Free Choice With Arbitrary Objects

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1 Free Choice in natural language

- 'Free choice' *any*

  (1) Any owl hunts mice.
  ⇝ *For all* x, if x is an owl, then x hunts mice.
  (Kadmon & Landman 1993)

  (2) I can catch any raven.
  ⇝ *For all* x, if x is a raven, then I can catch x.
  (Horn 2000)

- 'Free choice' *or*

  (3) I would dance with Mary or Sue.
  ⇝ I would dance with Mary *and* I would dance with Sue.
  (Kadmon & Landman 1993)

  (4) Alfonso or Claribel {is/would be} a good choice for chair.
  ⇝ Alfonso {is/would be} a good choice *and* Claribel {is/would be} a good choice.

- *wh*-ever free relatives

  (5) I do whatever I want whenever I want.
  ⇝ *For every* action a and time t, if I want to do a at t, then I do a at t.

- Free choice effects with deontic modals (Von Wright 1969; Kamp 1974):

  (6) You may borrow any of my toys.
  ⇝ *For all* x, if x is one of my toys, you may borrow x.

  (7) You may drink the whiskey or the gin.
  ⇝ You may have the whiskey *and* you may have the gin.

  (8) You can't eat soup or salad.
  ⇝ You can't have soup *and* you can't have salad.

- Free choice with epistemic modals (Zimmermann 2000):

  (9) Mrs. X might live in Victoria or Brixton.
  ⇝ Mrs. X might live in Victoria *and* she might live in Brixton.

- Free choice with ability modals:

  (10) Anything you can do I can do better.
  ⇝ If you can do a handstand, I can do a better one...

- Cherchia's (2013) **Identity Thesis**: "free choice (FC) effects constitute a unitary phenomenon empirically, and call for a uniform explanation conceptually" (p. 50).
- A methodological implication of the **Identity Thesis** is that we should be suspicious of accounts of FC that seem tailor-made for a particular item or that fail to generalize across different environments.

2 Proposal in brief: arbitrary objects

> *Any a* denotes only one *a*, but it is wholly irrelevant which it denotes, and what is said will be equally true whichever it may be. Moreover, *any a* denotes a variable *a*, that is, whatever particular *a* we may fasten upon, it is certain that *any a* does not denote that one; and yet of that one any proposition is true which is true of any a. (Russell in *Principles of Mathematics*, §60)

- FC uses of *any* and *or*, as well as *wh*-ever free relatives, denote *arbitrary objects* (entities, actions, times, etc.) that range over individual objects (entities, actions, times, etc.) and instantiate a property only when it is common to all of the individuals, or *values*, in their range.
- *Any owl* in (1) denotes the arbitrary owl, owl*, which has a property only when it is instantiated by all the owls. So we may predicate of owl* the property of having binocular vision, of being zygodactyl, and, of course, the property of being an owl. However, owl* is not nocturnal since not all owl species hunt at night.
- By deploying an arbitrary object, a speaker deemphasizes the individual identities of the values in its range and brings the common properties of these values to the foreground. We may think of owl* as functioning, so to speak, as a peg on which to hang properties common to all owls.
- When a speaker predicates a new property of an arbitrary object, such as predicating of owl* the property of hunting mice in (1), this has the

effect of adding the new property to the peg. Since arbitrary objects have properties common to their values, this implies that for all x, if x is an owl, then x hunts mice.

- Crucially, however, the speaker is *not* saying of each individual owl that it hunts mice. Rather, the speaker conveys that all owls hunt mice by effectively setting up a *dependency* between the property of being an owl and the new property of hunting mice.
- This 'property-based' verification not only accounts for their universal or conjunctive force, but also explains other distinctive features of free choice items, such as why sentences like (1) have a non-accidental 'law-like' flavor (cf. Hale 2020 on "instantial" versus "generic" truthmakers, and Linnebo 2022 on "instance-based" versus "generic" explanations of universal generalizations).

3 FC *any*

3.1 Theoretical and empirical issues

- Most immediately, we would like an account of the universal force of FC *any*. This demand is all the more pressing because I take it to be have been established by many linguists that polarity sensitive (PS) *any* is a narrow-scope existential indefinite rather than a wide-scope universal.

(11) a. I can catch any raven. (FC *any*)
b. I didn't see any pigs. (PS *any*) (Horn 2000)

(12) I wonder if Susan married anybody. (Fauconnier 1979)

- The universal force of FC *any* has a distinctive character, conveying "choiceness" or "arbitrariness", that the referent can be freely chosen from a class of items (Kadmon & Landman 1990 write: there is a feeling that (13) pertains to "arbitrary matches" (p. 230)):

(13) Any match {at all/whatsoever} that I strike lights. It doesn't matter which.

- Furthermore, FC *any* statements are 'law-like'. One signature of this is that FC *any* statements, like non-accidental statements in general, support counterfactual inferences (Ryle 1949; Vendler 1962):

(14) Any owl hunts mice. So, if Tweety were an owl, Tweety would hunt mice.

- Another signature is that *any* statements, like non-episodic generalizations, do not carry existential commitments:

(15) She may never marry, but {anyone/*everyone/*the person} she does marry will be Jewish. (Horn 2000)

- Beyond the issues related to quantificational force, *any* generally ranges over a more encompassing domain than ordinary universal determiners (as emphasized by Kadmon & Landman 1990, 1993, and others):

(16) Context: We have just sat down at a family-style restaurant where everybody shares dishes, but we have not yet had the chance to look over the menu.
a. ?Every vegan dish works for me.
b. Any vegan dish works for me.

- While I will try in this talk to explain these meaning features of FC *any*, there is also the explanatory demand of accounting for its distributional restrictions, which can be quite subtle. For example, FC *any* is not generally good in episodic statements, though it can be made acceptable when modified by appropriate subordinate clauses ('subtrigging', LeGrand 1975; Dayal 1995, 1998):

(17) Romeo danced with {?any woman./any woman who was receptive to his advances.}

3.2 Some previous accounts

- Kadmon & Landman's (1993) influential existential analysis:

(18) a. $[\![\textsf{any } N]\!] = [\![\textsf{an } N]\!]$ plus...
b. *Widening:* any widens the interpretation of the noun phrase N in comparison to the corresponding indefinite an N along a contextually provided dimension.
c. *Strengthening:* any N is felicitous only when this statement is stronger than (i.e., entails) the corresponding statement an N.
d. The FC interpretation of any N arises by means of a *generic operator* (a universal quantifier with a vague restriction), the same mechanism responsible for the generic interpretation of the ordinary indefinite an N.

(19) A mosquito carries West Nile virus.

- Difficulties with K&L's analysis of FC *any* as a "generic indefinite":
  - Generics allow exceptions, however it is not evident that *any* truly permits exceptions along any dimension:

    (20) A: A large dog gives live birth.
    B: What? ANY dog gives live birth.

    Dayal (1998) provides examples of covert or implicit subtrigging, and examples like (20) are arguably of this kind:

    (21) a. Mary confidently answered any objections.
    b. After the dinner, we threw away any leftovers.

    Compare the following continuations:

    B: Any dog gives live birth.
    A: Well, not male dogs.
    B: C'mon, what I meant to say is: any female dog, big or small, gives live birth.

    B: A shark attacks swimmers.
    A: Well, not leopard sharks.
    B: ?C'mon, what I meant to say is: a shark, but not a leopard shark, attacks swimmers.

  - Relatedly, FC *any* but not generic *a* is compatible with *almost*:

    (22) Almost {any/*an} owl hunts mice.

  - Dayal (1998) also notes contrasts with adverbs of quantification:

    (23) {A/*Any} lion is {usually/often/seldomly} majestic.

    While the variants with *a* have plausible readings that most/few lions are majestic, the variants with *any* only support frequency interpretations, which are incompatible with individual-level predicates like *majestic*.
  - A final argument, also due to Dayal (1995, 1998), is that ordinary indefinites do not have generic readings in subtrigged cases:

    (24) {Any/A} person who saw the fly in the food went hungry.

- Dayal (1998) is one of the main proponents of the universal FC *any* view. While she grants that PS *any* is an existential indefinite, Dayal argues that FC *any* is a modal universal determiner:

$$\forall s, x[\text{owl}(x, s) \wedge C(s)]$$
$$[\text{GEN } s'[s \leqslant s' \wedge C'(s')]\exists y[\text{mice}(y, s') \wedge \text{hunt}(x, y, s')]]$$

- One difficulty with Dayal's account it that she must treat FC and PS *any* as distinct lexical items. As Dayal herself acknowledges, a univocal account of *any* would be preferable if one could make it work, especially given similar FC items in Hindi, Japanese, and other languages.
- Within English itself, the existential-universal flip-flop with *any* also finds a parallel in a disjunctive-conjunctive flip-flop with *or* (Horn 1972; Kadmon & Landman 1993). However, we presumably do not want to claim that *or* is lexically ambiguous.

3.3 Indefinites: variable reference to a thing

- The crucial meaning feature of FC *any* that motivates my theory is its arbitrariness or lack of individuation. I propose that FC *any* denotes or refers to an arbitrary or variable thing.
- The formal treatment of free choice items will be implemented by grafting a version of arbitrary object theory (Fine 1983, 1985a,b; Horsten 2019) onto a compositional version of truthmaker or 'menu' semantics (Bledin 2024, drawing on Fine 2017a,b,c, Champollion & Bernard 2022).

  (25) **Types:** e and s are the basic types of **entities** and **states**, $\mathsf{a} \to \mathsf{b}$ is the type of a **function** mapping arguments in type a to results in type b, Sa is the type of a **set** of values in type a.

  (26) **Menu types:** $\mathsf{Ma} := \mathsf{Sa}$ for $\mathsf{a} \in \{\mathsf{e}, \mathsf{s}\}$.

- The entity and state spaces are both complete lattices.
- $\bigsqcup X$ is the **sum** or **fusion** of the elements in X. ($x \sqcup y := \bigsqcup\{x, y\}$)
- When $x \leqslant y$, or equivalently $x \sqcup y = y$, I say that x **is a part of** y, or that y **contains** x.
- A state space contains a set $W \subseteq S$ of **world states**, where no world state is part of any other. A state is a **possible state** just when it is part of some world state.
- I allow entities and states to be arbitrary, however I will delay making the ordinary-arbitrary distinction explicit until needed.
- When I use the term 'indefinite DP', I refer to any DP that denotes a non-singleton entity menu. This includes individual disjunctions, since they denote a menu whose alternatives are the referents of the disjuncts (Alonso-Ovalle 2006 based on Hamblin 1973):

(27) **Disjunction**

$$[\![\mathsf{or}]\!] \quad = \quad \lambda X \lambda Y. X \cup Y \quad :: \quad \mathsf{Ma} \to \mathsf{Ma} \to \mathsf{Ma}$$

(28)
$$\begin{aligned} [\![\text{Hedwig or Archimedes}]\!] &= \uparrow [\![\text{Hedwig}]\!] \cup \uparrow [\![\text{Archimedes}]\!] \\ &= \{\text{Hedwig}, \text{Archimedes}\} \quad :: \quad \mathsf{Me} \end{aligned}$$
(**Set return:** $\uparrow := \lambda x.\{x\}$)

- Alongside FA, the following method is available to thread nondeterminism through a derivation (Charlow 2014, 2020):

(29) **Bind**

$$\gg= \quad := \quad \lambda X \lambda f. \bigcup_{x \in X} f(x) \quad :: \quad \mathsf{Ma} \to (\mathsf{a} \to \mathsf{Mb}) \to \mathsf{Mb}$$

(30)
$$\begin{aligned} & [\![[\![\text{[Ag]Hedwig or Archimedes hooted}]\!] \\ = \; & ([\![\text{Hedwig or Archimedes}]\!] \gg= [\![\text{[Ag]}]\!]) \cap [\![\text{hoot}]\!] \\ = \; & (\bigcup_{e \in \{\text{Hedwig}, \text{Archimedes}\}} [\![\text{[Ag]}]\!](e)) \cap [\![\text{hoot}]\!] \\ = \; & \{s : s \in [\![\text{Hedwig hooted}]\!] \vee s \in [\![\text{Archimedes hooted}]\!]\} \quad :: \quad \mathsf{Ms} \end{aligned}$$

- The treatment of existential DPs, such as *an owl* or *some raven*, generalizes that of individual disjunctions. Instead of denoting generalized quantifiers, existential DPs have a non-Montagovian semantics in which they denote menus of entities. Building on von Fintel (1994) and subsequent linguistic research (especially Schwarz 2009), I propose a hidden domain restriction argument s^* whose value can be determined by context or preceding linguistic material:

(31) **Existential quantification**

$$[\![\mathsf{a/some}_{s^*}(\alpha)]\!] \quad = \quad \{e : \exists s \leqslant s^*(\text{Possessor}(s) = e \wedge s \in [\![\alpha]\!])\} \quad :: \quad \mathsf{Me}$$

(32)
$$\begin{aligned} & [\![\mathsf{an}_{s^*}(\mathsf{owl})]\!] \\ = \; & \{e : \exists s \leqslant s^*(\text{Possessor}(s) = e \wedge s \in [\![\mathsf{owl}]\!])\} \\ = \; & \{\text{Hedwig}, \text{Archimedes}, ...\} \quad :: \quad \mathsf{Me} \end{aligned}$$

(33)
$$\begin{aligned} & [\![[\![\text{[Ag]an}_{s^*}\text{ owl hooted}]\!] \\ = \; & ([\![\mathsf{an}_{s^*}(\mathsf{owl})]\!] \gg= [\![\text{[Ag]}]\!]) \cap [\![\text{hoot}]\!] \\ = \; & (\bigcup_{e \in \{\text{Hedwig}, \text{Archimedes}, ...\}} [\![\text{[Ag]}]\!](e)) \cap [\![\text{hoot}]\!] \\ = \; & \{s : s \in [\![\text{Hedwig hooted}]\!] \vee s \in [\![\text{Archimedes hooted}]\!] \vee ...\} \quad :: \quad \mathsf{Ms} \end{aligned}$$

- Turning finally to *any*, I offer a basic treatment as an indefinite (Kadmon & Landman 1993; Horn 2000; among others). The intuition behind Widening suggests that the value of s^* for *any* will typically be much broader than that for other quantificational NPs, perhaps as large as an entire possible world, but I will not make this explicitly here:

(34) ***any*: basic indefinite interpretation**

$$[\![\mathsf{any}_{s^*}(\alpha)]\!] \quad = \quad \{e : \exists s \leqslant s^*(\text{Possessor}(s) = e \wedge s \in [\![\alpha]\!])\} \quad :: \quad \mathsf{Me}$$

3.4 FC *any*: reference to a variable thing

- I propose that free choice interpretations arise through an operator, which I denote by 'FC', that may combine with indefinites contributing menus of items to return arbitrary objects that range over them.
- One piece of evidence for this is that free choice uses of *any* and *or* are often, if not always, marked by intonational stress (Jennings 1994; Forbes 2014). This special stress is typically associated with nonstandard semantic effects (cf. distributive uses of *and*).
- The formalization of arbitrary objects is based on Fine (1985a,b):

(35) An **entity space** $\langle E_O, E_A, \leqslant, V \rangle$ consists of:

a. E_O is a nonempty set of **ordinary entities**.

b. E_A is a set of **arbitrary entities**.
The set of all entities is $E = E_O \cup E_A$.

c. $\leqslant$ is a **parthood** relation over E such that $\langle E, \leqslant \rangle$ is an atomistic complete lattice.

d. $V : E_A \to (S \to \mathcal{P}(E))$ is a valuation that assigns to every arbitrary object a **range of values** relative any state.

- I allow for 'higher-order' arbitrary objects with arbitrary entities within their ranges given examples like the following (Chris Barker (p.c.)):

(36) Any apple or any pear costs a dollar.

- To ensure that we have all the arbitrary objects we need, I impose two existence conditions (the first is based on Fine 1985a, Chapter 3):

(37) For any function f from each $s \in S$ to a set $X \subseteq E_O$ of ordinary entities, there is an arbitrary entity $a \in E_A$ with $V(a) = f$.

(38) For any function f from each $s \in S$ to a *finite* set $X \subseteq E$ of entities, there is an arbitrary entity $a \in E_A$ with $V(a) = f$.

- To ensure that we do not have too many arbitrary objects, I also impose the following identity condition (based on Fine 1985a, Chapter 3):

(39) For any arbitrary entities $a, b \in E_A$, $a = b$ if $V(a) = V(b)$.

- The free choice operator 'FC' is the inverse of the valuation V:

(40) **Free choice operator**

$$[\![\text{FC}]\!] \quad = \quad \lambda f.V^{-1}(f) \quad :: \quad (\mathsf{s} \to \mathsf{Me}) \to \mathsf{e}$$

(41) **FC *any***

$$\begin{aligned} & [\![\text{FC any}_{s^*}(\alpha)]\!] \\ = \; & [\![\text{FC}]\!]([\![\lambda s^*.\text{any}_{s^*}(\alpha)]\!]) \\ = \; & V^{-1}(\lambda s^*.\{e : \exists s \leqslant s^*(\text{Possessor}(s) = e \wedge s \in [\![\alpha]\!])\}) \quad :: \quad \mathsf{e} \end{aligned}$$

(42)

$$\begin{aligned} & [\![\text{FC any}_{s^*}(\text{owl})]\!] \\ = \; & V^{-1}(\lambda s^*.\{e : \exists s \leqslant s^*(\text{Possessor}(s) = e \wedge s \in [\![\text{owl}]\!])\}) \quad :: \quad \mathsf{e} \\ & \text{(the arbitrary owl}^*\text{)} \end{aligned}$$

- We can transition from (a function from states to) alternative sets to the corresponding arbitrary object using V^{-1} and then back again using V. Crucially, however, these two kinds of representations—alternative sets versus arbitrary objects—behave quite differently within my compositional system, each assuming a life of its own.

3.5 Composing arbitrary objects

(43) **Principle of Arbitrary Attribution:** If an arbitrary object instantiates a property, then this property is common to all the values in its range.

- This is one direction of Fine's (1983) "Principle of Generic Attribution". I do not require that any property common to a range of values is instantiated by the arbitrary object with this range, since a property may be shared in some accidental, non-modally-robust way.

- How can we incorporate the Principle of Arbitrary Attribution into our semantic theory? One approach is to operationalize this principle by introducing semantic machinery that substitutes for any arbitrary object each individual in its range (at the world of evaluation w^*):

(44) Where $X_1, X_2, ...$ are Ma-type sets,

$$\textstyle\bigsqcup\{X_1, X_2, ...\} \quad := \quad \{x_1 \sqcup x_2 \sqcup ... : x_1 \in X_1, x_2 \in X_2, ...\}$$

(45) **Individuation operator**

$$\text{I} \quad := \quad \lambda f \lambda e.\textstyle\bigsqcup_{e' \in V(e)(w^*)} f(e') \quad :: \quad (\mathsf{e} \to \mathsf{Ms}) \to (\mathsf{e} \to \mathsf{Ms})$$

(46) **Arbitrary Attribution (operationalized version)**

To compose an expression denoting an arbitrary object with a verbal or other predicative projection, the arbitrary object-denoting expression must first be raised to a position above the projection, allowing this projection to combine with the individuation operator I before application.

$$\begin{aligned} & [\![[\![_{\text{DP}}\text{FC any}_{s^*}(\text{owl})][\text{I}[\lambda e[\![_{\text{TP}}[\text{Pos}]e][\![_{\text{V}}\text{hunts mice}]]]]]]\!] \\ = \; & (\lambda e.\textstyle\bigsqcup_{e' \in V(e)(w^*)}([\![\text{Pos}]\!](e') \cap [\![\text{hunt mice}]\!]))(\text{owl}^*) \\ = \; & \textstyle\bigsqcup_{e \in V(\text{owl}^*)(w^*)}\{s : \text{Possessor}(s) = e \wedge \text{hunts-mice}(s)\} \\ = \; & \textstyle\bigsqcup_{e \in \{\text{Hedwig}, ...\}}\{s : \text{Possessor}(s) = e \wedge \text{hunts-mice}(s)\} \\ = \; & \{s_1 \sqcup s_2 \sqcup ... : s_1 \in [\![\text{Hedwig hunts mice}]\!], \\ & s_2 \in [\![\text{Archimedes hunts mice}]\!], ...\} \quad :: \quad \mathsf{Ms} \end{aligned}$$

- On this first implementation, the introduction of arbitrary objects can be seen as an intermediate stage of semantic processing, one that provisionally accepts variable things before trading in more respectable entities through the application of I. Those with ontological concerns about arbitrary items may find this approach particularly appealing.

- My own preference, however, is to let the truthmakers for FC *any* statements openly display their arbitrariness by allowing truthmakers involving arbitrary items:

(47)

$$\begin{aligned} & [\![[\text{Pos}]\text{FC any}_{s^*}(\text{owl})]\ \text{hunts mice}]\!] \\ = \; & \{s : \text{Possessor}(s) = \text{owl}^* \wedge \text{hunts-mice}(s)\} \quad :: \quad \mathsf{Ms} \end{aligned}$$

We might regard a state of owl* being a mouse hunter as atomic, encoding a conceptual connection between the property of being an owl and the property of hunting mice without containing any specific manifestations of this connection.

- The Principle of Arbitrary Attribution can now take a modal form:

(48) **Individuated states**

Given state s involving arbitrary object e_A, an individuation of s is a state $s_{e_A \to e'}$ obtained by substituting the value e' for e_A.

(49) **Arbitrary Attribution (modal version)**

Given state s involving arbitrary object e_A and world $w \in W$, if $s \leqslant W$ then there is some $s_{e_A \to e'} \leqslant W$ for each $e' \in V(e_A)(w)$.

A state of the arbitrary owl possessing the property of hunting mice brings with it, as it were, states of each of the ordinary owls (in the world of evaluation) possessing this property.

3.6 Explaining the meaning facts

- The "choiceness" is built into the very use of arbitrary objects.

- The universal force of FC *any* follows from the Principle of Arbitrary Attribution in either its operationalized or modal form.
- The account validates counterfactual entailments:

(50) Any match that I strike lights. So if I had struck this match instead of you, it would have lit.

Relative to an alternative circumstance s where the speaker struck the relevant match m, the arbitrary speaker-struck match would range over a set that includes m, so in combination with a state of this arbitrary match possessing the property of lighting, the Principle of Arbitrary Attribution would ensure a state of m lighting.

- The value range of an arbitrary object may be empty relative to the actual world, so FC *any* statements remain existentially import-free.

4 Modal free choice

(51) You may borrow any of my toys. (Narrow FC)

- Let $s_{\Diamond\{t:\text{Agent}(t)=X\wedge\varphi(t)\}}$ be a truthmaker for $\ulcorner X$ *may/can/might* $\varphi\urcorner$. I assume this state involves the proposition $\{t : \text{Agent}(t) = X \wedge \varphi(t)\}$ in some way, but I would like to remain noncommittal about this.
- A truthmaker for (51) involves the arbitrary toy of the speaker, toy*:

$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{borrow}(t)\wedge\text{Theme}(s)=\text{toy}^*\}}$

- According to the Principle of Arbitrary Attribution, such a state obtains in a world only if the following individuated states also obtain:

$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{borrow}(t)\wedge\text{Theme}(s)=\text{Barbie}\}}$
$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{borrow}(t)\wedge\text{Theme}(s)=\text{Power Ranger}\}}$ ...

(52) You may drink the whiskey or the gin. (Narrow FC)

(53) **FC *or***

$$\begin{aligned} & [\![\text{FC } \alpha \text{ or } \beta]\!] \\ = \; & [\![\text{FC}]\!]([\![\lambda s^*.\alpha \text{ or } \beta]\!]) \\ = \; & V^{-1}(\lambda s^*.[\![\alpha]\!] \cup [\![\beta]\!]) \quad :: \quad \mathsf{e} \end{aligned}$$

(54)
$$\begin{aligned} & [\![\text{FC the whiskey or the gin}]\!] \\ = \; & V^{-1}(\lambda s^*.\{\text{the whiskey}, \text{the gin}\}) \quad :: \quad \mathsf{e} \end{aligned}$$

- A truthmaker for (52) involves the arbitrary liquor from among the whiskey and the gin, liquor*:

$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{drink}(t)\wedge\text{Theme}(s)=\text{liquor}^*\}}$

- This state brings with it the following individuated states:

$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{drink}(t)\wedge\text{Theme}(s)=\text{the whiskey}\}}$
$s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{drink}(t)\wedge\text{Theme}(s)=\text{the gin}\}}$

(55) You can't eat soup or salad. (Dual Prohibition)

- Applying the theory of negative states in Bledin (2024):

$\neg s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{eat}(t)\wedge\text{Theme}(s)=\text{soup-or-salad}^*\}}$

- Applying the Principle of Arbitrary Attribution:

$\neg s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{eat}(t)\wedge\text{Theme}(s)=\text{soup}\}}$
$\neg s_{\Diamond\{t:\text{Agent}(t)=\text{Hearer}\wedge\text{eat}(t)\wedge\text{Theme}(s)=\text{salad}\}}$

(56) Mrs. X might live in Victoria or she might live in Brixton. (Wide FC)

- It is less clear to me at the moment that arbitrary objects help with wide-scope free choice. We might try appealing to arbitrary modal states, but it might also be that the full range of free choice phenomena must be explained by an array of different mechanisms.

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