Can You Know that You're a Loser?

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1 *An engineer, a scientist, and a philosopher...*

An engineer, a scientist, and a philosopher are hiking through the hills of Scotland. Off in the distance, they see a single black sheep.

"Incredible, the sheep in Scotland are black!" exclaims the engineer.

"No, no, that's too quick," replies the scientist. "All we know is that there is at least *one* black sheep in Scotland."

The philosopher ponders for a moment. "... well, there's at least one sheep in Scotland which appears black *on at least one side*."[1]

[1] A version of this joke can be found in Stewart 1995, Chapter 20.

Lesson: Your knowledge can go beyond your 'evidential starting points'.[2]

[2] This is compatible with E = K; Williamson 2000.

2 *Coin Knowledge*

Consider:

> You have a coin which you know is either fair or double-headed. Instead of examining the coin, you decide to flip it a large number of times and observe the outcomes of the flips. After 1000 flips, you've only observed heads. In fact the coin you have is double-headed.

Question: Can you know that the coin is double-headed?

> ... if you could ever learn anything non-trivial about objective chances, you could learn that a certain double-headed coin is not fair by flipping it repeatedly, seeing it land heads each time, and eventually inferring that it is not fair. (Dorr, Goodman, and Hawthorne 2014, p.283)

Coin propositions:[3]

[3] See also e.g. Bacon 2014, Rothschild and Spectre 2018, Goodman and Salow 2023.

- The fair coin won't land heads every time when it is flipped.
- By the end of winter, the leaf I'm looking at will have fallen from the tree.
- All emeralds are green.

Claim:

> (COIN-KNOWLEDGE) You can know coin propositions.

3 *Lottery Ignorance*

Consider:

> You have a ticket in a fair lottery consisting of a million tickets. A single winning ticket was drawn yesterday, but that ticket's number has not yet been announced. In fact you lost.

Question: Can you know that you lost the lottery?

> . . . your true opinion that you will lose the lottery isn't knowledge, whatever the odds. The greater the number of losing tickets, the better is your justification for believing you will lose. Yet there is no number great enough to transform your fallible opinion into knowledge – after all, you just might win. (Lewis 1996, p.551)

> Jim buys a ticket in a million-ticket lottery. He knows it is a fair lottery, but, given the odds, he believes he will lose. When the winning ticket is chosen, it is not his. Did he know his ticket would lose? It seems that he did not. (Nelkin 2000, p.373)

Lottery propositions:[4]

- My ticket in a million ticket lottery lost.
- I will not suffer a fatal heart attack in the next week.
- There isn't a misprint in the morning paper.

[4] See also e.g. Hawthorne 2004.

Claim:

> (LOTTERY-IGNORANCE) You can't know lottery propositions.

4 *Knowledge or Ignorance?*

Observation: From a coin proposition you can get a lottery proposition.

P1. I know that the fair coin won't land heads 1000 times in a row.[5]

P2. I know that my ticket is a winner if and only if the fair coin lands heads 1000 times in a row.

C. Therefore, I know my ticket is a loser.

[5] Nothing essential seems to depend on the sequence of flips being all heads. Compare: You have a coin which you know is either fair or rigged to land in a particular sequence, *HTTHTHTH* . . .

Possible responses:

- Reject COIN-KNOWLEDGE.[6]
- Contextualism.[7]
- Subject sensitive invariantism.[8]

[6] E.g. Smith 2016, Climenhaga 2021.

[7] E.g. DeRose 1995, Lewis 1996.

[8] E.g. Hawthorne 2004, Stanley 2005.

But: It seems that whatever reason you have for accepting LOTTERY-IGNORANCE is a reason for rejecting COIN-KNOWLEDGE.

I'll argue: Reject LOTTERY-IGNORANCE. Often when you're a loser, you can know that you are:

> For the record, I do not share the lottery intuition... I believe that if the chances are 10,000,000 to 1 against and nothing vital hangs on it, you do know you will not win... (Lycan 2006, pp.165-166)

> [it's] intuitively obvious that you can know you're going to lose the lottery... When you spend your last dollar on a Powerball ticket, this will not solve all your financial problems. I know this. Your friends know this. (Gibbons 2013, p.213)

5 *Lottery Knowledge – An Outline*

Observation: Typically, when you know some proposition p, you're in a position to *appropriately endorse* your belief that p when that belief is challenged.[9]

[9] The general picture I'll sketch here applies to justified or rational belief as well, though I'll focus on knowledge.

Example: I know that we'll be having dinner at Caffe Boa. If challenged, I can provide reasons or evidence for my belief. In normal circumstances, it's natural and appropriate for me to cite the fact that we received this information in an email.

Typically, but not always. Compare: If your only evidence for p is that p, then presumably you're not in a position to endorse your belief.[10]

[10] Although compare: (1) 'How do you know you are in pain?' – 'Because I am in pain!' (2) 'Why do you believe that you believe something?' – 'Because I believe something!' (3) 'Why do you believe that $1+1=2$?' – 'It is obvious that $1+1=2$!'.

> In answering the question [What is your evidence for e?], one is expected not to cite propositions under challenge, since their status as evidence has been challenged. Thus when the question 'What is the evidence for e?' is meant as a challenge to the epistemic standing of e, one is expected not to cite e in response. (Williamson 2000, p.188)

Two examples:

- The unconfident student knows that William the Conqueror landed in England in 1066.[11]
- The unwitting clairvoyant knows that it's raining in Princeton right now.[12]

[11] Radford 1966.

[12] Goldman 1979. Compare: BonJour 1980.

If challenged, what could they cite in endorsing their respective beliefs?

1. William the Conqueror landed in England in 1066.
2. It's raining in Princeton right now.

These are clearly inappropriate. It's also generally inappropriate to cite psychological facts:[13]

3. I believe that William the Conqueror landed in England in 1066.

[13] Note my view is compatible with a certain kind of epistemic conservatism; e.g. Chisholm 1980. Even if the belief enjoys justification on the basis of its being believed, justification and appropriate endorsement can diverge.

4. It simply struck me, in a way that I can't explain, that it's raining in Princeton right now.

And it's generally inappropriate to appeal to higher-order knowledge:[14]

5. I know (that I know that I know…) that William the Conqueror landed in England in 1066.

6. My belief that it's raining in Princeton is reliable.

Important: What counts as appropriate endorsement may vary by context and be influenced by what is salient or what is at stake.

- Knowing that here is one hand and here is another in the biology classroom versus in the philosophy seminar.[15]
- Knowing when the train leaves when nothing bears on it versus when your job depends on being on time.[16]
- Gricean considerations:
  - I won't have enough money to go on a safari because I won't win the lottery.
  - I won't have enough money to go on a safari because I'm on a grad student stipend!

Endorsement hypothesis: When you're not in a position to appropriately endorse your belief that p, there is rational pressure not to make the relevant knowledge ascriptions.

- Incoherence of 'p, although I cannot appropriately endorse my belief that p'.
- Compare: 'p, and the only reason I believe p is because p'.
- Compare: 'p, but it is not certain that p'.

Lottery hypothesis: You know lottery propositions but you're (almost) never in a position to endorse lottery beliefs.[17]

If challenged, what could you cite?

1. My ticket lost.
2. I know that my ticket is a loser.
3. I believe that I will lose.

Obviously these are typically inappropriate. What about:

4. It's overwhelmingly likely that I lost.

[14] Note that this suggests appropriate endorsement isn't simply a matter of higher-order knowledge. Compare: Williamson 2005.

[15] 'Look, here are my hands!' might be appropriate in the biology classroom; compare Moore 1939.

[16] When nothing hangs on it 'I overheard them saying that the train leaves at noon' is plausibly fine, though when catching a flight depends on it, it's plausibly not.

[17] Compare: After the winner is announced, you can cite 'The winning numbers were announced on TV and I did not win.'

5. There's only a one-in-a-million chance that I won.

Claim: It depends. In some contexts, (4) and (5) are fine and we're happy to say we know lottery propositions, but very often they're not.

- Compare: 'What's your evidence for thinking you likely lost?'
- Statistical evidence in the law.[18]

[18] Speculation: When the stakes are high, (4) and (5) are inappropriate to cite. Compare: Moss 2023.

6 *Five Objections*

Objection 1: This is an argument that appropriate endorsement is necessary for knowledge.

Response: We should resist this, on pain of skepticism.[19]

[19] Regress worries, knowledge in children and animals, etc.

Objection 2: Lottery beliefs are hardly ever actually challenged.

Response: Explicitly challenging the relevant belief is unnecessary. Once the belief is made salient – perhaps by assertion or action, or even the consideration of assertion or action – there's rational pressure to not make the corresponding knowledge ascription.

Objection 3: Why should we favor lottery knowledge as opposed to accepting the contextualist or subject sensitive invariantist's theories?

Response: I think the jury is out! It's about which error theory to accept.[20]

[20] Maybe: Abductive considerations?

Objection 4: If you can't properly endorse lottery propositions, you can't properly endorse coin propositions.

Response: That's too quick. In the coin proposition cases, we gain inductive knowledge – in response to 'Why do think the fair coin will not land heads every time?' it seems generally appropriate to respond with 'If it did land heads every time, then it would be the double-headed one!'.[21] Compare: Even those who think you can't know that you've lost a lottery will be inclined to think that you can know you won't win 10 lotteries in a row.

[21] After all, don't you know the conditional: 'If the coin will land heads every time, then it's double-headed.'? Of course, *this* may itself be challenged, but the challenge seems to be a general challenge to inductive knowledge.

Objection 5: Suppose the arguments here are right, and you can know that you're a loser. Then can't we cite these arguments to endorse lottery beliefs?

Response: The possibility of lottery knowledge versus having lottery knowledge in this particular instance.

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