Elision, Disambigaution, and Pliant Distinction

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This talk is about one way in which we draw distinctions, a phenomenon I call *pliant distinction*. I describe what they are, discuss their prevalence, and sketch why they arise.

Elision and a distinction among distinctions

To bring pliant distinctions into focus, it's best to begin by defining the notion of *elision*:

ELISION: A concept ϵ elides distinct $F \neq G$ just in case: F and G are more eligible to be the content of ϵ than any other candidate content H, and are equally eligible with respect to one another. We say that ϵ is an *eliding concept* and that any concept which represents F or G as such is a *disambiguation of* ϵ.

Two cases to illustrate:

- Caspian, victim of Maddy's mischief, unaware of the distinction between *<bat (Chiroptera)>* and *<bat (baseball)>*.[1]
  - Caspian's concept *b* cannot be said to represent either property univocally nor disjunctively.
  - If Caspian were to learn of his situation, he would coin two new concepts BAT (CHIROPTERA) and BAT (BASEBALL) and jettison *b* from his conceptual repertoire.
  - Caspian's case suggests that elision is inherently problematic.
- Vinod, victim of mathematical imprecision, unaware of the distinction between *<number (Von Neumann)>* and *<number (Zermelo)>*.[2]
  - Inversely to Caspian, Vinod does not care about this distinction and goes right on using his eliding concept *n* even after grasping the distinction.
  - The disambiguations aren't retained in his conceptual repertoire.
  - We can see from Vinod's case that elision as such is not problematic. The issue in Caspian's case is with the *contents* he is eliding.

[1] Philosophers discussing confusion/conflation tend to talk about examples like this - see Kvart (1989), Fodor (1994), Millikan (2000), Camp (2004), Lawlor (2005), Schroeter (2008), Fine (2009), Lawlor (2010), Sainsbury and Tye (2012), Dickie (2015), and Unnsteinsson (2016).

[2] See Benacerraf (1965). Examples like this are most prominent in discussions of referential indeterminacy, semantic indecision, and vagueness - the "precisifications" discussed there are typically properties that no one would retain a disambiguation for.

These two cases illustrate two different ways in which we draw distinctions, where $\mathcal{C}_S$ is the conceptual repertoire of a cognizer S:

CATEGORICAL DISTINCTION: A distinction between $F \neq G$ is *categorical* for an agent S just in case: if S were aware that they possess a concept ϵ that elides F and G, and S were epistemically competent with respect to both F and G,[3] they would retain only disambiguations $d_F, d_G \in \mathcal{C}_S$.

[3] This condition is meant to screen off cases in which S is so ignorant or mistaken about F and G that their characteristic dispositions are masked.

VACUOUS DISTINCTION: A distinction between $F \neq G$ is *vacuous* for an agent S just in case: if S were aware that they possess a concept ϵ that elides F and G, and S were epistemically competent with respect to both F and G, they would retain only $\epsilon \in \mathcal{C}_S$.

But are there any cases in which the agent retains *both* the eliding concept *and* its disambiguations? These are cases of pliant distinction:

PLIANT DISTINCTION: A distinction between $F \neq G$ is *pliant* for an agent S just in case: if S were aware that they possess a concept ϵ that elides F and G, and S were epistemically competent with respect to both F and G, they would retain both ϵ and disambiguations $d_F, d_G \in \mathcal{C}_S$.

Are there pliant distinctions? And if so, how common are they?

The ubiquity of pliant distinctions

The three theorists who come closest to discussing pliant distinctions are Field (1974), Camp (2004), and Ripley (2018). The paradigmatic pliant distinction I'll discuss comes from the last:

- The word 'heaviness' and its cognates, and the distinction between <*weight*> and <*mass*>.[4]
- Uneducated usage of these words conflates weight and mass.[5]
- Those who grasp the distinction still use 'heaviness' and company to refer to weight and to refer to mass:
  - There are no heavy objects in deep space. (Weight)
  - Some black holes are heavier than a million suns. (Mass)
- Those who grasp the distinction *also* use 'heaviness' to *elide* the distinction:
  - We are placing bets on which is heavier, the desk lamp or Farhad the cat.
  - Unbeknownst to us, Farhad is in deep space and has more mass than the lamp. Who won the bet? Verdict: the bet is off, no one *could* win.
  - This verdict makes sense if we initially used an eliding concept, a concept HEAVINESS that ignores the distinction between weight and mass.

[4] Reminder: weight varies according to where you are, mass does not.

[5] See Taibu, Rudge, and Schuster (2015).

The Farhad example can be used to illustrate the semantic and logical profiles of pliant distinctions:

- Semantically, "Farhad is heavier than the fan" corroborates the supervaluationism of Field.[6]
- Logically, consider the entailment relations between:

  (H) Farhad is heavier than the fan.

  (M) Farhad has more mass than the fan.

  (W) Farhad has more weight than the fan.

- (M)/(W) follow from (H), and the negations of (M)/(W) follow from the negation of (H), but if we only know (M) or (W) individually, (H) does not follow.
- This is the telltale signature of pliant distinction: an *asymmetric substitutability* of disambiguations for their eliding forebears.

[6] True iff every disambiguation is true, false iff every disambiguation is false, disambiguation-sensitive otherwise.

These semantic and logical features are ubiquitous in philosophy and science:

- 'Consciousness'[7] - *Access* vs. *Phenomenal*

  (E) I am conscious of the redness of the apple.
  (D) Blindsight subjects are not conscious of what they see.

- 'Meaning'[8] - *Natural* vs. *Non-natural*

  (E) The red light means that you should stop.
  (D) Smoke means fire.

- 'Cause'[9] - *Productive* vs. *Counterfactual*

  (E) The cigarettes caused her cancer.
  (D) *(Bob's rock was guaranteed to break the window if Suzy's hadn't hit it first)* Suzy's throw caused the window to break.

- 'Reason'[10] - *Normative* vs. *Motivating*

  (E) The reason I am vegetarian is to avoid contributing to animal suffering.
  (D) They had no reason to bully him.

- 'Race'[11] - *Biological* vs. *Nonbiological*

  (E) Maya Angelou's race was Black.
  (D) Cesar Chavez's race was Hispanic.

- 'Probability'[12] - *Chance* vs. *Credence*

  (E) *(Of a coin known to be fair)* The probability that the coin will land heads is .5.
  (D) *(Of a biased coin which the evidence suggests is fair)* The probability that the coin will land heads is .5.

[7] From Block (1995).

[8] From Grice (1957).

[9] From Hall (2004).

[10] As discussed in Alvarez (2017).

[11] See Spencer (2019).

[12] Updated from Carnap (1945).

A corresponding list could be created for scientific terms:[13]

- Philosophers of science observe that scientific terms often are recycled to refer to previously confused phenomena.[14]
- But these expressions also give rise to unsettled occurrences that have the profile of elision.

These examples generally share an etiology: conflation of phenomena that stand in a systematic relation to one another. It turns out that this observation pertains to the next question: why draw a pliant distinction to begin with?

[13] For 'mass', see Field (1974). For 'gene', see Brigandt (2010). For 'hardness', see Wilson (2008). For 'hot', see Wiser (1995) and Carey (2009). For 'species' and 'metal', see Kitcher and Stanford (2000) and Leslie (2013).

[14] See LaPorte (2004), Wilson (2008), Leslie (2013), Taylor and Vickers (2017), Haueis (2024), and Visser (2025).

Why be pliant?

In thinking about why it would be useful to draw a pliant distinction, it's helpful to first establish why elision can be useful in spite of the fact that disambiguations always[15] allow us to represent more information.

Basic idea: if the chance of the distinction being relevant is low enough, and the cost of the resources for representing the distinction are high enough, then elision might be overall best.

[15] So long as the distinguished properties have greater than 0 chance of differing in instantiation.

- Analogy: the hospital labeling system and the two types of "Schmengen's disease". The finer grained labeling will be less useful if:
  - Both versions of Schmengen's are rare.
  - One version of Schmengen's is far more common than the other.
- Let A be a variable that has worlds as values and R a variable standing for a representation, with cells of a partition over the set of worlds as values.
- The worlds in a cell of R "agree" on how things are with respect to the representation.
- For example, suppose there are four worlds corresponding to the different atomic combinations of Fa and Ga.[16]
  - R_e is trivalent: it lumps the worlds where exactly one of F or G hold to together but separates the other two worlds (this is the analog to elision).
  - R_d is quadrivalent, with each world occupying its own cell (this is the analog to disambiguation).
- The expected mutual information $I(A;R)$[17] is the average reduction in uncertainty one can expect about A from learning the value of R given a background probability distribution.
- For any representations R, R^*: if R^* draws every distinction that R draws and more, and if the probability of a mixed world obtaining is greater than o, then $I(A;R^*) \geq I(A;R)$.
- But as the weighted uncertainty over mixed worlds falls, the difference between $I(A;R)$ and $I(A;R^*)$ shrinks. This can happen for two reasons:
  - The weight over those worlds is low, like when both variants of Schmengen's are rare.
  - The uncertainty over those worlds is low, like when one version of Schmengen's is much more common than the other.
- Plausibly the examples of interest to us have this structure. For example, worlds in which weight and mass magnitudes diverge are distant (at least with respect to our day-to-day projects).
- If we assume that there is a cost to disambiguation, then it becomes plausible that a trade-off between exploitable information and this cost will favor elision in the right circumstances.

That establishes the possibility of elision being superior to disambiguation, but what about the superiority of *pliant distinctions*, which retain *both* R_e and R_d, to the vacuous or categorical case?

- The key is to think about what exactly the cost of disambiguation is. You might initially think it traces to the number of representations retained in memory by our conceptual repertoire.
- But it's not plausible that the cost of disambiguation is a cost on memory, because we have evidence that the brain recycles erroneous representations rather than forgetting them.

[16] That is, $w_1 = \{Fa, Ga\}$, $w_2 = \{Fa, \neg Ga\}$, $w_3 = \{\neg Fa, Ga\}$, and $w_4 = \{\neg Fa, \neg Ga\}$. The lumped/mixed worlds are w_2, w_3.

[17] $I(A;R) = H(A) - H(A \mid R)$, where $H(A)$ is the Shannon entropy of A and $H(A \mid R)$ the conditional entropy of A having observed R.

  - For example, when people learn a new scientific theory, they do not eliminate their original theory but instead retain that theory and continue to use it in safe contexts.
  - This use of the original theory manifests in data like response times, activation of regions corresponding to inhibition (to suppress the original theory in contexts where that theory gets the wrong answer), and a regression to the original theory in conditions of cognitive load or degeneracy.[18]
  - Often the new scientific theories will draw distinctions that the original theory does not.
  - The picture that emerges is one where the cost of disambiguation is a cost on *deployment*.

[18] A good overview of this literature is Shtulman and Lombrozo (2016).

- If the background probability distributions change, and the change is easy to detect, then the cognizer will have reason to *both* retain R_ϵ and R_d, using them in the contexts where the distribution favors them. R_d is better when the weighted uncertainty over mixed worlds is high, R_ϵ is better when it's low, since it spares us the deployment cost.

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