

Elision, Disambiguation, and Pliant Distinction

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It can happen that each of two substances is kept track of in a normal way over a variety of encounters, but that there are also mistakes made so that information gathered from both gets collected under the same concept. For example, one might have two people “mixed up” or “confused” in one’s mind. Similarly, mass and weight were not distinguished throughout most of the history of science. ... Two or more are being thought of as one.¹

¹ Millikan (1994), p.68.

Millikan gives two examples of “two ... are being thought of as one”, and she labels both as a mistake. The first is confusing two people. The second is failing to distinguish between weight and mass.

THESIS: For some distinct $F \neq G$, it can be better to think of the two as one even while knowing that they are distinct - indeed, weight and mass is just such a case. These are *pliant distinctions*.²

Elision and a distinction among distinctions

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* .

- Caspian, unaware of the distinction between $\langle \text{pangolin} \rangle$ and $\langle \text{armadillo} \rangle$.³
 - Caspian’s concept c doesn’t represent either property univocally nor disjunctively.
 - Key symptom of defectiveness: if Caspian were to learn of his situation, he would jettison c from his conceptual repertoire.
 - For Caspian (and us), the distinction between pangolins and armadillos is always to be respected - it is *categorical*. Letting $\mathcal{C}_S$ denote the conceptual repertoire of an agent 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 competent⁴ with respect to both F and G , they would retain only disambiguations $d_F, d_G \in \mathcal{C}_S$.

But could the agent retain *both*, the disambiguations d_F, d_G and the eliding concept ϵ ? That would put them in a position to *sometimes* respect a distinction and *sometimes* ignore it.

- The word ‘heaviness’ and its cognates, and the distinction between $\langle \text{weight} \rangle$ and $\langle \text{mass} \rangle$.⁵
 - Uneducated usage of these words conflates weight and mass.⁶

² Ripley (2018) also talks about pliant distinctions, though not under that terminology (indeed, she uses the same example of weight and mass). She is primarily concerned with vagueness, and doesn’t relate pliant distinctions to the philosophical and scientific examples I’ll give, nor does she talk about information theory and concepts. Nevertheless, I see myself as building on a key insight of hers.

³ Philosophers discussing confusion/conflation tend to talk about examples like this - see Kvat (1989), Fodor (1994), Millikan (2000), Camp (2004), Lawlor (2005), Schroeter (2008), Fine (2009), Lawlor (2010), Sainsbury and Tye (2012), Dickie (2015), and Unnsteinsson (2016).

⁴ That is, knows enough about F and G for the relevant dispositions to manifest.

⁵ Reminder: weight varies according to where you are, mass does not.

⁶ See Taibu, Rudge, and Schuster (2015).

- Those who grasp the distinction between weight and mass must possess disambiguations WEIGHT and MASS, but they *also* retain and use their confused concept:
 - * We are placing bets on which is heavier, our friend’s cat Farhad (at the equator) or our other friend’s cat Olivia (at the North Pole).
 - * Farhad has more mass than Olivia but weighs less than her. 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.
- So the distinction between weight and mass is *pliant*:

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 $d_F, d_G \in \mathcal{C}_S$.⁷

⁷ There are also *vacuous* distinctions, in which the agent would jettison the disambiguations and solely retain the eliding concept. But those won’t be important in what follows.

The ubiquity of pliant distinctions

There are two key signatures of pliant distinctions:

- *The Semantic Signature*: Thoughts featuring an eliding concept have a trivalent acceptability profile, e.g., FARHAD IS HEAVIER THAN OLIVIA is neither wholly acceptable nor wholly unacceptable, but is *disambiguation-sensitive*.
 - Field (1974) advocated a supervaluationist semantics for these cases, but that semantics gets the wrong results for certain thoughts, e.g., HEAVINESS IS REALLY TWO THINGS.⁸
 - The important thing for my purposes is that the third value involves the elided F and G disagreeing with respect to truth.
- *The Logical Signature*: Disambiguations are *asymmetrically substitutable* for their eliding concepts.
 - Consider the entailment relations between:
 - (H) Farhad is heavier than Olivia.
 - (M) Farhad has more mass than Olivia.
 - (W) Farhad has more weight than Olivia.
 - (M)/(W) follow from (H), and the negations of (M)/(W) follow from the negation of (H), but (M) or (W) individually do not entail (H).
- These two signatures are common in philosophy and science, but this isn’t obvious initially, because of *nonlexicalization* of the disambiguations:
 - A lexical item that expressed an eliding concept often gets recycled to express disambiguations too, with no separate lexical item for the disambiguations.
 - The recycling occurs with ‘heaviness’, even though its disambiguations *were* lexicalized:
 - * There are no heavy objects in deep space. (WEIGHT)
 - * Some black holes are heavier than a million suns. (MASS)⁹
 - * Farhad is heavier than the fan. (HEAVINESS)

⁸ See Frost-Arnold (2008) and Merlo (2017) for relevant discussion.

⁹ Actually, ‘weight’ and its cognates can also be used to express MASS.

Now we can give some examples from philosophy:

- ‘Consciousness’¹⁰ - *Access* vs. *Phenomenal*

¹⁰ From Block (1995).

(E) I am conscious of the redness of the apple.

(D) Blindsight subjects are not conscious of what they see.

- ‘Meaning’¹¹ - *Speaker* vs. *Semantic*

¹¹ From Grice (1957).

(E) (*The professor wrote in their letter of recommendation, “S is a terrific philosopher”*) The letter means that S is a terrific philosopher.

(D) (*The professor wrote in their letter of recommendation, “S has terrific penmanship”*) The letter means that S is a terrible philosopher.

- ‘Cause’¹² - *Productive* vs. *Counterfactual*

¹² From Hall (2004).

(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’¹³ - *Normative* vs. *Motivating*

¹³ As discussed in Alvarez (2017).

(E) The reason I am vegetarian is to avoid contributing to animal suffering.

(D) They had no reason to bully him.

- ‘Race’¹⁴ - *Biological* vs. *Nonbiological*

¹⁴ See Spencer (2019).

(E) Maya Angelou’s race was Black.

(D) Cesar Chavez’s race was Hispanic.

- ‘Probability’¹⁵ - *Chance* vs. *Credence*

¹⁵ Updated from Carnap (1945).

(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.

A corresponding list could be created for scientific terms:¹⁶

- Philosophers of science observe that scientific terms often get recycled to previously confused phenomena (without lexicalization).¹⁷
- But these expressions also give rise to unsettled occurrences that have the profile of elision.

¹⁶ 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).

¹⁷ See LaPorte (2004), Wilson (2008), Leslie (2013), Taylor and Vickers (2017), Haueis (2024), and Visser (2025).

So there are plenty of examples of pliant distinction. But my thesis claims they are *rational*. I now explain why.

Why be pliant?

Starting point: 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.¹⁸

- The chance of a distinction being relevant can be understood in terms of the *value of lost information*.
- Analogy: a hospital labeling system and the background dispute about whether “Schmengen’s disease” is one or two. The finer grained labeling will be less useful if no practical consequences hang on the distinction.
- How can we understand elision in information-theoretic terms? Let A be a variable that has worlds as values and R a variable standing for a conceptual repertoire, 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 repertoire.
- For example, suppose there are four worlds corresponding to the different atomic combinations of Fa and Ga .¹⁹
 - R_ϵ is trivalent: it lumps the worlds where exactly one of F or G hold 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).
- Because R_d is a refinement of R_ϵ , it’s guaranteed to make more information available (on average) so long as $P(w_2 \vee w_3) > 0$. But that information will often not matter from a decision-theoretic perspective.²⁰

So there’s upward, information-theoretic pressure to disambiguate. But there’s also downward, representational-resource pressure to elide.

- We can see that disambiguation costs something from the literature on representation of scientific theories:
 - 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.²¹
 - Often the new scientific theories will draw distinctions that the original theory does not.
- If either the background probability distributions change or our goals change, then the cognizer will have reason to retain *both* R_ϵ and R_d , using them in the contexts where the distribution/goals favor them.²² Thus pliant distinctions turn out to be a reasonable form of representation.

¹⁸ This venerable idea traces to Rosch (1978). For recent relevant discussions, see Kinney and Lombrozo (forthcoming), Martínez (2024), and Shea (2024). As far as I know, no one has applied the familiar idea to elision.

¹⁹ 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 .

²⁰ See Kinney and Lombrozo (forthcoming) for the formal details.

²¹ A good overview of this literature is Shtulman and Lombrozo (2016).

²² This story also explains how pliant distinctions might arise/persist even without conflation. For example, a new concept *PLANET* that elides the orthodox property and the newer property associated with the IAU definition can be rationalized in the same way even if no one ever confused these properties. Cf. Chalmers (2011), Egré and O’Madagain (2019).

References

- [1] Maria Alvarez. "Reasons for Action: Justification, Motivation, Explanation". In: *The Stanford Encyclopedia of Philosophy*. Ed. by Edward N. Zalta. Winter 2017. Metaphysics Research Lab, Stanford University, 2017.
- [2] Ned Block. "On a Confusion About a Function of Consciousness". In: *Brain and Behavioral Sciences* 18.2 (1995), pp. 227–247. DOI: 10.1017/S0140525X00038188.
- [3] Ingo Brigandt. "The Epistemic Goal of a Concept: Accounting for the Rationality of Semantic Change and Variation". In: *Synthese* 177.1 (2010), pp. 19–40. DOI: 10.1007/s11229-009-9623-8.
- [4] Joseph L Camp. *Confusion: A study in the theory of knowledge*. Harvard University Press, 2004.
- [5] Susan Carey. *The origin of concepts*. Oxford, 2009.
- [6] Rudolf Carnap. "The Two Concepts of Probability: The Problem of Probability". In: *Philosophy and Phenomenological Research* 5.4 (1945), pp. 513–532. DOI: 10.2307/2102817.
- [7] David Chalmers. "Verbal Disputes". In: *Philosophical Review* 120.4 (2011), pp. 515–566. DOI: 10.1215/00318108-1334478.
- [8] Imogen Dickie. *Fixing reference*. Oxford University Press, 2015.
- [9] Paul Egré and Cathal O'Madagain. "Concept Utility". In: *Journal of Philosophy* 116.10 (2019), pp. 525–554. DOI: 10.5840/jphil20191161034.
- [10] Hartry Field. "Theory change and the indeterminacy of reference". In: *The Journal of Philosophy* 70.14 (1974), pp. 462–481.
- [11] Kit Fine. *Semantic relationism*. John Wiley & Sons, 2009.
- [12] Jerry A Fodor. *The elm and the expert: Mentalese and its semantics*. MIT press, 1994.
- [13] Greg Frost-Arnold. "Too Much Reference: Semantics for Multiply Signifying Terms". In: *Journal of Philosophical Logic* 37.3 (2008), pp. 239–257. DOI: 10.1007/s10992-007-9067-x.
- [14] Herbert Paul Grice. "Meaning". In: *Philosophical Review* 66.3 (1957), pp. 377–388. DOI: 10.2307/2182440.
- [15] Ned Hall. "Two Concepts of Causation". In: *Causation and Counterfactuals*. Ed. by John Collins, Ned Hall, and Laurie Paul. MIT Press, 2004, pp. 225–276.
- [16] Philipp Haueis. "A Generalized Patchwork Approach to Scientific Concepts". In: *British Journal for the Philosophy of Science* 75.3 (2024), pp. 741–768. DOI: 10.1086/716179.
- [17] David Kinney and Tania Lombrozo. "Building Compressed Causal Models of the World". In: *Cognitive Psychology* (forthcoming).
- [18] Philip Kitcher and K. Stanford. "Refining the Causal Theory of Reference". In: *Philosophical Studies* 97 (2000), pp. 99–129.
- [19] Igal Kvart. "Divided reference". In: *Midwest Studies in Philosophy* 14 (1989), pp. 140–179.

- [20] Joseph LaPorte. *Natural Kinds and Conceptual Change*. Cambridge University Press, 2004.
- [21] Krista Lawlor. "Confused thought and modes of presentation". In: *The Philosophical Quarterly* 55.218 (2005), pp. 21–36.
- [22] Krista Lawlor. "Varieties of coreference". In: *Philosophy and Phenomenological Research* 81.2 (2010), pp. 485–495.
- [23] Sarah-Jane Leslie. "Essence and Natural Kinds: When Science Meets Preschooler Intuition". In: *Oxford Studies in Epistemology* 4 (2013), pp. 108–66.
- [24] Manolo Martínez. "The Information-Processing Perspective on Categorization". In: *Cognitive Science* 48.2 (2024), e13411. DOI: 10.1111/cogs.13411.
- [25] Giovanni Merlo. "Multiple Reference and Vague Objects". In: *Synthese* 194.7 (2017), pp. 2645–2666. DOI: 10.1007/s11229-016-1075-3.
- [26] Ruth Garrett Millikan. *On clear and confused ideas: An essay about substance concepts*. Cambridge University Press, 2000.
- [27] Ruth Garrett Millikan. "On unclear and indistinct ideas". In: *Philosophical Perspectives* 8 (1994), pp. 75–100.
- [28] Ellie Ripley. "Blurring: An approach to conflation". In: *Notre Dame Journal of Formal Logic* 59.2 (2018), pp. 171–188.
- [29] Eleanor Rosch. "Principles of categorization". In: *Cognition and categorization*. Routledge, 1978, pp. 27–48.
- [30] Mark Sainsbury and Michael Tye. *Seven puzzles of thought: and how to solve them: an originalist theory of concepts*. Oxford University Press, 2012.
- [31] Laura Schroeter. "Why be an anti-individualist?" In: *Philosophy and Phenomenological Research* 77.1 (2008), pp. 105–141.
- [32] Nicholas Shea. *Concepts at the Interface*. Oxford / New York: Oxford University Press, 2024.
- [33] Andrew Shtulman and Tania Lombrozo. "Bundles of contradiction: A coexistence view of conceptual change". In: *Core knowledge and conceptual change* (2016), pp. 49–67.
- [34] Quayshawn Spencer. "I—a More Radical Solution to the Race Problem". In: *Aristotelian Society Supplementary Volume* 93.1 (2019), pp. 25–48. DOI: 10.1093/arisup/akz011.
- [35] Rex Taibu, David Rudge, and David Schuster. "Textbook presentations of weight: Conceptual difficulties and language ambiguities". In: *Phys. Rev. ST Phys. Educ. Res.* 11 (1 June 2015), p. 010117. DOI: 10.1103/PhysRevSTPER.11.010117. URL: <https://link.aps.org/doi/10.1103/PhysRevSTPER.11.010117>.
- [36] Henry Taylor and Peter Vickers. "Conceptual Fragmentation and the Rise of Eliminativism". In: *European Journal for Philosophy of Science* 7.1 (2017), pp. 17–40. DOI: 10.1007/s13194-016-0136-2.
- [37] Elmar Unnsteinsson. "Confusion is corruptive belief in false identity". In: *Canadian Journal of Philosophy* 46.2 (2016), pp. 204–227.
- [38] Alnica Visser. "The Cognitive Role of Concept Variability". In: *Mind and Language* (2025). DOI: 10.1111/mila.12546.

- [39] Mark Wilson. *Wandering significance: An essay on conceptual behavior*. Oxford University Press, 2008.
- [40] Marianne Wiser. “Use of history of science to understand and remedy students’ misconceptions about heat and temperature”. In: *Software goes to school: Teaching for understanding with new technologies* (1995), pp. 23–38.