

Singer, Daniel Jeremy

Sleeping beauty should be imprecise. (English) Zbl 1307.03006

Synthese 191, No. 14, 3159-3172 (2014).

Summary: The traditional solutions to the Sleeping Beauty problem say that Beauty should have either a sharp $1/3$ or sharp $1/2$ credence that the coin flip was heads when she wakes. But Beauty's evidence is incomplete so that it doesn't warrant a precise credence, I claim. Instead, Beauty ought to have a properly imprecise credence when she wakes. In particular, her representor ought to assign $R(\text{Heads}) = [0, 1/2]$. I show, perhaps surprisingly, that this solution can account for the many of the intuitions that motivate the traditional solutions. I also offer a new objection to A. Elga's ["Self-locating belief and the Sleeping Beauty problem", *Anal.* 60, No. 2, 143–147 (2000; doi:10.1093/analys/60.2.143)] restricted version of the principle of indifference, which an opponent may try to use to collapse the imprecision.

MSC:

03A05 Philosophical and critical aspects of logic and foundations

60A05 Axioms; other general questions in probability

Cited in 1 Document

Keywords:

epistemology; formal epistemology; sleeping beauty; imprecise Bayesianism; Bayesianism

Full Text: [DOI](#)

References:

- [1] Bovens, L, Judy Benjamin is a sleeping beauty, *Analysis*, 70, 23-26, (2010) · doi:10.1093/analys/amp127
- [2] Bovens, L; Ferreira, JL, Monty Hall drives a wedge between judy Benjamin and the sleeping beauty: A reply to bovens, *Analysis*, 70, 473-481, (2010) · doi:10.1093/analys/anq020
- [3] Easwaran, K. (2014). Regularity and hyperreal credences. *Philosophical Review*, 123(1), 1-41.
- [4] Elga, A, Self-locating belief and the sleeping beauty problem, *Analysis*, 60, 143-147, (2000) · doi:10.1093/analys/60.2.143
- [5] Elga, A, Defeating Dr. evil with self-locating belief, *Philosophy and Phenomenological Research*, 69, 383-396, (2004) · doi:10.1111/j.1933-1592.2004.tb00400.x
- [6] Hájek, A, What conditional probability could not be, *Synthese*, 137, 273-323, (2003) · Zbl 1047.03003 · doi:10.1023/B:SYNT.0000004904.91112.16
- [7] Jeffrey, R. (1983). *The logic of decision*. Chicago: University of Chicago Press.
- [8] Joyce, JM, How probabilities reflect evidence, *Philosophical Perspectives*, 19, 153-178, (2005) · doi:10.1111/j.1520-8583.2005.00058.x
- [9] Joyce, JM, A defense of imprecise credences in inference and decision making, *Philosophical Perspectives*, 24, 281-323, (2010) · doi:10.1111/j.1520-8583.2010.00194.x
- [10] Joyce, J. M. (2010b). Do imprecise credences make sense? Retrieved, from http://fitelson.org/joyce_hplms_2x2. Accessed 19 March 2014.
- [11] Kaplan, M. (1996). *Decision theory as philosophy*. Cambridge: Cambridge University Press. · Zbl 0885.62004 · doi:10.1017/CBO9780511804847
- [12] Levi, I. (1980). *The enterprise of knowledge*. Cambridge, MA: MIT Press.
- [13] Lewis, D. (1980). A subjectivist's guide to objective chance. In R. C. Jeffery (Ed.), *Studies in inductive logic and probability* (Vol. 2, pp. 83-132). Berkeley: University of California Press. (Reprinted in *Philosophical Papers*, Vol. II, pp. 83-113).
- [14] Lewis, D, Sleeping beauty: reply to elga, *Analysis*, 61, 171-176, (2001) · doi:10.1093/analys/61.3.171
- [15] Monton, B, Sleeping beauty and the forgetful Bayesian, *Analysis*, 62, 47-8211, (2002) · doi:10.1093/analys/62.1.47
- [16] Pust, J. (2011). Sleeping beauty and direct inference. *Analysis*, 71(2), 290-293.
- [17] Seminar, O, An objectivist argument for thirdism, *Analysis*, 68, 149-155, (2008) · Zbl 1143.03320 · doi:10.1093/analys/68.2.149
- [18] Sturgeon, S, Reason and the grain of belief, *Noûs*, 42, 139-165, (2008) · doi:10.1111/j.1468-0068.2007.00676.x
- [19] Titelbaum, MG, Ten reasons to care about the sleeping beauty problem, *Philosophy Compass*, 8, 1003-1017, (2013) · doi:10.1111/phc3.12080
- [20] Van Fraassen, B. C. (1989). *Laws and symmetry*. Oxford: Oxford University Press. · doi:10.1093/0198248601.001.0001
- [21] Fraassen, BC; Dunn, J (ed.); Gupta, A (ed.), *Figures in a probability landscape*, 345-356, (1990), Dordrecht · doi:10.1007/978-94-009-0681-5_21
- [22] Fraassen, BC, Belief and the problem of ulysses and the sirens, *Philosophical Studies*, 77, 7-37, (1995) · doi:10.1007/BF00996309

- [23] Fraassen, BC, Vague expectation value loss, *Philosophical Studies*, 127, 483-491, (2006) · doi:10.1007/s11098-004-7821-2
- [24] White, R. (2009). Evidential symmetry and mushy credence. In T. Szabo Gendler & J. Hawthorne (Eds.), *Oxford studies in epistemology*. Oxford: Oxford University Press.

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.