According to subject-sensitive invariantism (SSI), whether S knows that p depends not only on the subject’s epistemic position (the presence of a true belief, sufficient warrant, etc.) but also on non-epistemic factors present in the subject’s situation; such factors are seen as “encroaching” on the subject’s epistemic standing. Not the only such non-epistemic factor but the most prominent one consists in the subject’s practical stakes. Stakes-based SSI holds that two subjects can be in the same epistemic position with respect to some proposition but with different stakes for the two subjects so that one of them might know the proposition while the other might fail to know it. It is remarkable that the notion of stakes has not been discussed much in great detail at all so far. This paper takes a closer look at this notion. It turns out that there is more than one kind of stakes, namely even-stakes, knowledge-stakes, and action-stakes. I argue that even plausible notions of stakes raise problems for SSI. At the end I discuss the idea of practical adequacy as a different way of spelling out SSI. This idea, too, raises problems for SSI.

Keywords
subject-sensitive invariantism; knowledge; non-epistemic factors; encroachment; practical stakes; practical adequacy

According to subject-sensitive invariantism (SSI) whether S knows that p depends not only on the subject’s epistemic position (the presence of a true belief, sufficient warrant, etc.\textsuperscript{1}) but also on non-epistemic factors present in the subject’s situation (see, e.g., Hawthorne 2004; Stanley 2005; Fantl and McGrath 2009). Not the only such non-epistemic factor but the most prominent one consists in the subject’s practical stakes (see, e.g., Stanley 2005). We don’t need to explain in any detail here what the difference between epistemic and non-epistemic factors is; practical stakes should come out as non-epistemic anyway, no matter what the proposed explanation of the difference is. Stakes-based SSI holds that two

\textsuperscript{1} Counting knowledge itself as part of the epistemic position would be uninformative here.
subjects can be in the same epistemic position with respect to some proposition but with different stakes for the two subjects one of them might know the proposition while the other might fail to know it. The higher or lower the stakes, the more or less demanding the epistemic standards for knowledge; higher or lower stakes make it harder or easier to know. Here is a very well-known pair of cases which can be used to illustrate the importance of stakes for knowledge (DeRose 1992, 913):

Bank Case A. My wife and I are driving home on a Friday afternoon. We plan to stop at the bank on the way home to deposit our paychecks. But as we drive past the bank, we notice that the lines inside are very long, as they often are on Friday afternoons. Although we generally like to deposit our paychecks as soon as possible, it is not especially important in this case that they be deposited right away, so I suggest that we drive straight home and deposit our paychecks on Saturday morning. My wife says, “Maybe the bank won’t be open tomorrow. Lots of banks are closed on Saturdays.” I reply, “No, I know it’ll be open. I was just there two weeks ago on Saturday. It’s open until noon.”

Bank Case B. My wife and I drive past the bank on a Friday afternoon, as in Case A, and notice the long lines. I again suggest that we deposit our paychecks on Saturday morning, explaining that I was at the bank on Saturday morning only two weeks ago, and discovered that it was open until noon. But in this case, we have just written a very large and very important
check. If our paychecks are not deposited into our checking account before Monday morning, the important check we wrote will bounce, leaving us in a very bad situation. And, of course, the bank is not open on Sunday. My wife reminds me of these facts. She then says, “Banks do change their hours. Do you know the bank will be open tomorrow?” Remaining as confident as I was before that the bank will be open then, still, I reply, “Well, no. I’d better go in and make sure.”

Stakes-based SSI can explain the difference in knowledge, given the same epistemic position, as due to a difference in stakes.

We certainly have some intuitive notion of what is (practically) at stake for some subject in some situation (even if a lot of the details might vary from person to person). But still, it is remarkable that the notion of stakes has not been discussed much in great detail at all so far (for an exception see Worsnip 2015; also see Russell forthcoming, Anderson and Hawthorne forthcoming, Fantl and McGrath forthcoming, and Goldberg forthcoming). I would like to take a closer look at this notion, starting with our ordinary notion of stakes and modifying it in a plausible way when necessary. An adequate development of the notion of stakes would have to be somewhat close to our ordinary notion but also be able to play a good role for SSI. I will aim at some reflective equilibrium between ordinary usage and the principles of SSI, with more weight on the former.² It will turn out that there is more than one kind of stakes.

² If some notion of stakes leads to implausible results when applied by SSI, then this might either reflect a weakness of SSI or the inadequacy of the proposed notion of stakes. It will have to be decided case by case which is which.
1. Event-Stakes

Consider the following situation. It has been predicted that a tornado will go through the area where I live. It might hit and damage the house where I live or spare it. If the first, then I would be in a very bad situation; not so if the latter. So, a lot is at stake for me here, and there is nothing I or anyone can do about this. For this kind of stakes, the attitudes and actions of the subject don’t matter. We can call them “event-stakes” (similar to Worsnip’s A-stakes; see Worsnip 2015). The above situation gives us the following outcome matrix (with “C_1” and “C_2” for worldly circumstances; the entries indicate utilities):

<table>
<thead>
<tr>
<th></th>
<th>C_1 (Tornado doesn’t hit)</th>
<th>C_2 (Tornado hits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility</td>
<td>fine</td>
<td>very bad</td>
</tr>
</tbody>
</table>

The greater the difference between the outcomes, the more is at stake. This suggests that the following (absolute) value determines the stakes here (with “U” for utility):

$$|U(C_1) - U(C_2)|$$

We need absolute values here because, as one should not forget, outcomes can also be good. I might win the lottery (let us assume that would be a good thing):
More than just the utility difference seems relevant to the size of the stakes; probabilities also seem to play an important role. The lower the probability that the tornado will hit or that my ticket will win, the lower the stakes. Intuitively, the stakes of throwing a ticket in a 1 Million ticket lottery away are higher than the stakes of throwing a ticket in a 1000 ticket lottery away, given the same prize. Given that this is plausible, we should weigh (multiply) the utility difference with the probability of the event that would either deteriorate or improve the subject’s situation (the default situation). This would be the probability of \( C_2 \) here. Hence, we can measure event-stakes in the following way:

\[
\text{Event-Stakes} = |U(C_1) - U(C_2)|P(C_2)
\]

We can generalize to more than two circumstances. Consider the following modification of the above lottery case where the winning possibilities split into two: winning and becoming happy vs. winning and ending up miserable (as many real lottery winners do):

---

3 Pinillos and Simpson forthcoming report that different probabilities don’t influence subjects’ judgments about stakes. This is a point where I can see reasons to deviate from peoples’ judgments for the sake of a better theory. I cannot go more into methodological issues like this one.

4 Perhaps we would also have to take risk aversion and similar phenomena into account; see, e.g., Kahneman and Tversky 1979. This would complicate things without affecting the basic points here. Therefore, we can leave this aside here.
C₁ (loss)  C₂ (happy win)  C₃ (miserable Win)
fine  very good  very bad

One plausible way to measure the stakes here would be to add the probability-weighted utility differences for the default circumstance and each alternative circumstance. If C₁ is the default circumstance here, this would give us the following measure for 3-circumstance event-stakes:

\[ |U(C₁) - U(C₂)|P(C₂) + |U(C₁) - U(C₃)|P(C₃) \]

Sometimes, there might not be a default situation. In that case, we can choose the situation of the subject before the relevant event happens, the status quo ante, as the comparison point (SQA) for the alternative scenarios (Cₖ). More generally, for n alternative scenarios we get:

\[ \sum_{k=1}^{n} |U(SQA) - U(Cₖ)|P(Cₖ) \]

For simplicity’s sake, we may focus on 2-circumstances case here.

Do event-stakes have any relevance for knowledge? Going back to the tornado case above we can imagine the following pair of cases:
Tornado Case A. A tornado has been predicted to go through a coastal area. Sue just sold her house on the beach there. She has heard the weather reports and is aware of the small chance that the tornado will hit that house. If that should happen, she wouldn’t be in a bad situation at all though she would feel somewhat bad for the new owners (if the tornado weren’t to hit, she’d be just fine). Sue is confident that the tornado won’t hit the house and she is right.

Tornado Case B. A tornado has been predicted to go through a coastal area. Sue just bought a house on the beach there. She has heard the weather reports and is aware of the small chance that the tornado will hit that house. If that should happen, she would be in a very bad situation (if the tornado weren’t to hit, she’d be just fine). Sue is confident that the tornado won’t hit the house and she is right.

Sue’s event-stakes in case B are much higher than in case A (assuming that there is no big difference for her between owning the house or the money from the sale). Can we imagine that Sue in case A does know that the tornado won’t hit the house while in case B she does know that it won’t hit the house? I find it hard to come up with a verdict here and determine what the SSlist could or should say here. This in itself is interesting; however, we can and should leave this open here.

2. Knowledge-Stakes
A different kind of stakes has played a much bigger role in the discussion of SSI: stakes where the outcomes and utilities also depend on the subject’s actions. The bank cases above fall into this group. We can represent them with the following kind of matrix (with “A” and “B” for feasible acts, and “U1-4” for utilities of outcomes):

\[
\begin{array}{cc}
C_1 & C_2 \\
A & U1 & U2 \\
B & U3 & U4 \\
\end{array}
\]

Here is the matrix for Bank Case A (with “Sat” for “Saturday” and “Fri” for “Friday”):

---

5 There can be cases where the different acts have the same outcomes in each circumstance. And there can be cases where the different acts have different outcomes in each circumstance but with very small differences in utility between the outcomes of the different acts in each circumstance (small differences between the entries in each column). Finally, there can be cases where the latter differences are negligibly small as compared with the differences in the outcomes of the different acts given different circumstances (larger differences between the entries in the rows). For example (thanks to Matthias Brinkmann here), I can check now or later whether I have won the lottery or not. Whatever I do doesn’t make a big difference at all. The big difference is whether I won or not, no matter what I decide to do. This case falls into both of the last two groups of cases mentioned above. All three types of cases mentioned above could reasonably be considered as cases where the relevant stakes are event-stakes (in a somewhat broader sense of the term). I will leave aside this aspect in the following.

6 We should not include all possible acts here. If we included, for instance, acts the subject has never considered (or never taken to be live possibilities), then we would get implausible results. Suppose for instance, that in the bank cases there is one possible act which the subject hasn’t even thought of and which would have no bad outcomes if not p but a better outcome if p than the acts the subject is considering. It seems implausible to say that the possibility of such an act lowers the stakes in Bank Case B. So, judgments about stakes might vary between sets of feasible acts. And so will judgments about knowledge. I don’t think this further subject-sensitivity creates any major problems. One would, of course, want to say more about what determines the feasibility of acts. But not here. See, however, also Fantl and McGrath 2009, 66, and Anderson 2018, 17-20.
Bank case A

Sat open  Sat closed

go Sat  fine  annoying

go Fri  mildly annoying  mildly annoying

And here is the matrix for Bank Case B:

Bank case B

Sat open  Sat closed

go Sat  fine  desastrous

go Fri  mildly annoying  mildly annoying

In both cases $U_1 > U_3 = U_4 > U_2$. The intuitive verdict is that the stakes are much higher in case B than in case A. But what stakes? Well, here it’s the stakes of acting on the proposition ("p-stakes") that the bank will be open on Saturday. The stakes are high in case B because $U_2$ is much smaller than $U_1$ and the other utilities; the stakes are low in case A because $U_2$ is not that much smaller than $U_1$ and the other utilities. Given that A (going to the bank on Saturday) is the act preferred if $p$ (the bank will be open on Saturday), it is plausible to say that the p-stakes for that proposition are determined by the utility difference in the

---

7 Usually in the debate about SSI the relative standing of $U_2$ doesn’t receive many comments at all. However, there is no problem assuming it has the lowest value here.

8 Later, I will propose a distinction between 2 kinds of p-stakes: knowledge-stakes and action-stakes. This section deals with the former variant: p-stakes which are, according to SSI, relevant to knowledge.
outcomes for A: U1-U2. Since stakes can also be positive (see above)\(^9\), we should go with the absolute value: |U1 – U2|. Again, our intuitive verdicts about stakes also suggest that probabilities play a role here: The stakes in Bank Case B are much higher if there is a good chance that the bank will be closed on Saturday and much lower if there is only a very small chance that the bank will be closed on Saturday. All this suggests (again, leaving aside phenomena like risk aversion) the following measure for p-stakes:

\[
(p\text{-Stakes}) = |U(\text{acting on } p \text{ when } p \text{ is true}) - U(\text{acting on } p \text{ when } p \text{ is false})|P(\text{not } p).
\]

In Bank Case A the p-stakes are: |Utility of being fine – Utility of being annoyed| times the probability that the bank will be closed on Saturday. In Bank case B, however, the p-stakes are: |Utility of being fine – Utility of facing a desaster| times the probability that the bank will be closed on Saturday. If we assume in the bank cases that the probability of not \(p\) is not negligible, then we can say that the p-stakes in Bank Case A are quite low while they are quite high in Bank Case B.

Given the strength of the subject’s epistemic position (evidence, etc.) with respect to \(p\) (that the bank will be open on Saturday) and given the p-stakes in both bank cases we can move on to judging the subject’s knowledge of \(p\) or lack thereof – but only if we have a good idea about what pairings of strength of epistemic position and size of stakes would allow

\(^9\) Whether the relevant outcomes lie above or below an indifference point (where the subject is indifferent between having or not having the outcome) does not matter here; only the relevant utility difference do. Here is an example for positive stakes. Suppose there is a chance that a very good friend of mine whom I haven’t seen for a long time will be in town tonight. Suppose I can either stay in town or leave for the mountains. If I stay and he won’t be in town I’ll be fine and a bit better off than if I leave, neither meeting him elsewhere nor missing him in town (let us assume leaving would be mildly inconvenient for me). If I leave town, I’ll be fine in both cases. It seems plausible to say that the p-stakes (the knowledge-stakes) for He won’t be in town tonight are quite high for me.
for knowledge and what pairings wouldn’t. Is the subject’s epistemic position strong enough for knowledge that the bank will be open on Saturday in Bank Case A, given the stakes? Are the stakes too high for knowledge (given his epistemic position) in Bank Case B? SSlists have so far not offered any account of the relation between strength of epistemic position concerning \( p \), the \( p \)-stakes and knowledge that \( p \). This is a theoretical desideratum for SSI.\(^{10}\) However, perhaps we may still go with our intuitive verdict in cases like this one: in Bank Case A the subject’s epistemic position is strong enough for knowledge, given the stakes; in Bank Case B the subject’s epistemic position is not strong enough for knowledge, given the stakes.\(^{11}\)

One interesting implication of (p-stakes) is that the stakes for some proposition can be quite high but the stakes for its negation quite low. The stakes for \( \text{The bank will be open on Saturday} \) are high but the stakes for \( \text{The bank won’t be open on Saturday} \) will be low. So, it can be the case that some proposition can be hard to know while its negation can be relatively easy to know. I take it that this is a welcome result.

We thus have an intuitively plausible idea about stakes that can, perhaps, be applied by SSI to deliver plausible verdicts about knowledge and the lack thereof. But more still

---

\(^{10}\) There are others: What conception of utilities, practical interests or practical reasons one has (e.g., more or less subjective or objective) makes a difference to one’s verdict about stakes (see Baril 2019). Similar issues arise with respect to the interpretation of “probability”. We can leave these complications aside here (even though the SSlist will have to make a theoretical choice at some point). - There are also problems if one wants to stick with some principle of epistemic closure. Suppose I’m next to a icy lake, with my arch enemy Arce. My stakes for \( \text{The ice is thick enough to hold Arce} \) are low and I might know that the ice is thick enough to hold Arce. Suppose I do know this and also that we’re the same weight. Hence, I can infer from all this that the ice is thick enough to hold me, too. But my stakes for \( \text{The ice is thick enough to hold me} \) might be to high to allow for knowledge. See on this also Anderson and Hawthorne 2019, a brief remark in Cohen 2019, 103 that lends itself to such worries.

\(^{11}\) Using intuitive verdicts won’t help in all cases. Consider the proposition \( c \) that significant climate change is already under way. Acting on \( c \) would mean taking several drastic measures which would, however, seem like a big loss if \( \neg c \) were true. How high are the \( p \)-stakes then and is our epistemic position strong enough to allow for knowledge that climate change is already under way? While we don’t have clear intuitions about the impact of the stakes on the sufficiency of the epistemic position here here it still seems pretty clear that we know that climate change is under way. It seems that the stakes are simply irrelevant in a case like this. This is something the SSlist should worry about.
needs to be said. First, there could be more than just two circumstances. In analogy to remarks above, the idea of p-stakes can then be generalized in the following way (with “Ak” ranging over alternative ways in which p can be false):

\[
\sum_{k=1}^{n} |U(acting \ on \ p, \ given \ p) - U(acting \ on \ p, \ given \ Ak)|P(Ak)
\]

Generalizing from two feasible acts to more than two is a bit more tricky because there might be two or more acts which lead to outcomes of the same utility, given p. 12 Consider this case. I can think of 3 ways to spend this Sunday afternoon: do a picknick with friends, take a walk with friends or go to the movies with friends. I have heard the weather reports which say that there is a good though not very big chance for rain; I am still confident that it won’t rain and I am right. Here is the matrix (with great > good > fine > somewhat annoying > awful):

<table>
<thead>
<tr>
<th>Sunday</th>
<th>A</th>
<th>No rain</th>
<th>rain</th>
</tr>
</thead>
<tbody>
<tr>
<td>picknick</td>
<td>great</td>
<td></td>
<td>awful</td>
</tr>
<tr>
<td>walk</td>
<td>good</td>
<td></td>
<td>somewhat annoying</td>
</tr>
<tr>
<td>movies</td>
<td>fine</td>
<td></td>
<td>fine</td>
</tr>
</tbody>
</table>

12 This can happen in 2-act cases but it is more probable in many-act cases.
Since I would go for the picknick option given no rain, the stakes for the proposition that it won’t rain are determined by the utilities and probabilities for the first row of the matrix, the picknick-row. But what if we boost the walk option a bit by adding the playing of some outdoors hopscotch so that it will be as good, absent rain, as the picknick? One entry in the matrix only would change:

<table>
<thead>
<tr>
<th>Sunday B</th>
<th>No rain</th>
<th>rain</th>
</tr>
</thead>
<tbody>
<tr>
<td>picknick</td>
<td>great</td>
<td>awful</td>
</tr>
<tr>
<td>walk</td>
<td>great</td>
<td>somewhat annoying</td>
</tr>
<tr>
<td>movies</td>
<td>fine.</td>
<td>fine</td>
</tr>
</tbody>
</table>

What then are the stakes for the proposition that there won’t be rain? Given what I said above, the stakes would be determined by the utilities and probabilities for the top-ranked act, given no rain. However, there is a tie here: There are two acts with equally good outcomes given no rain but different utilities, given rain. Which act then matters for the determination of the stakes?

I think intuition runs out of steam here. The SSList should feel free to say one of two things (perhaps there are even more things they could say here?). First, one could leave the stakes indeterminate in such a case. But then it might also turn out to be indeterminate
whether I know that it won’t rain: I might not be in a good enough epistemic position for knowledge given the stakes as determined by the picknick option while I might be in a good enough epistemic position for knowledge given the stakes of the walk option. Leaving it open whether I know that it won’t rain constitutes a high price for the SSList. There does not seem to be any motivation independent from adherence to SSI to think that a case like Sunday B makes judgment about knowledge so tricky and difficult.

Perhaps the SSList should then go with a second option and determine the stakes in such cases in the following way. In Sunday B picknicking has a much worse outcome given not-\( p \) than walking. Since the two acts’ outcomes are equally good given \( p \), walking has the higher expected utility (and would thus be the preferable act). We can use expected utility as a tie breaker and let the utilities for walking determine the stakes. So, the stakes for the proposition that it won’t rain in Sunday B would be: |great – somewhat annoying|\( P(\text{rain}) \).

We can use the same procedures if relative gains rather than losses result from choosing the corresponding act under not-\( p \) circumstances. Finally, there are mixed cases where some combinations of act and circumstance lead to relative losses and others to gains. This matrix for three acts and three circumstances illustrates this kind of case (with higher positive numbers for higher utilities and lower negative numbers for greater dis-utilities):
Again, the best act overall seems to be the one with the highest expected utility (if the probabilities for C₁, C₂ and C₃ are .6, .2 and .2 respectively, then this would be Act 2). This fits with the idea above that in cases of ties for top act, given \( p \), one should use expected utility as a tie breaker and let the act with the highest expected utility determine the stakes.

If it should happen that two acts are tied in both ways (both are top given \( p \), and both have equal expected utility), then we’re back at our original problem of indeterminacy. Consider this 2-act and 3-circumstance scenario (probabilities indicated):

<table>
<thead>
<tr>
<th></th>
<th>C₁ (p: .6)</th>
<th>C₂ (p: .2)</th>
<th>C₃ (p: .2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act 1</td>
<td>4</td>
<td>22</td>
<td>-22</td>
</tr>
<tr>
<td>Act 2</td>
<td>4</td>
<td>5</td>
<td>-5</td>
</tr>
</tbody>
</table>
The expected utilities are the same for both acts (2.4) but applying the formula for p-stakes above leads to different results: for Act 1 it gives us $44/5$; for Act 2 it gives us $10/5$.

Depending on which act determines the stakes we get very different results and thus possibly also very different results for our verdict about knowledge or the lack thereof.

How serious could this problem of indeterminacy be? Perhaps the SSIist can hope that such double-ties are rare and thus don’t constitute more than a minor problem for their theory. Or should we, alternatively, assume that this would rather be a problem for the account of stakes proposed here? We shouldn’t assume this just because it creates a problem for SSI; we’re not presupposing the truth of SSI here. Do we have independent reasons to think that this would be a problem for the account of stakes proposed here? I don’t think so, also because we cannot rely – at this level of development of the view – on intuitions any more: They remain silent here. – So, we do have a problem for SSI here and it is somewhat unclear how serious it is.

3. Action-Stakes

It is worth considering alternative (recent) formulations of notions of stakes: the one proposed by Jeffrey Sanford Russell and the one proposed by Charity Anderson and John Hawthorne. Both consider not just acting on $p$, our target proposition, but also acting on alternative propositions. While (p-stakes) works even if there is just one feasible act (if that is conceivable or possible), these alternative proposals require at least two alternative feasible acts (could this be an advantage for (p-stakes)?). Here is Russell’s proposal (see 

13 - as one would do if one considered opportunity costs or opportunity benefits.
Russell forthcoming, Ms. 4-6) for the case of two actions (acting on \( p \) and acting on \( \text{not-}p \))
and two circumstances (more complicated cases can be put aside here because this won’t affect the basic points here):

\[
\text{Stakes}(p) = \frac{U(\text{acting on not-}p \text{ when not-}p \text{ is true}) - U(\text{acting on } p \text{ when not-}p \text{ is true})}{U(\text{acting on } p \text{ when } p \text{ is true}) - U(\text{acting on not-}p \text{ when } p \text{ is true})}
\]

The stakes of \( p \) thus consist in the ratio of the utility difference for the feasible acts given \( \text{not-}p \) and the utility difference for the feasible acts given \( p \). No indication about the measurement of utilities is given here (whether they are being assigned real values between 0 and 1 or whether dis-utilities will be assigned negative values). Since it’s the utility differences that matter according to (RUSSELL) we could also work with absolute values of the utility differences (this also in order to include positive stakes).

One might notice first that (RUSSELL) doesn’t weigh the utilities with probabilities. This seems to me to be less than ideal for the adherent of SSI, for reasons already explained above (see also the brief remark in Anderson and Hawthorne forthcoming, Ms. 14-15).

More important is a second point: (RUSSELL) considers alternative acts. Why do that? This question is also interesting because it will lead us to an important distinction between two different kinds of \( p \)-stakes. Consider the following case. I come to a fork in a
road. I have to go either left or right (there is no other option). If I go left I’ll either be very well (‘heaven’) or very badly off (‘hell’); the situation is the same for going right – and the probabilities (subjective, epistemic, objective) for LEFT (heaven is to the left and hell to the right) and RIGHT (heaven is to the right, and hell to the left) are both .5. Russell’s formula gives us the following verdict about this case:

\[ \text{Stakes}(\text{LEFT}) = \]

\[ \frac{U(\text{acting on RIGHT when RIGHT is true}) - U(\text{acting on LEFT when RIGHT is true})}{U(\text{acting on LEFT when LEFT is true}) - U(\text{acting on RIGHT when LEFT is true})} = \frac{U(\text{heaven}) - U(\text{hell})}{U(\text{heaven}) - U(\text{hell})} = 1. \]

This is way too low. One can see this if one compares this with (RUSSELL)’s verdict for the proposition that the bank will be open on Saturday (SAT) in the high-stakes version of DeRose’s bank case (see DeRose 1992, 913; see Russell forthcoming, Ms.6):

\[ \text{Stakes}(\text{SAT}) = \]

\[ \frac{U(\text{acting on not-SAT when not-SAT is true}) - U(\text{acting on SAT when not-SAT is true})}{U(\text{acting on SAT when SAT is true}) - U(\text{acting on not-SAT when SAT is true})}. \]

---

14 If the chances are 50-50, then, plausibly, the subject cannot have knowledge one way or the other. We can put this aside here because this case is only used to illustrate differences in verdicts about stakes.
In the above bank case the numerator is quite big while the denominator is comparatively small. The stakes are thus high and much bigger than 1 according to (RUSSELL) (see for a similar example Russell forthcoming, Ms.7). So, the stakes for LEFT (heaven is to the left) are much smaller than the stakes for SAT (the bank will be open on Saturday). However, this is very implausible and not the result any SSIist would want to accept. Using (p-stakes) above, however, together with plausible assumptions about heaven, hell and bouncing checks, gives us the verdict that the stakes for LEFT are much higher than for SAT. This seems right.

So, one might be tempted to say that (RUSSELL) doesn't get the stakes right for certain kinds of propositions like LEFT. However, just to say this would be misleading – and not only because no account can be expected to cover all cases. Rather, this would be misleading because there is something (RUSSELL) is getting right even if it is missing something else. There is an interesting difference between a case like the bank case above and a case like the heaven-and-hell case. While the expected utilities (and the utility differences across circumstances) for the feasible acts differ drastically (given certain assumptions) in the bank case, they don't differ at all in the heaven-and-hell case. As far as the agent's choice is concerned, nothing from their perspective distinguishes between going left from going right in the heaven-and-hell case whereas going to the bank on Saturday is quite different in this respect from going on Friday. One can put this difference in terms of "action-stakes", that is, the stakes that are relevant and matter to or are at least to some degree sensitive to principles of making the best decision. More precisely, the action-stakes are higher (lower) the more (less) of a significant gap there is between the different feasible acts in their decision-theoretic ranking (by expected utility or utility
differences if probabilities can be assigned, by some other principle if not). In the heaven- and-hell case the action-stakes are very low while they are very high in the Bank case. (RUSSELL) gets this right (not going into the details here). However, since we’re interested in SSI here and the stakes relevant to knowledge (or the lack thereof) we should have a different notion of p-stakes, one of “knowledge-stakes”. This one is captured by our (p-stakes) which seems to offer the better account of knowledge-stakes.

In other words, if one is interested in knowledge-stakes – as adherents of SSI are primarily – then one should go for something like (p-stakes), that is, a formula that only deals with the target proposition. If, however, one is interested in action-stakes, then one should go for something like (RUSSELL), that is, a formula that compares in some way the utilities for the target proposition and for some alternative act(s). By the way, knowledge- and action-stakes can diverge, even by a lot, but they also often don’t and rather converge.

Anderson and Hawthorne propose a notion of stakes very similar to Russell’s (but also see the brief explanation in Anderson and Hawthorne 2019, 112 which seems closer to (p-stakes)): The stakes of p are determined by the difference between the “maximum regret” for acting on p (the maximum loss under any circumstance for acting on p versus not acting on p) and the maximum regret for acting on not-p. This proposal amounts to something very much like (RUSSELL) (see Anderson and Hawthorne, Ms.16; for some criticism see Goldberg forthcoming and the reply to Anderson and Hawthorne by Fantl and McGrath forthcoming). It gives very similar verdicts on the bank cases and on the heaven- and-hell-case.

---

15 Anderson and Hawthorne forthcoming, 16 also mention an alternative: The p-stakes are determined by the differential between the maximal gap between the utilities of outcomes for different acts, given p, on the one side, and the maximal gap between the utilities of outcomes for different acts, given not p, on the other
Anderson and Hawthorne make an interesting objection to the likes of (p-Stakes). Suppose (I am modifying their example a bit) I have to choose between two envelopes A and B. I know that they both contain the same amount of money and that they could contain either 1 or 1000 dollars. I am confident though not completely sure that it’s 1000 Dollars; I also have some evidence for this and I am right about this. What then are the stakes for the proposition that they contain 1000 Dollars (1K)?

I know that which envelope I choose doesn’t affect the outcome and also doesn’t make a difference to the utility of the outcome. There is no decision-theoretic advantage to either of the two acts. In that sense one should expect the stakes to be low. And indeed, they equal 0, according to both of Anderson and Hawthorne’s proposals (see Anderson and Hawthorne forthcoming, Ms.16); (RUSSELL) doesn’t even deliver a verdict because “0/0” is undefined.

However, according to (p-stakes) the stakes for 1K are quite high (if we can identify a unique top-ranked act; if not, there can be indeterminacy; see above). According to SSI (if it incorporates (p-stakes)), it would make sense to say that in such a case it’s hard to be in a position to know whereas that is much easier in a situation where the monetary differences are small. The divergence of verdicts by (RUSSELL) and (p-stakes) fits nicely with the distinction between action-stakes and knowledge-stakes: The former are very low (minimal) while the latter are high. If what matters for knowledge, according to the adherent of SSI, are the knowledge-stakes, then (p-stakes) is getting the right verdicts here.

---

side. According to this, the stakes are high in Bank Case B and low in the heaven-and-hell case. In contrast to Anderson and Hawthorne’s other proposal above, this one would in 2-act cases always give us the same stakes for \( p \) and for \( \neg p \); this strikes me as a bit of a disadvantage. However, in general the latter proposal is quite close to Anderson and Hawthorne’s first proposal or to Russell’s, too. Anderson and Hawthorne do not seem fully committed to any of these proposals.
However, perhaps a defender of (p-stakes) shouldn’t even go that far and rather insist that the stakes under discussion here are event-stakes: concern a case where taking any of the feasible acts has no significant effect on the outcome (nor its utility). And in that case, it wouldn’t be clear whether the stakes have any connection with knowledge (see above).

4. Conclusion

If one wants to defend SSI, then one has to say more about the nature and function of the non-epistemic subject-sensitive factors. The notion of stakes could use more clarification. It also turns out that this way of explaining subject-sensitivity face serious problems. I did not have the space here to discuss ideas of practical adequacy which also raises difficult issues. Perhaps there still are other ways of being an SSIist – which would have to presented and defended in some detail, too. Given the remarks above, the prospects for SSI look uncertain, to say the least. Without further support, one should not accept it.
References


Fantl, Jeremy and Matthew McGrath forthcoming, “Clarifying Pragmatic Encroachment: a Reply to Charity Anderson and John Hawthorne on Knowledge, Practical Adequacy,


Pinillos and Simpson forthcoming xxx


