Introduction. Many, if not all, predicates in natural language exhibit what Freidrich Waismann (1945) called "open texture" meaning that their extension is systematically undetermined. More precisely, given a predicate F, call F *open-textured* if there is some object a such that neither the facts about F's usage, nor any non-linguistic facts, suffice to determine whether a falls into F's extension.

Let's start with H.L.A. Hart's classic example of an open-textured predicate, *vehicle*:

> A legal rule forbids you to take a vehicle into the public park. Plainly this forbids an automobile, but what about bicycles, roller skates, toy automobiles? What about airplanes? Are these, as we say, to be called "vehicles" for the purpose of the rule or not? (1958, p. 607)

A necessary condition for being a vehicle is, presumably, being a thing designed to transport people or cargo, but you might think that that alone is not a sufficient condition for vehiclehood. For example, roller skates can transport people, but only under the skater's own impetus. Does that still count? Such dilemmas crop up across predicates: is a hot dog a sandwich? is Pluto a planet? and so on (McConnell-Ginet, 2006; Ludlow, 2014).

Many critics of truth-conditional semantics present open texture as a serious objection, potentially undermining the viability of the entire enterprise. Chomsky, for example, takes open texture as one of several reasons to think that utterances have at most "truth indications." This view has been subsequently defended by Chomskyans like Paul Pietroski who argues that "linguistic meanings *guide and constrain without determining* truth, reference, and other (norm governed) expression–speaker–world relations" (2005, p. 281). This paper defends a broadly Pietroski-inspired theory based on dynamic semantic approaches to vagueness (Kamp, 1981; Barker, 2002). In the process, we hope to show that open-texture can be accomodated using fairly standard tools from formal semantics.

A dynamic proposal. We adopt a view of context originating in Stalnaker (1978) according to which the common ground determines a context set of worlds $\sigma \subseteq W$. In Stalnaker's theory, the characteristic effect of assertion is to eliminate worlds in the context set; hence, a successful assertion of p updates the prior context σ with p returning a new context $\sigma[p] = \sigma \cap p$.

Descriptive vs. metalinguistic uses. Barker (2002) observed that gradable adjectives (GAs) can be used in two different ways:

(1) A: Is Feynman tall or short?
B: Feynman is tall.

(2) A: Who around here is considered tall?
B: Well, around here Feynman is tall.

On their descriptive use, B's assertion of the GA in (1) adds to the common ground information about Feynman's height. However, on their metalinguistic use, B's assertion of the GA in (2) does not add new information to the common ground; rather, B's utterance serves to inform A about the prevailing standard of tallness in the community. This use is harder to model in the Stalnakerian framework we've sketched. Moreover, we the same constrast with non-vague open-textured predicates:

(3) A: What is a smörgastrata?
B: A smörgastrata is a sandwich.

(4) A: What around here is considered a sandwich?
B: Well, around here a smörgastrata is a sandwich.

Whereas (3) adds information to the common ground about what kind of thing a smörgastrata is, (4) adds information about how the predicate *sandwich* is used.

Adding conventions. To capture metalinguistic uses of open-texture predicates, we follow Kocurek and Rudolph (2020) in introducing a function **c** called a *convention* which assigns intensions to names and predicates. Given a set of worlds W and a domain D, a *convention* **c** is a function such that:

- $\mathbf{c}(a) : W \to D$ for each name a
- $\mathbf{c}(P^n) : W \to \mathcal{P}(D^n)$ for each n-place predicate P^n

We treat the meanings of expressions as context change potentials on a context modelled as a set of world-convention pairs:

(5) $[\![\text{a scooter is a vehicle}]\!] = \lambda\sigma.\{\langle w, \mathbf{c}\rangle \in \sigma : w \text{ s.t. } \mathbf{c}(\textbf{scooter})(w) \in \mathbf{c}([\![\text{vehicle}]\!])(w)\}$

The descripive use corresponds to a situation in which there's agreeement about the relevant convention, but there's uncertainty about what the world is like.

w	$\mathbf{c}([\![\text{vehicle}]\!])(w)$	$\mathbf{c}(\textbf{scooter})(w) \in \mathbf{c}([\![\text{vehicle}]\!])(w)$?
w_1	$\{car, motorcycle, scooter\}$	✓
w_2	$\{car, bus\}$	✗

The metalinguist use corresponds to a situation in which there's agreeement about what the world is like, but there's uncertainty about the relevant convention.

c	$\mathbf{c}([\![\text{vehicle}]\!])(w)$	$\mathbf{c}(\textbf{scooter})(w) \in \mathbf{c}([\![\text{vehicle}]\!])(w)$?
$\mathbf{c}_1$	$\{car, motorcycle, scooter\}$	✓
$\mathbf{c}_2$	$\{car, bus\}$	✗

A prototype-based semantics for comparatives. We can give comparatives a test-based semantics similar to how modals are analyzed in update semantics (Veltman, 1996).

(6) A car is more of a vehicle than a scooter.

The basic idea is that constructions like (6) are claims about conceptual centrality. We assume there's a distance metric $d : D \to \mathbb{R}$ over D and a prototype convention p which maps every predicate to its exemplar (Rosch, 1975; Osherson & Smith, 1981).

(7) a. $[\![\text{more}]\!] = \lambda\alpha\lambda x\lambda y\lambda\sigma.\{\sigma : \forall\langle w, \mathbf{c}\rangle \,.\, d(\mathbf{c}(x)(w), p(\alpha)(w)) < d(\mathbf{c}(y)(w), p(\alpha)(w))\}$

b. $[\![(6)]\!] = \lambda\sigma.\{\sigma : \forall\langle w, \mathbf{c}\rangle \,.\, d(\mathbf{c}(\textbf{car})(w), p([\![\text{vehicle}]\!])(w)) < d(\mathbf{c}(\textbf{scooter})(w), p([\![\text{vehicle}]\!])(w))\}$

In other words, a comparison of two individuals with respect to a predicate is a comparison of the distance between each individual and the exemplar of said predicate.

In addition, this also allows us to make sense of metalinguistic comparisons (Morzycki, 2011; Kocurek & Rudolph, 2020).

(8) Pluto is more of a dwarf planet than a planet.

(9) $[\![(8)]\!] = \lambda\sigma.\{\sigma : \forall\langle w, \mathbf{c}\rangle \,.\, d(\mathbf{c}(\textbf{Pluto})(w), p([\![\text{dwarf planet}]\!])(w)) < d(\mathbf{c}(\textbf{Pluto})(w), p([\![\text{planet}]\!])(w))\}$

A comparison between two predicates with respect to an individual is a comparison of the distance between each predicate's exemplar and the relevant individual.

Further applications. In the full paper, we show that our dynamic theory has other advantages, explaining certain metalinguistic uses of conditionals (e.g., "if anything is a sandwich, a Reuben is a sandwich") (Hinterwimmer, 2010), counterconventionals (e.g., "if Pluto was a planet, there would be dozens of plantes") (Einheuser, 2006; Kocurek et al., 2020), and restrictions on attitude verbs like *consider* and *counts* (Kennedy & Willer, 2022).

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