-INCREASING/NON-DISTRIBUTIVE:

(67) a. A British judge wears a wig.
b. $\not\models$ A judge wears a wig.

(68) a. John looks like a British judge.
b. $\not\models$ John looks like a judge.

NON-DECREASING:

(69) a. A bird flies.

[13]Note that modification is not essential to get non-increasing monotonicity:

(i) John looks like a penguin.
$\not\models$ John looks like a bird.

(ii) A penguin swims well.
$\not\models$ A bird swims well.

b. $\not\models$ A penguin flies.

(70) a. John looks like a bird.
b. $\not\models$ John looks like a penguin.

Although it follows from non-monotonicity, it is worth mentioning that similarity statements are tolerant to exceptions, just like generic statements:

(71) a. - John looks like a penguin.
b. - # No, he doesn't look like *that one*!

(72) a. - Penguins swim well.
b. - # No, *that one* doesn't!

4.2 Analysis

Take GEN to be an unselective binder, an underspecified dyadic operator that relates a restrictor and a matrix sentence (Krifka et al., 1995). For instance, (73a) has the logical form in (73b):

(73) a. A bird flies.
b. $\text{GEN}\big(\text{bird}(x)\big)\big(\text{fly}(x)\big)$

Then the LF for (74a) is (74b), paraphrased in (74c). Any interpretation of GEN that ensures non-monotonicity of characterising sentences like (67) yields non-monotonicity for similarity statements like (68), too.[14]

(74) a. John is like a duck. *(...He follows his mother anywhere.)*
b. $\text{GEN}\Big(\text{duck}(x)\Big)\Big(\forall \underline{A} \in \mathbf{D}.\iota P\big(P \in \underline{A} \wedge P(j)\big) = \iota Q\big(Q \in \underline{A} \wedge Q(x)\big)\Big)$
c. 'Typically, if something is a duck, John shares relevant properties with it'

Let us take, for instance, the modal interpretation of GEN from Krifka *et al.*, as in (75) below.

(75) $\text{GEN}\big(duck(x)\big)\big(fly(y)\big)$ is true in w relative to a modal base B_w and an ordering source $\leq_w$ iff:

For every x and every $w' \in B_w$ such that $duck(x)$ is true in w', there is a world $w' \in B_w$ such that $w' \leq_w w'$, and for every world $w'' \leq_w w'$, $fly(x)$ is true in w''.

Then we can spell out (74b) as (76):

[14]Notice that such a linguistic analysis of failures of increasingness in similarity talk may give at least a partial explanation of known psychological fallacies such as the conjunction fallacy. In the conjunction fallacy as originally formulated in Tversky & Kahneman (1983), subjects are told that Linda is 'outspoken and concerned with issues of social justice'. They are then asked whether she is more likely to be a bank teller or a feminist bank teller, and answer the latter, in blatant violation of probability calculus. Rips (1989) argues that the conjunction fallacy may be explained in terms of similarity: subjects deem Linda 'more similar to the conjunction 'feminist bank teller' than to the constituent 'bank teller'.' If subjects do in fact substitute a similarity judgment for the probability judgment they are asked to perform, they may judge that Linda looks like a feminist bank teller, without looking like a bank teller. This entailment pattern is predicted by an analysis of such sentences in terms of generic quantification.

(76) For every x and every $w' \in B_w$ such that $duck(x)$ is true in w', there is a world $w' \in B_w$ such that $w' \leq_w w'$, and for every world $w'' \leq_w w'$,
$\forall \underline{A} \in \mathbf{D}.\iota P\big(P \in \underline{A} \wedge P(j)(w'')\big) = \iota Q\big(Q \in \underline{A} \wedge Q(x)(w'')\big)$.

Of course the paraphrase in (74c) is counter-intuitive. Instead, (77b) looks like a quite intuitive paraphrase of (73a), reported in (77a)

(77) a. A bird flies.
b. Tipically, if something is a bird, it flies.

This is related to information-structural issues: while a sentence like (77a) is about birds, sentence (74a) isn't. But in general, theories of genericity have focused mostly on characterizing sentences at large. And in such sentences, the topic of the sentence is invariably what goes into the restrictor of GEN. Now, if we respect the underspecified truth conditions of GEN without departing from the information structure of (74a), we get a sentence like (78) below, which sounds way more intuitive:

(78) John shares relevant properties with typical instances of a duck.

That genericity has been almost only explored in characterizing sentences is related to the received view of GEN as a silent quantificational adverb. Quantificational adverbs only bind expressions that are in their Topic (de Swart, 1996; Chierchia, 1995, 2009). *Prima facie*, then, it is surprising that an expression containing an indefinite can receive a generic interpretation when a sentence is not *about* that expression. What happens when an indefinite that is not in the Topic of a sentence receives a generic reading? What is its proper treatment?

This is what I discuss in the rest of this paper, which is structured as follows. In 4.3, I discuss a potential problematic prediction of my analysis: symmetry. 'John looks like a lawyer" and 'A lawyer looks like John" are not equivalent. I then show that intuitions of asymmetry are due to the rigid information structure of copulas containing 'like' PPs: the subject is systematically the Topic, and the 'like' PP systematically the Comment. Once these factors are controlled for, symmetry seems indeed to hold.

In 4.4, I discuss a second potential problem of my analysis, which concerns quantificational adverbs. The received view of genericity takes GEN to be a silent quantificational adverb. If 'lawyer' can go into the restriction of the generic quantifier in 'John looks like a lawyer', how come it cannot go into the restriction of other Q-adverbs like 'rarely'? It seems indeed that 'John rarely looks like a lawyer" cannot mean 'John looks like few lawyers'. By contrast, in an ascertained generic sentence like 'A lawyer is good at public speaking', the subject can go into the restrictor of any other Q-adverb: 'A lawyer is rarely good at public speaking' is equivalent to 'few lawyers are good at public speaking'. In section 5, I propose a revision of my account. I propose that the generic interpretation of the indefinite does not come from covert application of the silent Q-adverb GEN, but from a generic quantification that is inherent in the semantics of 'like'. Lastly, in section 6, I discuss a number of perspectives opened and issues left open by my account.

4.3 Asymmetry

Consider the sentences in (79).

(79) a. The son$_{DP1}$ is like the father$_{DP2}$.
b. The father$_{DP1}$ is like the son$_{DP2}$.

At least *prima facie*, the asymmetry between the two sentences is a problem for the account I presented in 3. What is its source? In what follows, I refer to the subject of a similarity statement as DP1 and to the other expression as DP2. The lexical entry in (28), reported below in (80), predicts that DP1 and DP2 should be interchangeable, since the lexical entry for 'like', which I recall below, is grounded in identity.

(80) $[\![\text{like}]\!]^w = \lambda y.\lambda x.\forall \underline{A}_{\langle s,\langle e,t\rangle\rangle,t\rangle} \in \mathbf{D}_{\langle\langle s,\langle e,t\rangle\rangle,t\rangle,t\rangle}.\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{A} \wedge P(x)(w)\big) = \iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{A} \wedge Q(y)(w)\big)$

But asymmetries with similarity have long been known. For instance, Tversky (1977) uses them as a basis for his asymmetric treatment of psychological similarity, arguing that DP2 is always 'the more salient". Thus if the speaker wants to say that Turks fight very thoroughly, they will utter (81a) rather than (81b):

(81) a. Turks fight like tigers.
b. ? Tigers fight like Turks.

The same insight extends to simile:

(82) a. My love is as deep as the ocean.
b. ?The ocean is as deep as my love.

In other words, different orders license different contextual inferences:

(83) a. Man is like a tree.
$\rightsquigarrow$ Man has roots.
b. A tree is like a man.
$\rightsquigarrow$ A tree has a life history.

Tversky accounted for these asymmetries as resulting from salience imbalances between the features of the first and of the second argument, presupposing that the second argument is more salient. Ortony (1979) made Tversky's intuition more precise by appealing to the Topic-Comment distinction (Halliday, 1967; Clark & Haviland, 1977; Lambrecht, 1996). According to the given-new principle as formulated in Danes (1970) and Clark & Haviland (1977), the Topic must not provide new information, precisely because it is the part of the sentence of which new information is about to be given. New information should instead be provided by the Comment.

On these grounds, I argue that the asymmetry should not be part of the semantics. Intuitions of asymmetry are actually the result of the fixed information structure of similarity statements: DP1 is obligatorily the Topic, and DP2 is obligatorily the Comment. We may view the Topic as introducing a question and the Comment as answering it. This rigid structure, in turn, has an effect on the choice of the relevant attributes serving as similarity criteria.

(84) Context: John has a red nose, Bob has yellow ears.
a. John$_{DP1}$ is like Bob$_{DP2}$. $\rightsquigarrow$ John has yellow ears.
b. Bob$_{DP1}$ is like John$_{DP2}$. $\rightsquigarrow$ Bob has a red nose.

Because the question bears on the referent of DP1, the features of DP1 cannot be selected as similarity criteria, as this would make the sentence redundant. Take for instance (84a): the question set up is something like 'What are John's properties?'; then, if DP1, thus John, were to serve as an anchor, the sentence would simply imply that John has a red nose, which is already common ground.

Instead, it is the DP2 that provides content to the predication, and as a result the salient features of the DP2 are predicated of the DP1. This explains the fact often noticed in the psychology literature that in similarity statements speakers are required to follow a pattern of low feature salience for the topic combined with high feature salience for the comment (Glucksberg & McGlone, 2001; Gildea & Glucksberg, 1983; Ortony *et al.*, 1985).

Copular constructions with fixed informational-structural properties are not uncommon. English specificational copulas, for instance, seem to obligatorily assign the topic to the DP1 and the comment/focus to the DP2, unlike predicational copulas (Mikkelsen, 2005; Declerck, 1988; Higgins, 1979). Specificational copulas are commonly defined as copulas that feature a non-referential subject:

(85) The professor is John.

Consider these question-answer pairs:

(86) a. Who is the winner?
b. The winner is JOHN.(S)
c. JOHN is the winner.(P)

(87) a. What is John?
b. # THE WINNER is John.(S)
c. John is the WINNER.(P)

The predicational copulas (denoted by P) allow for any word order: DP1 can be either the topic or the comment. Things are different for specificational copulas (denoted by S): 'the winner' can be DP1 only if the question bears on who the winner is, i.e. just in case WINNER is the topic of the sentence. A similar phenomenon is shown even more clearly by Martinović (2013) for Wolof: *la*-sentences, a class of copular sentences with morphologically marked information structure, systematically require DP2 to contribute new information about DP1, thereby resulting in a fixed Topic-Comment structure.

In a way, then, it would not come as a complete surprise that similarity statements are copular constructions with a rigid information structure. If such an explanation is correct, asymmetry effects should be considerably reduced when there is informational symmetry on the two arguments, i.e. the value for the relevant attributes is either known for none of the arguments or is known to the same degree of confidence for both arguments.[15]

[15] Given that the second argument serves as an anchor for the relevant attributes, one may wonder if it wouldn't be enough to 'freeze' the similarity respects , given that symmetry is predicted to obtain if the criteria for similarity are frozen. But, the topic-comment structure could imply that the value for the relevant attribute is less certain for the topic than for the comment, which may muddy the waters. For instance, in the sentence below, the inference is that John's personality type is known to the speaker:

(i) In terms of personality, Mary is like John.

Taking knowledge to be low for both arguments, imagine a spy has to identify two suspects on the ground, and is told by its intelligence agency:

(88) 'Look, we know nothing about how they look. We just know that with respect to clothing, suspect 1 looks like suspect 2.'

Then, (89) seems to follow:

(89) With respect to clothing, suspect 2 looks like suspect 1.

'Like a *N*' constructions display the same problems.

(90) a. John looks like a doctor.
$\not\approx$
b. A doctor looks like John.

Again, the central issue is what attributes are relevant: if we know John has a red nose, we can infer that doctors generally have a red nose in (90b), but not in (90a).

Zooming in on a specific attribute and creating a context of informational symmetry should, again, weaken the intuition of asymmetry considerably. Imagine that the central intelligence agency is perfectly informed as to how a certain professional category dresses, say 'schmawyers', and with respect to how suspect 1 dresses. Imagine they tell the spy on the ground:

(91) With respect to clothing, suspect 1 looks like a schmawyer.

The spy knows nothing about schmawyers, but is able, with a colleague, to get sight of suspect 1. If the colleague asks the spy what a schmawyer is, it seems completely appropriate for the spy to utter (92):

(92) Look, I don't know much about schmawyers. But I know that with respect to clothing, a schmawyer looks like suspect 1.

Such a pragmatic theory of the asymmetry of similarity statements also well-predicts asymmetries when these conditions are not met. When less is known about the values of the subject/first argument, the similarity criteria are chosen among those salient for the second argument. Whence the asymmetrical judgments: in (93) the relevant attributes are those in common for lawyers, in (94) they are those specific to John.

For instance, if it is salient that lawyers wear ties and that John has a red nose, then (93) will imply John wears a tie, while (94) will imply that, typically, lawyers have a red nose.

(93) a. John looks like a lawyer.
b. Typically, if someone is a lawyer, John looks like them.
$\rightsquigarrow$ Typically, if someone is a lawyer, John looks like them with respect to their salient attributes.

(94) a. A lawyer looks like John.
b. Typically, if someone is a lawyer, they look like John.
$\rightsquigarrow$ Typically, if someone is a lawyer, they look like John with respect to John's salient attributes.

4.4 Quantificational adverbs and similarity statements

Consider the contrast between (95) and (96):

(95) a. A duck usually flies.
$\approx$
b. Most ducks fly.

(96) a. John usually looks like a duck.
$\not\approx$
b. John looks like most ducks.

What is the source of this contrast? The received view of quantificational adverbs states that in order for an indefinite to be bound by a quantificational adverb, it must be a Topic (Chierchia, 1995, 2009; de Swart, 1996). However, we saw in section 4.3 that similarity statements of the form *V* + 'like' have a rigid information structure, which systematically assigns the 'like' PP to the Comment of the sentence. This explains why (97a) is not (at all) equivalent to the paraphrase in (97c) and the formula in (97c):

(97) a. John rarely looks like a lawyer.
b. John looks like few lawyers.
c. $\textsc{rarely}\big(\text{lawyer}(x)\big)\big(\text{John looks like } x\big)$

The received view also views GEN as a phonologically unrealized quantificational adverb. As such, it should not be able to put into its restrictor the indefinite in a 'like' PP, given that due to the rigid information structure of similarity statements, 'like' PPs can only ever be assigned to the Comment of a sentence. But, (98a) can in fact receive a generic interpretation, as paraphrased in (98c) and formalized in (98c):

(98) a. John looks like a lawyer.
b. John looks like a typical lawyer.
c. $\textsc{gen}\big(\text{lawyer}(x)\big)\big(\text{John looks like } x\big)$

Under this perspective, then, it is surprising that 'like a *N*' PPs can receive generic interpretations at all. Similarity statements such as (98a) display a puzzling combination of properties: the 'like' PP is always in the Comment of a sentence, but indefinites embedded by it can receive a generic interpretation.

5 A revision of the analysis: inherent genericity

To resolve the puzzle with which we concluded section 4, I propose that the meaning of 'like' is in fact inherently generic: the indefinite receives a generic interpretation as a result of the lexical semantics of 'like', and not as a result of covert application of the Q-adverb GEN. This allows us to still account for the generic interpretation of indefinites in 'like' PPs, but at the same time to explain why Q-adverbs cannot put the very same indefinite into their restrictor.

The intuition is the following: the first argument of 'like' goes systematically into the restriction of the inherent generic quantification of 'like'. Thus sentence (99a) receives roughly an interpretation as in (99b), and (100a) receives roughly an interpretation as in (100b).

(99) a. John is like Mary.
b. Typically, if someone has the property of being Mary, then John shares relevant properties with them.

(100) a. John is like a lawyer.
b. Typically, if someone has the property of being a lawyer, then John shares relevant properties with them.

To make this idea work, we need to operate some revisions on the lexical entry given in (28) in section 3.

5.1 'Like' takes a Generalized Quantifier

To make the notation lighter, in the following I will write 'SRP' (for 'shares relevant properties"), as a shortcut for the old lexical entry for 'like', which I recall below in (101):

(101) a. SRP
$=$
$[\![\text{like}]\!]^w = \lambda y.\lambda x.\forall \underline{A}_{\langle s,\langle e,t\rangle\rangle,t\rangle} \in \mathbf{D}_{\langle\langle s,\langle e,t\rangle\rangle,t\rangle,t\rangle}.\iota P_{\langle s,\langle e,t\rangle\rangle}\big(P \in \underline{A} \wedge P(x)(w)\big) =$
$\iota Q_{\langle s,\langle e,t\rangle\rangle}\big(Q \in \underline{A} \wedge Q(y)(w)\big)$
b. **In words:** 'for all attributes $\underline{\text{A}}$ in **D**, the value that *a* takes for $\underline{\text{A}}$ is the same as the value that *b* takes for $\underline{\text{A}}$'

With this in mind, let us turn to the revision I propose. I propose that 'like' takes a *generalized quantifier* and an individual as an input (and not two individuals):

(102) $[\![\text{ like }]\!] = \lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x.\text{GEN}\Big(\text{BE}(\mathbf{Q})\Big)\Big(\lambda y.x \text{ SRP } y\Big)$

Here, BE is a type-shifting operator originally proposed by Partee (2002) that turns a generalized quantifier into a property:

(103) $\text{BE} = \lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x.\mathbf{Q}\big(\lambda y.y = x\big)$

Partee proposed BE as a natural type-shifting functor that 'applies to a generalized quantifier, finds all the singletons therein, and collects their elements in a set'. If one analyzes indefinites as generalized quantifiers, BE can also be seen as the operation that the copular verb does to turn the generalized quantifier into a property:

(104) $[\![\text{ [John [is [a lawyer]]] }]\!] =$
$= [john[\text{BE}[\lambda P.\exists x(lawyer(x) \wedge P(x))]] =$
$= [john[\lambda \mathbf{Q}.\lambda y.\mathbf{Q}(\lambda z.y = z)\big)\big(\lambda P.\exists x(lawyer(x) \wedge P(x))]] =$
$= [john[\lambda y.\exists x(lawyer(x) \wedge y = x]] =$
$= \exists x.lawyer(x) \wedge john = x$

Which in itself is equivalent to the formula $lawyer(john)$.

One nice property of this account, then, is that it captures the copular nature of similarity. BE allows 'like', in constructions such as 'is like a lawyer', to (i) turn the quantifier ‘a lawyer’ into a property, and thus to (ii) put the property of being a lawyer into the restriction of its own inherent generic quantification. Then, we can derive the meaning of (100a) as in (105). The fully explicit computations of the truth conditions of the sentences of this section are reported in the Appendix.

(105) ⟦ [John [is [like [a lawyer]].⟧ =
$= [john[\lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x \text{ SRP } y\big)[\lambda P'.\exists x(lawyer(x) \wedge P'(x))]]] =$
$= [john[\lambda x.\text{GEN}\big(\lambda z.\exists z'\big(lawyer(z') \wedge z = z'\big)\big)\big(\lambda y.x \text{ SRP } y\big)]]] =$
$= \text{GEN}\big(\lambda z.\exists z'\big(lawyer(z') \wedge z = z'\big)\big)\big(\lambda y.john \text{ SRP } y\big)$

Assuming that GEN simply denotes a relation between predicates, the last formula states that generally, if someone is identical to someone who is a lawyer, John shares relevant properties with them. We can simplify the formula to:

(106) $\text{GEN}\big(\exists z'\big(lawyer(z') \wedge x = z'\big)\big)\big(john \text{ SRP } x\big)$

This ends up being equivalent to:

(107) $\text{GEN}\big(lawyer(x)\big)\big(john \text{ SRP } x\big)$

The desired truth conditions therefore follow from an inherently generic entry for ‘like’. Besides not predicting that quantificational adverbs should give rise to readings parallel to GEN, this view spontaneously derives a desirable prediction, namely that narrow readings of disjunction seem to arise not only with indefinites, but also with individuals:

(108) With respect to personality, John is like Bob or Mary.
 a. With respect to personality, John is like Bob or with respect to personality, John is like Mary.
 b. With respect to personality, John is like [Bob or Mary].
 $\models$ With respect to personality, John is like Bob and Mary.
 $\rightsquigarrow$ Bob and Mary have the same kind of personality.

This can only be accounted for by giving truth conditions that correspond to a rough paraphrase like (109), which corresponds to the proposed revision of the theory:

(109) Typically, if someone has the property of being Mary or of being John, then John shares personality-relevant properties with them.

I now turn to deriving a number of sentences with this approach and answering some natural questions that may arise after such a revision:

(i) What happens with simple statements like ‘John is like Mary’?
(ii) What happens to the specific reading of similarity statements?
(iii) What happens to quantified sentences such as ‘John is like every lawyer’?
(iv) How precisely do we derive readings of disjunction, both with indefinites and with individual arguments?

(i) ‘John is like Mary’

I propose that in sentences like (110), 'Mary' is interpreted as a Montagovian individual, i.e. the generalized quantifier corresponding to the set of properties that Mary has, instead of as an atomic individual.[16]

(110) John is like Mary.

To obtain a Montagovian individual from an atomic individual, another of Partee's type-shifting functors comes in handy, **lift**:

(111) $\textbf{lift} := \lambda x.\lambda P.P(x)$

Assuming that **lift** can be optionally inserted to obtain Montagovian individuals from atomic individuals allows us to compute the truth conditions of (110) and get the right prediction:

(112) $[\![$ [John [is [like[**lift**[[Mary]]]]]] $]\!] =$
$= [john[\lambda x.\text{GEN}\Big(\text{BE}\big(\lambda P'.P'(mary)\big)\Big)\Big(\lambda y.x \text{ SRP } y\Big)]] =$
$= [john[\lambda x.\text{GEN}\big(\lambda z.mary = z\big)\big(\lambda y.x \text{ SRP } y\big)]] =$
$= \text{GEN}\big(\lambda z.mary = z\big)\big(\lambda y.john \text{ SRP } y\big)$

Which we can write in the more readable form of:

(113) $\text{GEN}\big(x = mary\big)\big(john \text{ SRP } x\big)$

(ii) Deriving the specific reading

One further question concerns other readings of the indefinite and other quantifiers. How is the 'wide' reading of the indefinite captured? This reading, corresponding to what I called the specific reading of similarity statements, should be possible if the indefinite raises above the 'like' PP and leaves a 'Montagovian' trace, i.e. a trace of type $\langle e,t\rangle,t$ rather than of type e, analogous to what happens in 'John looks like Mary'. As an example, I use the sentence below, in which the restriction 'I know' has the effect of making the specific reading preferred.

(114) John is like a lawyer I know.
   a. (Preferred) specific reading: There is a lawyer such that John looks like them.

(115) $[\![$ [John [is [like [a lawyer I know]]]] $]\!] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x') \wedge P'(x')[john[\lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)$
$[\textbf{lift}(t_e)]]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x') \wedge P'(x')[\text{GEN}\big(\lambda z.z = t\big)\big(\lambda y.john \text{ SRP } y\big)]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x') \wedge P'(x')[\lambda y'\Big(\lambda x.\text{GEN}\big(\lambda z.z = y'\big)\big(\lambda y.john \text{ SRP } y\big)\Big)]] =$
$= \exists x'\Big(lawyer\text{-}I\text{-}know(x') \wedge \text{GEN}\big(\lambda z.z = x'\big)\big(\lambda y.john \text{ SRP } y\big)\Big)$

Which we can write as:

[16] Assuming that proper names can alternatively denote e and $\langle e,t\rangle,t$ objects is in fact a standard move (cf., a.o.,Winter, 2002)

(116) $\exists x\big(lawyer\text{-}I\text{-}know(x) \wedge \textsc{gen}(y=x)(john \text{ SRP } y)\big)$

(iii) 'John is like every/most lawyer(s))'

Partee (2002) points out that for quantifiers containing no singleton sets BE will output 'uninteresting' properties insofar as they denote the empty set. With McNally (1998), I assume that such outputs are of no communicative interest. A quantifier that is not a singleton-set generator, then, will simply lack a property-type denotation, and will systematically receive a wide scope interpretation in similarity statements. In particular, universal and proportional quantifiers lack property-type denotations because the NP they apply to will not contain, in the overwhelming majority of models, the singleton sets that BE looks for (Partee, 2002). The intuition behind these blocked type-shiftings, as put by McNally (1998), is that 'these NPs lack such denotations because their determiners are fundamentally relational and therefore cannot be treated as one-place properties of (atomic or sum) individuals; consequently, their descriptive content cannot be used to identify an individual.'[17] For instance, if we apply BE to 'every', we get the property of being every lawyer. This property is true of a lawyer only if there exists only one lawyer, or else is true of no lawyer at all:

(117) $\textsc{be}(\llbracket \text{ every lawyer } \rrbracket) = \lambda x.\forall y\big(lawyer(y)\big) \rightarrow (y=x)$

This would lead to an unreasonable interpretation of the corresponding similarity statement, as in (118a); the wide scope reading in (118b) will thus be preferred.

(118) John is like every lawyer.

a. # $\textsc{gen}\big(\forall y\big(lawyer(y)\big) \rightarrow (y=x)\big)\big(john \text{ SRP } x\big)$
In words: Generally, if someone is every lawyer, then John shares relevant properties with them.

b. $\forall y\big(lawyer(y)\big) \rightarrow \big(\textsc{gen}\big(y=x\big)\big(john \text{ SRP } x\big)\big)$
In words: Every lawyer is such that generally, if someone is them, John shares relevant properties with them.

A similar reasoning applies to quantifiers like 'most': no individual has the property of being most lawyers, unless they're the only existing lawyer:

(119) $\textsc{be}(\llbracket \text{ most lawyers } \rrbracket) =$
$\lambda x.\textsc{most}\ y\big(lawyer(y)\big)\big(y=x\big)$

Then, it is reasonable to assume that (120) will receive interpretation (120b) rather than (120a):

(120) John is like most lawyers.

a. # $\textsc{gen}\Big(\textsc{most}\ y\big(lawyer(y)\big)\big(y=x\big)\Big)\Big((john \text{ SRP } x\Big)$
In words: Generally, if someone is most lawyers, then John looks like them.

b. $\textsc{most}\ y\big(lawyer(y)\big)\big(\textsc{gen}(y=x)(john \text{ SRP } x)\big)$
In words: Most lawyers are such that generally, if someone is them,

[17] See pp. 371-375 of the same article for a comprehensive list of such quantifiers.

John shares relevant properties with them.

This perspective leads us to formulate a specific empirical generlization. If we suppose, with Partee (2002), that predicative uses of indefinites in 'be' copulas are yielded by application of the type shifter BE, then we expect a systematic parallelism between two phenomena:

(i) unavailabilities of predicative readings of Generalized Quantifiers with 'to be' and
(ii) systematic wide interpretations of quantifiers embedded in 'like', i.e. unavailabilities of generic readings with similarity statements.

And indeed, both (121a) and (121b) are ungrammatical:

(121) a. * John is every lawyer.
b. * John is most lawyers.

Of course in models in which the predicate *lawyer* is itself a singleton set these readings should be available, but as noted by McNally (1998), the competition with more natural alternative sentences like (122) makes such sentences infelicitous nonetheless:

(122) John is the only lawyer.

(iv) 'John is like someone/ someone who *P*s/ some lawyer/ some lawyer who *P*s'

The parallelism between similarity statements and 'be' copulas, in fact, goes as far as to encompass facts about 'some', too:

(123) John is some lawyer.
a. SPECIFIC
b. *PREDICATIVE

(124) John looks like some lawyer.
a. SPECIFIC
b. *GENERIC

This, however, is *prima facie* problematic from the perspective outlined above. Although it is a singleton set generator, 'some' does not have narrow, generic reading in similarity statements:

(125) John looks like some lawyer.
a. $\exists x.lawyer(x) \wedge \text{GEN}(y = x)(john \text{ SRP } y)$
b. # $\text{GEN}\big(\exists x.lawyer(x) \wedge y = x\big)\big(john \text{ SRP } y\big)$

(126) John looks like someone.
a. $\exists x.person(x) \wedge \text{GEN}(y = x)(john \text{ SRP } y)$
b. # $\text{GEN}\big(\exists x.person(x) \wedge y = x\big)\big(john \text{ SRP } y\big)$

However, a generic reading of 'someone' in similarity statements seems to be licensed when 'someone' is subtrigged:

(127) John looks like someone who just had an argument.

a. $\exists x.person(x) \wedge just\text{-}had\text{-}an\text{-}argument(x) \wedge \text{GEN}(y = x)(john \text{ SRP } y)$

b. $\text{GEN}\big(\exists x.person(x) \wedge just\text{-}had\text{-}an\text{-}argument(x) \wedge y = x\big)\big(john \text{ SRP } y\big)$

This is highly reminiscent of the subtrigging effects first discovered by Carlson (1981): (130), unlike (132) and (129), is acceptable under a generic reading.

(128) Some lawyer should be punctual.

a. Existential

b. #Generic

(129) Someone should be punctual.

a. Existential

b. #Generic

(130) Someone who respects others should be punctual.

a. Existential

b. Generic

Mascarenhas (2012) further elaborates on this data, pointing out that while 'someone' can receive generic readings when subtrigged, 'some' cannot:

(131) Some lawyer who respects others should be punctual.

a. Existential

b. #Generic

Similarity, again, displays the same pattern:

(132) John looks like some lawyer who respects others.

a. Existential

b. #Generic

Thus the availability of the general reading of similarity statements with indefinites (both 'some *NP*' and 'someone') patterns *exactly* with the availability of generic readings with indefinites in other contexts. This constitutes a further argument that the general reading of similarity constructions is in fact a generic reading.

(v) 'John is like a lawyer or a judge'

One last question is how this revision accounts for the observed ambiguity between wide and narrow readings of disjunctive similarity statements. The wide scope reduces to a disjunction of propositions:

(133) $[\![$ John is like a lawyer or a judge$]\!]_{\textbf{wide scope}} \approx [\![$ John is like a lawyer or John is like a judge $]\!]$

The account can capture this just like it captures simple sentences of the form 'John looks like Mary". To derive the narrow reading, instead, it suffices to take disjunction as defined for generalized quantifier-typed disjuncts.

With this semantics for disjunction, 'a lawyer or a judge' will be an expression denoting itself a generalized quantifier:

(134) $[\![$ a lawyer or a judge $]\!] = \lambda P.\exists x.\big(lawyer(x) \wedge P(x)\big) \vee \big(judge(x) \wedge P(x)\big)$

With this assumption, everything falls into place:

(135) $[\![$ [John [is [like [[a lawyer] or [a judge]]]]]$]\!]_{\textbf{narrow scope}} =$
$= [john[\lambda x'.\text{GEN}\Big(\text{BE}\big(\lambda P'.\exists x'\big(\big(lawyer(x') \wedge P'(x')\big) \vee \big(judge(x') \wedge P'(x')\big)\big)\big)\Big)$
$\Big(\lambda y.x' \text{ SRP } y\Big)]] =$
$= [john[\lambda x'.\text{GEN}\Big(\lambda z.\exists x'\big(\big(lawyer(z) \wedge x' = z\big) \vee \big(judge(z) \wedge x' = z\big)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]] =$
$= \text{GEN}\Big(\lambda z.\exists x'\big(\big(lawyer(z) \wedge x' = z\big) \vee \big(judge(z) \wedge x' = z\big)\big)\Big)\Big(\lambda y.john \text{ SRP } y\Big)$

Which we can write in more simple form as:

(136) $\text{GEN}\Big(lawyer(x) \vee judge(x)\Big)\Big(john \text{ SRP } x\Big)$

Which is, again, the desired result.
Something similar happens with the narrow readings of sentences like (108), or like (160):

(137) John is like Bob or Mary.

The computation of (160) is parallel to what happens with disjunction of indefinites such as in (135).

(138) $[\![$ [John [is [like [[Bob] or [Mary]]]]]$]\!]_{\textbf{narrow scope}} =$
$= [john[\lambda x'.\text{GEN}\Big(\text{BE}\big(\lambda P'.P'(bob) \vee P'(mary)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]] =$
$= [john[\lambda x'.\text{GEN}\Big(\lambda z.bob = z \vee mary = z\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]] =$
$= \text{GEN}\Big(\lambda z.bob = z \vee mary = z\Big)\Big(\lambda y.john \text{ SRP } y\Big) =$

Which we can write again in a more readable form:

(139) $\text{GEN}\big(x = bob \vee x = mary\big)\big(john \text{ SRP } x\big)$

This correctly predicts that in the narrow reading of disjunctive similarity statements, John shares relevant properties with Bob *and* Mary, which implies that Bob and Mary look alike.

5.2 Predicative Indefinites?

A last remark is in order. Of course an alternative to the solution outlined in this section would have been to take the complement of 'like' to denote a *property* instead of a Generalized Quantifier, as for instance in (140). Call these two options respectively the 'Generalized Quantifiers' approach and the 'Predicative Indefinites' approach.

(140) $[\![$ like $]\!] = \lambda P.\lambda x.\text{GEN}\big(P(y)\big)\big(x \text{ SRP } y\big)$

The 'Predicative Indefinites' approach would be in line with much literature that proposes that English *a* indefinites can act as predicates, in copulas (cf. Van Geenhoven 1998; Winter 2002 a.o.) but also in e.g. complements of locative prepositions (Mador-Haim & Winter, 2007). This is of course doable, but then in turn requires to treat things like 'Mary' and 'those objects' as properties, too, which is much less standard. Whatever route one takes, there is type-shifting involved, so that such an approach wouldn't be obviously simpler than the one adopted here.

Moreover, the 'Predicative Indefinites' approach would predict less naturally than the 'Generalized Quantifiers' approach the ungrammaticality of sentences such as (141a), where the adjective is not a grammatical input for the 'like' PP.

(141) a. * John looks like French.
b. John looks like a Frenchman.

This is in contrast with predicational copula, where both properties denoted by an adjective and (admittedly) by an indefinite and are grammatical.

(142) a. John is French.
b. John is a Frenchman.

Some – possibly syntactic – stipulations would need to be added to account for the fact that properties denoted by adjectives are not a possible input of 'like', as opposed to properties denoted by indefinites. In the 'Generalized Quantifiers' approach, instead, the ungrammaticality of (141a) follows directly from the type mismatch between the unsaturated argument and the adjective.

Be that as it may, the issue comes down to whether indefinites directly denote properties and can be existentially closed via e.g. Semantic Incorporation (as in Van Geenhoven 1998, but also in McNally 1992; Zimmermann 1993), or whether they start out as an existential quantifier (or possibly an existentially closed choice function) that gets type-shifted into a property (in the spirit of Partee 2002).

Importantly however, the 'Predicative Indefinites' approach would still be compatible with the main claim of this section, namely that 'like' involves inherent genericity. It is not necessary, then, that I take stance on a deep question that goes well beyond the scope of this paper.

6 Perspectives and open issues

6.1 Gradability

A topic I did not address at all is the gradability of 'like'. Alrenga (2010) points out that 'like' can be modified by scalar modifiers such as 'much':

(143) Palo Alto is much like I remember it.

He argues that such modifiers impose constraints on the cardinality of the number of shared properties within the relevant set. He assumes that 'like' does not always existentially quantify on shared properties, but may alternatively combine with its argument to yield sets of properties, as below:

(144) $[\![\text{ like }]\!] = \lambda X.\lambda Y.\lambda P[P \in X \wedge P \in Y]$

'Much' then combines with 'like' to place a restriction on the cardinality of the properties shared between X and Y.

$[\![\text{ much }]\!] = \lambda X.|X| > n$

This move is in principle available for my account as well. We may assume that 'like' may alternatively universally quantify on relevant attributes or return the set of attributes whose value the two input individuals share. Then, 'much' may place constraints on the cardinalities of such attributes. The reason I do not pursue such an approach is that I suspect that gradability with 'like' may be about more than simple cardinalities. There is at least a second source of gradability, which depends on the single *attributes*, and more precisely whether the relevant attributes contain gradable properties. To see this, notice the difference between (145a) and (145b):

(145) a. In terms of eye color, Mary is much like Bob.
b. # In terms of nationality, Mary is much like Bob.

Of course, it would already make little sense to state that in (145a) 'much' places constraints on the cardinality of eye-color shared properties. But mostly, it would fail to capture the contrast between (145a) and (145b). Tentatively, one may explain these data as follows. Properties that belong to the 'color' attribute are gradable both quantitatively and qualitatively (as argued, a.o., by Kennedy & McNally 2010). That is to say, an object may be more or less red both in terms of the proportion of its surface that is covered in red and in terms of how vivid, how 'red' its color is. In (145a), then, one may use 'much' to express that the color of Mary's eyes and the color of Bob's eyes are close on e.g. a qualitative scale. By contrast, properties that belong to a 'sharp' attribute like 'nationality' are not gradable, whence the infelicity of (145b). Of course this would mean that not all attributes denote perfect partitions, i.e. sets of mutually exclusive (and collectively exhaustive) properties. Attributes like 'color' may instead denote sets of fuzzy properties. How these fuzzy properties may be judged to be close to each other is of course perception-dependent, but I leave it as an open question for future research. In general, while I think this route is promising, I will not attempt to implement it compositionally here.

6.2 Adverbial quantification and availability of generic readings

Zooming out, the data I presented in this paper point to some rather unattended issues with generic interpretations of items in non-subject positions. First, why do certain constructions make generic readings more available than others? For instance, a generic reading is available in (146) (if uttered out of the blue), but not so much in (147), where the existential reading of the indefinite seems to be much more accessible.

(146) John looks like a lawyer.
a. John looks like a typical lawyer. — more available
b. There is a specific lawyer John looks like. — less available

(147) John is passionate about a crime book.
a. John is passionate about a typical crime book. — less available

b. There is a specific crime book John is passionate about. more available

It is known that there is a bias to assign subjects to the Topic of a sentence (Lambrecht, 1996). If it is true that GEN, as a silent Q-adverb, only binds indefinites in the Topic of a sentence, then it is expected that indefinites in non-subject position should have less accessible generic interpretations. However, it seems that sentences parallel to (147) formulated with an overt quantificational adverb have a quantificational reading that is more accessible than a generic reading is for (147). There is an available reading of sentence (148) that really means that John is passionate about most books.

(148) John is often passionate about a crime book.
$\approx$
John is passionate about most crime books.

There is instead no strong bias to assign an indefinite in non-subject position to the Topic. On the one hand, this may explain the relative unavailability of generic readings in (146). But overt Q-adverbs only bind indefinites in their Topic, too, just like GEN; and 'often' makes the quantificational reading of the indefinite available in (148). This is puzzling, since if we assume that GEN is a Q-adverb, any information-structural explanation that applies to GEN should generalize to Q-adverbs.

A second question concerns constructions that give rise to generic readings of indefinites, but not to parallel quantificational readings with overt quantificational adverbs.

(149) John is more competent than a lawyer.
$\approx$
John is more competent than a typical lawyer.

(150) John is often more competent than a lawyer.
$\not\approx$
John is more competent than most lawyers.

(151) a. John has the charisma of a lawyer.
$\approx$
b. GEN[x is a lawyer][John has the charisma of x]

(152) a. John has rarely the charisma of a lawyer.
$\not\approx$
b. FEW[x is a lawyer][John has the charisma of x]

My revised theory of 'like' explains this phenomenon for similarity statements. But what happens in other cases like (150) and (150), or (151) and (152)? Is there inherent generic quantification in comparatives and in 'of'? Or is it just that GEN is in general different from overt quantificational adverbs?[18]

[18]More tentatively, one may view the readings that arise in 'for a *N*' PPs as generic as well. To the extent that this observation is descriptively adequate, the indefinite there is also untouched by adverbial quantification:

(i) John is tall for a football player.
$\approx$
John is tall with respect to a typical football player.

7 Conclusion

I proposed an analysis of similarity statements of the form V + 'like' based on two components: property sharing and generic quantification. I showed that this can explain a range of phenomena that are otherwise puzzling. Property-sharing explains the fact that one can specify what features are relevant for a given similarity statement both overtly and covertly:

(153) With respect to color, this banana is like that lemon.

Genericity explains non-monotonicity, paraphrases with 'typical', and narrow readings of disjunction.
I raised a problem that an analysis based on genericity faces, namely that quantificational adverbs do not give rise to readings parallel to the generic readings on indefinites in similarity statements:

(154) John looks like a lawyer.
$\approx$
John looks like a typical lawyer.

(155) John often looks like a lawyer.
$\not\approx$
John looks like most lawyers.

I solved this problem by assuming that the generic interpretation of the indefinite derives from a generic quantification inherent to the meaning of 'like, and not from covert application of the silent quantificational adverb GEN.

(ii) John is often tall for a football player. $\not\approx$
John is tall with respect to most football players.

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Appendix

In the following, I write the copula 'to be' as simply passing through the predicate it takes as an input, namely as $\lambda P.\lambda x.P(x)$.

(156) $[\![$ [John [is [like [a lawyer]].$]\!] =$
$= [john[\lambda P.\lambda x.P(x)[\lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x \text{ SRP } y\big)[\lambda P'.\exists x(lawyer(x)\wedge$
$P'(x))]]]] =$
$= [john[\lambda P.\lambda x.P(x)[\text{GEN}\Big(\text{BE}\big(\lambda P'.\exists x(lawyer(x)\wedge P'(x))\big)\Big)\Big(\lambda y.x \text{ SRP } y\Big)]]] =$
$= [john[\lambda P.\lambda x.P(x)[\lambda x.\text{GEN}\Big(\lambda \mathbf{Q}.\lambda z.\mathbf{Q}\big(\lambda z'.z' = z\big)\big(\lambda P.\exists x\big(lawyer(x)\wedge P(x)\big)\big)\Big)\Big(\lambda y.x \text{ SRP } y\Big)]]] =$
$= [john[\lambda P.\lambda x.P(x)[\lambda x.\text{GEN}\big(\lambda z.\exists z'\big(lawyer(z')\wedge z = z'\big)\big)\big(\lambda y.x \text{ SRP } y\big)]]] =$
$= [john[\lambda x.\text{GEN}\big(\lambda z.\exists z'\big(lawyer(z')\wedge z = z'\big)\big)\big(\lambda y.x \text{ SRP } y\big)]]] =$
$= \text{GEN}\big(\lambda z.\exists z'\big(lawyer(z')\wedge z = z'\big)\big)\big(\lambda y.john \text{ SRP } y\big)$

(157) $[\![$ [John [is [like [Mary]]]]$]\!] =$
$= [john[[\![\text{is}]\!][[\![\text{like}]\!][\big(\mathbf{lift}(mary)\big)]]]] =$
$= [john[\lambda P.\lambda x.P(x)[\lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x \text{ SRP } y\big)[\lambda P'.P'(mary)]]]] =$
$= [john[\lambda P.\lambda x.P(x)[\lambda x.\text{GEN}\Big(\text{BE}\big(\lambda P'.P'(mary)\big)\Big)\Big(\lambda y.x \text{ SRP } y\Big)]]] =$
$= [john[\lambda x.\text{GEN}\Big(\lambda \mathbf{Q}.\lambda z.\mathbf{Q}\big(\lambda z'.z' = z\big)\big(\lambda P.P(mary)\big)\Big)\Big(\lambda y.x \text{ SRP } y\Big)]]] =$
$= [john[\lambda x.\text{GEN}\big(\lambda z.mary = z\big)\big(\lambda y.x \text{ SRP } y\big)]]] =$
$= [john[\lambda x.\text{GEN}\big(\lambda z.mary = z\big)\big(\lambda y.x \text{ SRP } y\big)]] =$
$= \text{GEN}\big(\lambda z.mary = z\big)\big(\lambda y.john \text{ SRP } y\big)$

(158) $[\![$ [John [is [like [a lawyer I know]]]] $]\!] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[john[\lambda P.\lambda x.P(x)[\lambda \mathbf{Q}_{\langle e,t\rangle,t}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)$
$[\mathbf{lift}(t_e)]]]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[john[\lambda P.\lambda x.P(x)[\lambda x'.\text{GEN}\big(\text{BE}\big(\mathbf{lift}(t)\big)\big)\big(\lambda y.x' \text{ SRP } y\big)]]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[john[\lambda P.\lambda x.P(x)[\lambda x'.\text{GEN}\Big(\lambda \mathbf{Q}.\lambda z.\mathbf{Q}\big(\lambda z'.z' =$
$z\big)\big(\lambda P'.P'(t)\big)\Big)$
$\Big(\lambda y.x' \text{ SRP } y\Big)]]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[john[\lambda P.\lambda x.P(x)[\lambda x'.\text{GEN}\big(\lambda z.z = t\big)\big(\lambda y.x' \text{ SRP } y\big)]]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[\lambda P.\lambda x.P(x)[\text{GEN}\big(\lambda z.z = t\big)\big(\lambda y.john \text{ SRP } y\big)]]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[\text{GEN}\big(\lambda z.z = t\big)\big(\lambda y.john \text{ SRP } y\big)]] =$
$= [\lambda P'.\exists x'.lawyer\text{-}I\text{-}know(x')\wedge P'(x')[\lambda y'\Big(\lambda x.\text{GEN}\big(\lambda z.z = y'\big)\big(\lambda y.john \text{ SRP } y\big)\Big)]] =$
$= \exists x'\Big(lawyer\text{-}I\text{-}know(x')\wedge \text{GEN}\big(\lambda z.z = x'\big)\big(\lambda y.john \text{ SRP } y\big)\Big)$

(159) $[\![$ [John [is [like [[a lawyer] or [a judge]]]]]$]\!]_{\textbf{narrow scope}} =$
$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[[\lambda P'.\exists x'.lawyer(x')\wedge$
$P'(x')]\lambda \mathbf{Q}'.\lambda \mathbf{Q}'.\lambda P'.\ \mathbf{Q}'(P')\vee \mathbf{Q}'(P')[\lambda P''.\exists x''.judge(x'')\wedge P''(x'')]]]]]] =$
$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[[\lambda P'.\exists x'\big(lawyer(x')\wedge$
$P'(x')\big)\vee \exists x''\big(judge(x'')\wedge P'(x'')\big)]]]]] =$
$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[\lambda P'.\exists x'\big(\big(lawyer(x')\wedge$
$P'(x')\big)\vee\big(judge(x')\wedge P'(x')\big)\big)]]]] =$
$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\text{BE}\big(\lambda P'.\exists x'\big(\big(lawyer(x')\wedge P'(x')\big)\vee\big(judge(x')\wedge$

$P'(x'))))\Big)$

$\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\lambda \mathbf{Q}.\lambda z.\mathbf{Q}\big(\lambda z'.z' = z\big)\big(\lambda P'.\exists x'\big(\big(lawyer(x') \wedge P'(x')\big) \vee$

$\big(judge(x') \wedge P'(x')\big)\big)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\lambda z.\exists x'\big(\big(lawyer(z) \wedge x' = z\big) \vee \big(judge(z) \wedge x' =$

$z)\big)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda x'.\text{GEN}\Big(\lambda z.\exists x'\big(\big(lawyer(z) \wedge x' = z\big) \vee \big(judge(z) \wedge x' = z\big)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]] =$

$= \text{GEN}\Big(\lambda z.\exists x'\big(\big(lawyer(z) \wedge x' = z\big) \vee \big(judge(z) \wedge x' = z\big)\big)\Big)\Big(\lambda y.john \text{ SRP } y\Big)$

(160) $[\![$ [John [is [like [[Bob] or [Mary]]]]]$]\!]_{\textbf{narrow scope}} =$

$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[[\mathbf{lift}(bob_e)]\lambda \mathbf{Q}'.\lambda \mathbf{Q}'.\lambda P'.$
$\mathbf{Q}'(P') \vee \mathbf{Q}'(P')[\mathbf{lift}(mary_e)]]]]]] =$

$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[[\lambda P'.P'(bob)]\lambda \mathbf{Q}'.\lambda \mathbf{Q}'.\lambda P'.$
$\mathbf{Q}'(P') \vee \mathbf{Q}'(P')[\lambda P''.P''(mary)]]]]]] =$

$= [john[\lambda P.\lambda x.[\lambda \mathbf{Q}.\lambda x'.\text{GEN}\big(\text{BE}(\mathbf{Q})\big)\big(\lambda y.x' \text{ SRP } y\big)[[\lambda P'.P'(bob) \vee P'(mary)]]]]]] =$

$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\text{BE}\big(\lambda P'.P'(bob) \vee P'(mary)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\lambda \mathbf{Q}.\lambda z.\mathbf{Q}\big(\lambda z'.z' = z\big)\big(\lambda P'.P'(bob) \vee P'(mary)\big)\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda P.\lambda x.[\lambda x'.\text{GEN}\Big(\lambda z.bob = z \vee mary = z\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]]] =$

$= [john[\lambda x'.\text{GEN}\Big(\lambda z.bob = z \vee mary = z\Big)\Big(\lambda y.x' \text{ SRP } y\Big)]] =$

$= \text{GEN}\Big(\lambda z.bob = z \vee mary = z\Big)\Big(\lambda y.john \text{ SRP } y\Big) =$