Draft 2021. Final version to appear in GRAZER PHILOSOPHISCHE STUDIEN 99.2 (2022) 273-292
Quotations allowed only from: https://doi.org/10.1163/18756735-00000136

No Justification for SMITH's Incidentally True Beliefs

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Abstract. Edmund Gettier (1963) argued that there can be justified true belief (*JTB*) that is not knowledge. I question the correctness of his argument by showing that SMITH of Gettier's famous examples does not earn justification for his incidentally true beliefs, while a doxastically more conscientious person *S* would come to hold justified but false beliefs. So, Gettier's (and analogous) cases do not result in justified *and* true belief. This is due to a tension between deductive closure of justification and evidential support. For being justified, any believing, disbelieving, or withholding of deductively inferred propositions must be distributed proportionally to given evidential support. This proportionality principle has primacy over deductive closure in case of conflict. My argument does not save the *JTB*-account. But it *explains*, instead of merely referring to an *intuition*, why subjects in Gettier situations do not earn knowledge.

Over the years, Edmund Gettier's three-pages paper of 1963 has persuaded most epistemologists that the ominous SMITH[1] earns justified true belief, but not knowledge, of some consequences *q* by deductive inference from justifiedly[2] believed although false premises *p*. This achievement was hailed of late as having "… sparked the deepest, most extensive revision of any philosophical field since our ancient sources laid down the foundations of philosophical inquiry."[3]

It may be correct to say that much of the proliferation of various epistemologies in recent decades is, to a fair extent, due to the impact of Gettier's examples. But now I have converted to the view that we have been terribly misled. SMITH's deductively inferred, and

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1 For ease of keeping references apart, I refer to Gettier's SMITH as male and to a doxastically more conscientious person *S* as female.

2 The expression 'justifiedly' instead of the more idiomatic 'justifiably' ought to indicate that the concerned believer *S* believes some proposition *p because of* the reasons justifying their belief. A belief might be justifi*able* in the sense that *S* believes *p*, there are reasons available for *S* that *would* justify her in believing that *p*, however, *S* does not believe *p* because of these, but for other or for no reasons at all. A justifi*able* true belief in this sense may then still be an *un*justified true belief in case *S* does not believe it for the justifying reasons. This echoes the (in my ears somewhat unfitting) distinction of 'doxastic' vs. 'propositional' justification.

3 Cf. Borges et al. (2017) p. vii, and ample quotations there to the same effect. For a less euphoric opinion on the matter see Dutant (2015); this recommendable account on the history of the concept(s) of knowledge convinced me not to call the *JTB* account "traditional".

incidentally true beliefs cannot be *justified* true beliefs, because they are based on a faulty condition of deductive closure such that, by introducing a slight correction, the sting can be taken out of Gettier's and analogous cases. Although this does not rehabilitate the *JTB* account of knowledge, it explains the widely shared (and correct) intuition that actors in Gettier's original and similar scenarios do not earn knowledge – not even in the eyes of supporters of the *JTB* account (if there are any left).

I proceed as follows. In *Sect. 1*, I deal with some conceptual preliminaries, mainly concerning the concepts of belief, disbelief and withholding, and on the distinction between *support* of propositions and *justification* of believing. In *Sect. 2*, I state the core claim of this paper: It is not always the case that a person *S* is justified in *believing* a deductive consequence β of a proposition α that she justifiedly believes. This will be demonstrated by two schematic scenarios, *Scheme I* and *Scheme II*. In *Sect. 3*, I discuss Gettier's original examples '*Case I*' and '*Case II*'. It will turn out that they are instances of *Scheme I* and *Scheme II*. In neither case are they examples of justified *and* true belief deductively gained from justified false belief. The concluding *Sect. 4* states that the bewilderment stemming from Gettier's examples is just *a secondary effect of a faulty conception of justification*. For being justified, any believing, withholding, and disbelieving of deductively inferred propositions must be distributed proportionally to the given evidential support. This proportionality principle has primacy over deductive closure in case of conflict and renders SMITH's inferred and incidentally true beliefs unjustified.

1. Preliminaries on Belief, Support and Justification

I advocate a *two-function model*[4] of confirmation and justification. But, differently from James Hawthorne (2005), who fashions it as a model of how "Bayesian *support* should inform Bayesian *belief*" (p. 278), I widen it to a *partly* Bayesian version: I take *support* to be objectively Bayesian, but construct *belief* (whether comparative or graded) in such a manner that non-probabilistic (therefore non-Bayesian) conceptions of belief are not excluded. Details and benefits of such an account would afford a separate publication, but some elements needed for this paper must be explained.

1.1 Evidential Support

Let '$p|\mathcal{E}$' denote some number that reflects an objective Bayesian (thus probabilistic) *degree of support* to which a set of propositions $\mathcal{E}=\{e_1,\ldots e_n\}$ supports a proposition *p*. We need not prejudge here in particular which theory of support to prefer. A version of inductive logic like Hawthorne (2018) or Fitelson (2006) might be good choices, but I

[4] The term was coined by James Hawthorne (cp. his 2005), who dates the idea back to Carnap (1971), followed by Skyrms (1986) and Lange (1999).

leave it to readers to choose their own favorite.[5] The introduction of such a measure of support allows to compare the strength of support for propositions *p*, *q* by a quasi-ordering $\leqq_s$ of *supportive strength* that takes the values $p|\mathcal{E}$, $q|\mathcal{E}$ as arguments. For instance, we get $p|\mathcal{E} \leqq_s q|\mathcal{E}$ if *p* is not stronger supported by $\mathcal{E}$ than *q* is. The relations '$>_s$' and '$=_s$' are then definable in terms of $\leqq_s$ in the usual manner. Such comparisons are still concerned with the strengths to which any set $\mathcal{E}$ of propositions probabilistically supports any propositions *p*, *q*,… etc.. Such a relation may be called logical (in a wide sense, including set theory) in that it is invariant with respect to the actual truth-values of the involved contingent propositions *p*, *q*, e_i.

For getting comparisons of *evidential* support, we need to restrict the membership of propositions to a set of (total) *evidence* $\mathcal{E}_{S,t}$ that contains only propositions that are associated with the *opinion set* $\mathcal{O}_{S,t}$ of a person *S* at time *t*. The essential point is here, that the opinion set $\mathcal{O}_{S,t}$ is the set of *S*'s *believing*, *disbelieving*, or *withholding* certain propositions, while $\mathcal{E}_{S,t}$ is the associated set of believed, disbelieved, or withheld *propositions*.[6] This bridges subjective or personal properties of *S* (her *opinions* that are *more or less firm* and may be justified or unjustified) with objective entities (*propositions* that are *more or less strongly supported* by $\mathcal{E}_{S,t}$ and may be true or false).

1.2 Opinions: Belief, Disbelief, and Withholding

Believing ('$B_{S,t}(p)$'), *disbelieving* ('$D_{S,t}(p)$'), or *withholding* ('$W_{S,t}(p)$') are mutually excluding dispositional properties of a person *S* concerning a proposition *p* such that, at time *t*, only one of them can belong to her opinion set $\mathcal{O}_{S,t}$. For making a start, we define believing as follows:

Df B A person *S believes* a proposition *p* at time *t* iff *S* is disposed at *t* to mentally experiencing *assent* for *p* more intensely than for $\neg p$ in case she considers *p* with respect to truth:
$B_{S,t}(p)$ iff $disp_{S,t}(\boldsymbol{a}(p) >_i \boldsymbol{a}(\neg p))$.

Analogously, we can define disbelief as the opposite dispositional property of *S* such that *S*'s considering *p* with respect to truth triggers her mental experience of *dissent*:

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5 As a *schematic* version of logical-probabilistic support think of $p|\mathcal{E} = prob(\mathcal{E}|p)$ or some more specific likelihood-based measure. A review of the options would exceed the scope of this paper.

6 That the evidence $\mathcal{E}_{S,t}$ contains all propositions associated with *S*'s opinion set $\mathcal{O}_{S,t}$ distinguishes the present view from that of Williamson (2000), who takes evidence to be identical with the set of all *known* propositions (and, by this, restricts evidence to consist exclusively of true propositions).

My proposal is also distinct from the kind of Evidentialism promoted by Conee and Feldman (1985), (2004) and prominently represented by McCain (2013), (2018). Their evidence consists of *mental states*, mine of *propositions*. The advantage of keeping evidence propositional is that it makes better sense to define support as logical or set-theoretical relations taking propositions as arguments.

Df D A person *S disbelieves* a proposition *p* at time *t* iff *S* is disposed at *t* to mentally experiencing *dissent* from *p* more intensely than from $\neg p$ in case she considers *p* with respect to truth:
$D_{S,t}(p)$ iff $disp_{S,t}(\boldsymbol{d}(p) >_{\boldsymbol{i}} \boldsymbol{d}(\neg p))$.

'Experiencing assent' and 'experiencing dissent' refer here to conscious mental events (occurring on the occasion of considering *p*) as *actualizations* of the concerned dispositions. Such actualizations may, but need not, be accompanied by overtly affirmative or negating behavior or by evaluative feelings about *p*, like hope, desire, fear, or disgust. They are just the assenting (dissenting) feelings about *p* that are often referred to as the mental *acts* of believing (disbelieving) *p*. Pictorially put, assenting is a kind of 'mentally nodding' (in distinction to the disposition to *result* in such a nodding) that happens involuntarily in case of considering *p* with respect to truth.[7] Accordingly with dissent, for which we would need an antonym for 'mentally nodding' (maybe 'mentally naying') as a pictorial expression. Note also that assent and dissent appear *consciously* and *immediately* to the mind. Formerly one might have said that they appear 'with immediate evidence', but, as pointed out, I reserve the term 'evidence' for evidential *propositions*, and propositions must be distinguished from their being assented to or dissented from.

Plausibly, we may add here that assent to *p* should be equally intense as dissent from $\neg p$, hence we might, for instance, have defined belief as $B_{S,t}(p)$ iff $disp_{S,t}(\boldsymbol{a}(p) >_{\boldsymbol{i}} \boldsymbol{d}(p))$, or disbelief as $D_{S,t}(p)$ iff $disp_{S,t}(\boldsymbol{d}(p) >_{\boldsymbol{i}} \boldsymbol{a}(p))$.

Analogous to the above, we can now define *withholding* as a third type of opinion[8] by relating the intensities of assent and dissent:

Df W A person *S withholds* a proposition *p* at time *t* iff *S* is disposed at *t* to mentally experiencing equal intensity of *assenting to* and *dissenting from p* in case she considers *p* with respect to truth:
$W_{S,t}(p)$ iff $disp_{S,t}(\boldsymbol{a}(p) =_{\boldsymbol{i}} \boldsymbol{d}(p))$.

The three types of opinions *B*, *D* and *W* were defined as doxastic dispositions of persons

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7 Thanks to Leopold Stubenberg for drawing my attention to Robert Audi's (1994). My conception of the doxastic dispositions of belief, disbelief and withholding differs from Audi's proposal in that his distinction between 'dispositional beliefs' and 'dispositions to believe' is merged into my *condition of actualization* ('*p* being considered with respect to truth', which includes Audi's 'formation of belief') as distinct from the *actualization itself* (the mental occurrence of assent).

8 Taking the "agnostic attitude" (withholding) for a third type of opinion has also been argued by Friedman (2013), Rosa (2019), and others. Withholding is often understood as *refraining* from any opinion or judgment, while I conceive of it as another type of opinion, just like belief and disbelief are opinions had by persons. It is the opinion where assenting to and dissenting from a proposition *p* are counterbalanced such that assent to and dissent from both *p* and $\neg p$ collapse into equal intensity.

Of course, if *p* has never come to a person's mind, then she cannot have *any* opinion on it (whether belief, disbelief, or withholding). But if she is aware of (or considers) *p* and does neither believe nor disbelieve it, then she is withholding *p* in my sense. Thanks to Barry Smith, who kept me from proposing an explication that was not clear enough in this respect.

by relating the intensities of assent and dissent that occur on the event of considering the concerned propositions. By this, the opinions are mutually definable: The negation of believing (i.e. not believing) is the disjunction of disbelieving and withholding:[9] $\neg B_S(p) \equiv D_S(p) \vee W_S(p)$, thus, $B_S(p) \equiv \neg D_S(p)\ \&\ \neg W_S(p)$, $W_S(p) \equiv \neg B_S(p)\ \&\ \neg D_S(p)$, *et cetera*, such that, for any proposition $p \in \mathcal{E}_S$, believing, disbelieving and withholding are pairwise disjunct, and only one of the three possible opinions on *p* can be included in *S*'s opinion set $\mathcal{O}_S$.

The definitions above are entirely neutral as far as they concern the justificatory status of opinions, nor do they determine any actual truth-values of the concerned propositions. For instance, the definition of *belief* applies irrespectively of whether the concerned believing is justified or not and irrespectively of whether the believed proposition is true or false. For defining *justified* opinions, we must merge the defined opinions with evidential support:

S justifiedly believes that *p*, formally $jB_S(p)$, iff

(1) *S* believes that $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$, formally: $disp_S(\boldsymbol{a}_S(p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S) >_i \boldsymbol{a}_S(p|\mathcal{E}_S \leqq_s \neg p|\mathcal{E}_S)$,

(2) based on (1), *S* believes *p*, formally: $disp_S(\boldsymbol{a}_S(p) >_i \boldsymbol{a}_S(\neg p))$, and

(3) The evidential support for *p* is stronger than that for $\neg p$, formally: $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$.[10]

S justifiedly disbelieves that *p*, formally $jD_S(p)$, iff

(1) *S* believes that $\neg p|\mathcal{E}_S >_s p|\mathcal{E}_S$, formally: $disp_S(\boldsymbol{a}_S(\neg p|\mathcal{E}_S >_s p|\mathcal{E}_S) >_i \boldsymbol{a}_S(\neg p|\mathcal{E}_S \leqq_s p|\mathcal{E}_S)$,

(2) based on (1), *S* disbelieves *p*, formally: $disp_S(\boldsymbol{a}_S(\neg p) >_i \boldsymbol{a}_S(p))$, and

(3) The evidential support for $\neg p$ is stronger than that for *p*, formally: $\neg p|\mathcal{E}_S >_s p|\mathcal{E}_S$.

S justifiedly withholds[11] that *p*, formally $jW_S(p)$, iff:

(1) *S* believes that $p|\mathcal{E}_S =_s \neg p|\mathcal{E}_S$, formally: $disp_S(\boldsymbol{a}_S(p|\mathcal{E}_S =_s \neg p|\mathcal{E}_S) >_i \boldsymbol{a}_S(p|\mathcal{E}_S \neq_s \neg p|\mathcal{E}_S)$,

(2) based on (1), *S* withholds *p*, formally: $disp_S(\boldsymbol{a}_S(p) =_i \boldsymbol{d}_S(p))$, and

(3) The evidential support for *p* equals that for $\neg p$, formally: $p|\mathcal{E}_S =_s \neg p|\mathcal{E}_S$.

We may then say that *S* has a justified *and* true belief iff $jB_S(p)\ \&\ p$, or that *S* has a justified

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9 From here on, I omit the time-indexes, it is always at *t*.

10 Part of this view *may*, but need not, be reduced to what Foley (1993) and (2009) calls *Lockean Thesis*; cp. also Hawthorne (2009). Certain difficulties connected with this thesis (for instance, the Lottery Paradox) need not concern us here and do not invalidate the basic idea that, for being justified, *belief, disbelief*, and *withholding* (and their firmness) must be distributed proportionally to the given evidential support. Howson (2000) can be read as a thoughtful presentation of a Bayesian, therefore probabilistic, version of this proportioning principle. Williamson (2000) has his own version of it.

Note further that the (mild) provisions so far already mean a radical abstraction from the fact that *real* persons will only be able to keep rather small 'regions' within $\mathcal{O}_{S,t}$ consistently ordered.

11 Note that justified withholding can occur in two ways:

(a) Model 'Next fair coin toss': *S*'s total evidence $\mathcal{E}_S$ equally supports *p* and $\neg p$, like heads or tails.

(b) Model 'No idea': *S*'s total evidence $\mathcal{E}_S$ is neutral, i.e. not relevant, concerning *p*.

but false belief iff $jB_S(p)$ & $\neg p$.

2. *The core claim of this paper and two schemes of failing closure*

Now suppose that a person *S* justifiedly believes a proposition *p* in the defined sense. Let her belief still be short of certainty, such that it is still possible that *p* is false, and consider some proposition *q* that is entailed by *p* (symbolized: $p \vDash q$). Gettier's closure condition (like many analogous ones) has it then, that *S* is justified in believing *q* if *S* justifiedly believes *p* and believes *q* for the sole reason that *q* is entailed by *p*. The idea seems to be that the *justification for believing q* is (by force of the entailment) somehow 'inherited' from justifiedly believing *p* merely due to *q* being a deductive consequence of *p*.

My core claim is that such *general* closure, given any propositions α and β, is false. If $\alpha|\mathcal{E}_S >_s \neg\alpha|\mathcal{E}_S$ and $\alpha \vDash \beta$, then it is *not always* the case that $\beta|\mathcal{E}_S >_s \neg\beta|\mathcal{E}_S$. Consequently, being evidentially justified in believing some contingent proposition α does *not always* license the justification for believing some proposition β that happens to be a deductive consequence of α. Here are two schematic scenarios:

2.1 Scheme I

Imagine that *S* justifiedly believes (based on $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$) some proposition *p*, where *S*'s believing of *p*, given evidence $\mathcal{E}_S$, may be arbitrarily firm but is short of certainty. Furthermore, the evidence $\mathcal{E}_S$ also includes that *p* entails a proposition *q*, but is not entailed by *q*. On these premises, it is then true that

a) *p* & *q* and *q* are deductive consequences of *p*,

b) *p* & *q* is redundant of *p*,

c) *p* & *q* and *q* are true in all worlds where *p* is true (call them '*p*-worlds').

Thus, given her evidence $\mathcal{E}_S$ (including the entailment $p \vDash q$), *S* is justified in believing *p* & *q* because of $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$, wherefore *S* is justified in believing *p* & *q* *as far as S* justifiedly believes *p*. So, *in any p-world*, if *S* justifiedly believes *p*, *S*'s believing *p* and believing *q* is justified and true.

But now observe that *q* is true not only in all *p* & *q*-worlds, but also in all $\neg p$ & *q*-worlds (remember that *q* does not entail *p*), and let us say that *S* believes '*just q*' *iff* $B_S((p \,\&\, q)\vee(\neg p \,\&\, q))$. Would then *S*, by deductive means and *without any addition to, or change in her evidence*, come to be justified in believing something more general about *q*-worlds, that is, be justified in believing *just q*? Certainly not, because *believing* just *q* would afford evidence $\mathcal{E}'$, with $q|\mathcal{E}' >_s \neg q|\mathcal{E}'$, such that $p \,\&\, q|\mathcal{E}' >_s p \,\&\, \neg q|\mathcal{E}'$ and $\neg p \,\&\, q|\mathcal{E}' >_s \neg p \,\&\, \neg q|\mathcal{E}'$. But this does not match with the support provided by the evidence $\mathcal{E}_S$ presupposed above with $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$, because this gives $p \,\&\, q|\mathcal{E}_S >_s \neg p \,\&\, q|\mathcal{E}_S$ and

$\neg p \,\&\, q|\mathcal{E}_S =_s \neg p \,\&\, \neg q|\mathcal{E}_S$ (remember that $\mathcal{E}_S$ excludes $p \,\&\, \neg q$ because of the entailment $p \vDash q$). Thus, although q and $p \,\&\, q$ can be *deduced* from p and $p \vDash q$, the fact that the evidence $\mathcal{E}_S$ stronger supports p than $\neg p$ leads, in the present case, not to a stronger evidential support for *just* q (i.e., once more, $(p \,\&\, q)\vee(\neg p \,\&\, q)$) than for *just* $\neg q$ (i.e., $(p \,\&\, \neg q)\vee(\neg p \,\&\, \neg q)$). Consequently, S can never be evidentially justified in believing *just* q, but only in believing *just* p and *just* $p \,\&\, q$ (where the latter is, as already observed, merely redundant of p). Whichever the *actual truth-values* of p and q happen to be, they cannot change anything about this *justificatory state* of S's opinions.

Now assume that, despite strong evidential support, p is actually false (and so $p \,\&\, q$ is actually false), while q (and so $\neg p \,\&\, q$) happens to be actually true. Then S is *justified* in believing the *false* p and the *false* $p \,\&\, q$ and is *not justified* in believing *just* the *true* q, such that in neither case she has any justified *and* true belief.

A few more explanations are in order here: My argument leaves elementary logical rules entirely untouched. *Of course*, necessarily, q is true if $p \,\&\, q$ is, and *of course* S is justified in believing $p \,\&\, q$ as long as she justifiedly believes p based on $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$. But the *believing* of propositions must be distinguished from the *propositions* believed. The former may be justified or unjustified while the latter are true or false.[12] And although conjunction elimination is a valid rule governing the *truth-relations among the propositions* $p \,\&\, q$ and q, there is no analogous general rule governing the *justificatory relations among beliefs* that would allow a kind of 'conjunction elimination' from justifiedly believing $p \,\&\, q$ to justifiedly believing *just* q.

We can conclude therefore that *Scheme I* allows, as justified opinions, only believing p and believing $p \,\&\, q$, while withholding *just* q and *just* $\neg q$. Of such mixed kinds of justified opinions I say, for short, that S '*justifiedly withholds* q *beyond believing* p', whichever condition or phrase of epistemic praise or success one may prefer,[13] and this implies that S is not justified in *believing just* q.

Summing up *Scheme I*: $jB_S(p \,\&\, q)$ does not entail $jB_S(p)$ *and* $jB_S(q)$, because it is *not always* the case that if $p \,\&\, q|\mathcal{E}_S >_s \neg(p \,\&\, q)|\mathcal{E}_S$ then $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$ *and* $q|\mathcal{E}_S >_s \neg q|\mathcal{E}_S$.

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12 It should be clear from the foregoing that, instead of what (somewhat misleadingly) is called "propositional justification", we better focus here on *evidential support*, namely, truth-functionally and/or set-theoretically defined relations between the propositions constituting the evidence $\mathcal{E}$ and the propositions under consideration.

13 This applies to any conceptions taken from the current literature, like '*Rationality requires S* to withhold q beyond believing p', 'If S's *epistemic state comes about in the right manner* [or *by some reliable cognitive belief-forming process*], it results in withholding q beyond believing p', 'S's withholding q beyond believing p *does not depend on luck*', or whatever.

2.2 *Scheme II*

Imagine that *S* justifiedly believes (based on $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$) some proposition *p*, where *S*'s believing of *p*, given evidence $\mathcal{E}_S$, may be arbitrarily firm but is short of certainty. Furthermore, the evidence $\mathcal{E}_S$ also includes that *p* and some proposition *q* are logically independent of each other (neither entails the other one or its negation, formally: $p \div q$), and that $\mathcal{E}_S$ is neutral with respect to *q*, such that $q|\mathcal{E}_S =_s \neg q|\mathcal{E}_S$. Then it is true that

a) $p \vee q$ and $p \vee \neg q$ are *deductive* consequences of *p* (by disjunction introduction),

b) $p \vee q$ and $p \vee \neg q$ are equally supported by $\mathcal{E}_S$, formally $p \vee q|\mathcal{E}_S =_s p \vee \neg q|\mathcal{E}_S$,

c) $p \vee q$ and $p \vee \neg q$ are true in all worlds where *p* is true (call them '*p*-worlds').

But now observe that $p \vee q$ is *also* true in all *q*-worlds, and $p \vee \neg q$ is *also* true in all $\neg q$-worlds. So, would then *S*, by deductive means and *without any addition to, or change in her evidence*, come to be justified in *believing* something more general about any *q*- or $\neg q$-worlds, say *just q* (i.e., once more, $(p \,\&\, q) \vee (\neg p \,\&\, q)$) or *just* $\neg q$ (i.e., $(p \,\&\, \neg q) \vee (\neg p \,\&\, \neg q)$)? Certainly not, because the evidence does not support anything concerning *q* beyond *p*.

If *S*, besides believing *p*, believes *both*, $p \vee q$ *and* $p \vee \neg q$, it comes down to believing just *p* and the tautology: $(p \vee q) \,\&\, (p \vee \neg q) \equiv p \,\&\, (q \vee \neg q) \equiv p$. So, in that case, *S* remains being justified in her believing that *p* and *nothing beyond p* (except from the tautology).

But let, alternatively, *S* believe *just one* of the two deductive consequences of *p* introduced above, say she believes (*p* and) *just* $p \vee q$ while not believing[14] that $p \vee \neg q$. In this case, *S* cannot be *justified* in her belief, because this contradicts the evidence.

Being justified in believing *just* $p \vee q$ while not believing that $p \vee \neg q$ would afford evidence $\mathcal{E}'$, with $p \vee q|\mathcal{E}' >_s \neg(p \vee q)|\mathcal{E}'$ and $\neg p \,\&\, q|\mathcal{E}' \geqq_s p \vee \neg q|\mathcal{E}'$. But this does not match with the support provided by the evidence $\mathcal{E}_S$ as presupposed above (which is $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$ and $p \div q$), because this gives $p \vee q|\mathcal{E}_S >_s \neg(p \vee q)|\mathcal{E}_S$ and $p \vee \neg q|\mathcal{E}_S >_s \neg p \,\&\, q|\mathcal{E}_S$. So, *S* cannot be justified in believing *just* $p \vee q$ at the expense of not believing $p \vee \neg q$ as well. Whichever the actual truth-values of *p* and *q* happen to be, they cannot change anything about this *justificatory* state of *S*'s opinions.

Now assume that *p*, despite strong evidential support, is actually false, while *q* happens to be actually true. Then *S* either is justified in *believing the false p* (equivalent $(p \vee q) \,\&\, (p \vee \neg q)$), or is not justified in believing *just* the true $p \vee q$. So, it turns out that in a *Scheme II* scenario *S* is, again, 'justified in withholding $p \vee q$ beyond believing *p*', which implies that *S* is not justified in believing *just* $p \vee q$.

Summing up *Scheme II*: $jB_S(p)$ does not entail $jB_S(p \vee q)$ *and* $jB_S(p \vee \neg q)$, because it is *not always* the case that if $p|\mathcal{E}_S >_s \neg p|\mathcal{E}_S$ then $p \vee q|\mathcal{E}_S >_s \neg(p \vee q)|\mathcal{E}_S$ *and* $p \vee \neg q|\mathcal{E}_S >_s \neg(p \vee \neg q)|\mathcal{E}_S$.

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14 Keep in mind that not believing $p \vee q$ entails disbelieving or withholding $p \vee q$.

Generalizing, we can conclude that *Schemes I* and *II* show this: Given evidence $\mathcal{E}_S$ and some propositions α, β, where β is a deductive consequence of α, and where believing α is justified because of $\alpha|\mathcal{E}_S >_s \neg\alpha|\mathcal{E}_S$, it is not always the case that $\beta|\mathcal{E}_S >_s \neg\beta|\mathcal{E}_S$, wherefore, on given premises, believing *just* β is not always justified. For this reason, we must strengthen the closure condition such that for being evidentially justified in believing a deductive consequence β of a justifiedly believed proposition α, it is a necessary condition that also $\beta|\mathcal{E}_S >_s \neg\beta|\mathcal{E}_S$.

This can be turned into a practical advice:

(1) Let some person *S* be justified in her believing a proposition α, where *S* is justified in her believing α only if α is appropriately supported by *S*'s total evidence $\mathcal{E}_S$; formally: $\alpha|\mathcal{E}_S >_s \neg\alpha|\mathcal{E}_S$.

(2) Next, let *S* deductively infer some β from α, *and check* β *against the evidence* $\mathcal{E}_S$.

(3) If the evidential support for β is stronger than that for ¬β (formally: $\beta|\mathcal{E}_S >_s \neg\beta|\mathcal{E}_S$) and if this stronger support is *S*'s reason for believing β, then *S* is, indeed, justified in her believing β; otherwise, *S*'s *believing* β is not justified, although *withholding* β might be.

Note that it is the daily bread and butter of inductive reasoning to 'check against the evidence', as demanded by *(2)*. Mere reliance on the deductive validity of inference from inductively justified premises is not a reliable substitute for such checking and may even lead us astray like, for instance, in Gettier cases. It will turn out that Gettier's SMITH allows himself to 'infer' *deductively* what he could not even achieve by *inductive* means (which is somewhat perverse).

3. Gettier's Cases

Preparing his demonstration, Gettier defined two conditions on "… that sense of 'justified' in which *S*'s being justified in believing *p* is a necessary condition of *S*'s knowing that *p*" (Gettier 1963, p. 121):

False justified belief [FJB]

"… it is possible for a person to be justified in believing a proposition that is in fact false."[15]

Gettier's Closure [G-Clsr]

"… for any proposition *p*, if *S* is justified in believing *p*, and *p* entails *q*, and *S* deduces *q*

[15] Zagzebski (1994) points at this provision as the basic cause for the inescapability of Gettier cases: "As long as the truth is never assured by the conditions which make the state [of believing] justified, there will be situations in which a false belief is justified. … *with this common, in fact, almost universal assumption, Gettier cases will never go away*." (p. 73, my emphasis.)

from *p* and accepts *q* as a result of this deduction, then *S* is justified in believing *q*."[16]

Condition *FJB* or analogous ones are accepted by most epistemologists[17] as plausible and shall remain undisputed. Any concept of justification of believing (at least of contingent propositions) should leave room for justified false belief. What we *aim* at in our pursuit of knowledge is, of course, to believe true propositions and disbelieve false ones. But *all we can do* in this pursuit is to rely on justifications and, consequently, believe (disbelieve, withhold) only what our evidence justifies us in believing (disbelieving, withholding). This, however, cannot supply any guarantee of *reaching* the named aim. By *FJB* we must always carry the risk of failing to know some proposition *p* for lack of *p*'s truth, notwithstanding our justification for believing *p* to be true. Condition *FJB* states nothing more than this: Accompanying our auspices of earning knowledge, there always looms the possibility of unwittingly arriving at justified *false* belief. In other words: All (or, at least most of) our *claims* for knowledge remain provisional.

G-Clsr is a *prima facie* innocuous condition on *inferential*[18] justification of believing, which leaves all the difficult problems of perceptual (or immediate) justification out of our present concern. Before questioning *G-Clsr*, here is a point of agreement:

That "*S* deduces *q* from *p* and *accepts q as a result of this deduction*" indicates that the entailment of *q* by *p* must figure *as a reason* for *S* for accepting *q* and, thus, *S must be aware* of this entailment.[19] This is exactly how Gettier puts it when he presents his examples: *S* "sees" (p. 122), or "realizes" (p. 123), the entailment, and accepts consequences "on the grounds" (p. 122), or "proceeds to accept … [*q*] … on the basis" (p.123), of recognizing it. In short, it is not sufficient that *p* entails *q* objectively; *S* must also be aware of this entailment and accept any *q because of* this entailment *as her reason* for such acceptance (and not for any other, possibly spurious, reasons).

I agree with Gettier that any objectively obtaining logical relations can count as justifying some opinion (belief, disbelief, or withholding) only if *S* appropriately takes account of them as her reasons. But it should be clear from *Sect.2* that the questionable part of *G-Clsr* is its *unconditionally* licensing justification for believing a consequence *q*, given justified belief of *p* and entailment $p \vDash q$. This kind of closure condition is quite common and can be

16 Gettier uses capital proposition letters *P*, *Q*, … throughout. I have changed them here into lower case *p*, *q*, … using them for general considerations, while reserving capitals for discussing his examples.

17 A notable exception is Dretske (2017), who also argues against Gettier's closure in Dretske (2005).

18 The widespread tendency to include also non-inferential cases like Ginet's barn (for instance, Hazlet (2015) p. 2) neglects this in my view essential feature of Gettier's own cases. The justification of erroneous *perceptual* belief is a different matter.

19 'Awareness' is here not meant in any technical sense. Suffice it that *S* has in mind some 'strong connection' between *p* and *q* which logicians would reconstruct as entailment or as a sufficiently high degree of logical support. Cp. among others Skyrms (1967) p. 374, and footnotes 4 and 5.

found anywhere in the literature.[20] My counterclaim is that the justification of opinions must always accord with evidential support, that is, evidential support has always primacy over deductive closure.

Let us look now at Gettier's scenarios in detail.

3.1 Gettier's Case I

SMITH and Jones have applied for a certain job. SMITH has acquired evidence $\mathcal{E}_S$ "… that the president of the company assured [SMITH] that Jones would in the end be selected, and that he, SMITH, had counted the coins in Jones's pocket ten minutes ago" (p. 122), justifying him in believing that

P: Jones is the man who will get the job, and Jones has ten coins in his pocket.

SMITH deduces from proposition *P* that

Q: The man who will get the job has ten coins in his pocket.

However, *P* is in fact false because SMITH himself, and not Jones, is the one who will get the job. Furthermore, SMITH is unaware (has no evidence) of the fact that he himself is also carrying ten coins in his pocket. So, Gettier claims by condition *G-Clsr* that SMITH has a justified *and* true belief that *Q*.

But wait! Shouldn't SMITH believe only what is supported by his evidence $\mathcal{E}_S$ for believing justifiedly? Equivalently rewritten, his justified belief that *P* based on $\mathcal{E}_S$ is

P_{full}: The man who will get the job has ten coins in his pocket, *and this man is identical with Jones*:
$\exists x(J_{ob}x \ \& \ C_{oins}x \ \& \ x = Jones \ \& \ \forall y((J_{ob}y \ \& \ C_{oins}y) \rightarrow x = y))$,

while *Q*, equivalently rewritten, is

Q_{weak}: The man who will get the job has ten coins in his pocket, *whether or not he is identical with Jones*:
$\exists x(J_{ob}x \ \& \ C_{oins}x \ \& \ (x = Jones \lor x \neq Jones) \ \& \ \forall y((J_{ob}y \ \& \ C_{oins}y) \rightarrow x = y))$.

Now observe that $P_{full} \& Q_{weak}$ is redundant of P_{full} (plus the tautology), wherefore $(P_{full} \& Q_{weak}) \equiv P_{full} \equiv P$.[21] So, believing *P* is tantamount to believing P_{full} *and* Q_{weak} (and so is

[20] Williamson takes it also for unconditionally granted: "… what matters for [Gettier's] immediate purposes is just that the assumption [that justification of belief is closed under deduction] *clearly holds* in his chosen cases …" Williamson (2007, p. 182; my emphasis).

[21] Bernecker (2011, p. 127) mentions a criticism to the effect that *Case I* suffers from a "confusion of the referential and attributive sense of the definite description 'the [person] who will get the job'." He explains this in an endnote: "Smith takes the definite description to refer to Jones but it in fact picks out Smith. If the definite description refers to Jones, Smith's belief turns out to be justified but false. If the definite description refers to Smith, the belief is true but unjustified. The example therefore fails to show that justified true belief is insufficient for knowledge" (p. 147). I think this criticism overlaps partly with my argument but does not affect its validity.

tantamount to believing *just* P_{full}), while to believe *just* Q_{weak}, that is, $(P_{full} \,\&\, Q_{weak}) \vee (\neg P_{full} \,\&\, Q_{weak})$, comes to *neglect* (at least part of) the evidence.

It turns out that Gettier's *Case I* is an instance of *Scheme I*. SMITH disregards his evidence $\mathcal{E}_S$ (including $P \vDash Q$), which *would* justify him in believing the false P_{full} (because of $P_{full}|\mathcal{E}_S >_s \neg P_{full}|\mathcal{E}_S$) and consequently *would* justify him in believing the false $P_{full} \,\&\, Q_{weak}$ (because of $P_{full} \,\&\, Q_{weak}|\mathcal{E}_S >_s \neg(P_{full} \,\&\, Q_{weak})|\mathcal{E}_S$). But by believing *just* that Q_{weak}, which is equivalent to $(P_{full} \,\&\, Q_{weak}) \vee (\neg P_{full} \,\&\, Q_{weak})$, he renounces to base his beliefs on his evidence and ends up with an unjustified although true belief. SMITH can only be justified in believing $P_{full} \,\&\, Q_{weak}$, which adds up to believing just P_{full} and happens to be false. So, in the one case he has an *unjustified but true* belief, and in the other case he has a *justified but false* belief. Thus, SMITH has in neither case a justified *and* true belief.

In contrast, imagine *S* to be a *doxastically conscientious person S*, who strives to believe the truth, the whole truth and nothing but the truth[22] and who answers sincerely all questions posed to her, always asserting carefully what she justifiedly believes. How would she react to the question "Do you know anything about who will get the job?" Her *most conscientious evidentially based answer* will not be a mockery as if from the Delphic Oracle, like "Whoever he is, the one who will get the job has ten coins in his pocket". Rather, her *full* answer that reflects her justified opinion will be something like "I know[23] that it is Jones who gets the job, and he has ten coins in his pocket." By keeping to what she takes for the *whole* truth, she remains justified in her (unfortunately false) belief.

What remains as a justified opinion in the *Case I* scenario is what I called 'withholding Q_{weak} beyond believing P_{full}'. Believing the false P_{full} is justified and amounts to believing the false $P_{full} \,\&\, Q_{weak}$ anyway, but believing *just* the (incidentally) true Q_{weak}, irrespective of whether P_{full} or $\neg P_{full}$, is not supported by the evidence and, for this reason, remains unjustified.

3.2 Gettier's Case II

SMITH has strong evidence $\mathcal{E}_S$ [24] justifying him in believing that

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22 This aspiration touches upon the deeper meaning of the well-known oath formula. Klein (2017) p. 37 alludes to this formula as an uninformative definition of knowledge. But if a person can aspire (or be ordered) to fulfill it, it cannot be uninformative. Strictly understood, no person can be obliged to simply 'say the truth, the whole truth and nothing but the truth', but only to say what she *believes*, to deny what she *disbelieves*, and to withhold what she *neither believes nor disbelieves* to be the truth.

23 Of course, *we* presuppose that *S* is in error with her knowledge claim because we have presupposed the falsity of *P* for this case. The decisive point here, however, is what *S* takes for the *whole* truth given her total evidence.

24 "Smith's evidence might be that Jones has at all times in the past within Smith's memory owned a car, and always a Ford, and that Jones has just offered Smith a ride while driving a Ford." Gettier (1963), p.122.

P Jones owns a Ford.

Furthermore, SMITH "… has another friend, Brown, *of whose whereabouts he is totally ignorant*" (p.122, my emphasis). Nevertheless, by *G-Clsr* (plus disjunction introduction), he would be justified in believing any of the following (and indefinitely many more of the same kind):

Q_1 Either Jones owns a Ford, or Brown is in Boston.
Q_2 Either Jones owns a Ford, or Brown is in Barcelona.
Q_3 Either Jones owns a Ford, or Brown is in Brest-Litovsk.

Although Brown could not be in all the three named cities at the same time, SMITH may, by *G-Clsr*, accept each of Q_1 to Q_3 and claim justification for believing them all.[25] That the literature on the subject usually mentions merely Q_2, is due to how the example continues: Notwithstanding the justifying evidence, P is false, but Q_2 happens to be true because Brown is in Barcelona, rendering belief of Q_2, against common intuition, as knowledge in the sense of the *JTB*-account.[26]

This scenario, if analyzed correctly, must again result in 'justifiedly withholding Q_2 beyond believing P'. A doxastically conscientious person S's *most conscientious evidentially based answer*, this time to the question "Is it true that Jones owns a Ford or Brown is in Barcelona?", would somehow be "I know that Jones owns a Ford, but I could not tell whether Brown is in Barcelona or somewhere else."[27]

Observe that in the *Case II*-scenario SMITH does not consider, let alone accept, the following propositions:

Q_4 Either Jones owns a Ford, or Brown is not in Boston,
Q_5 Either Jones owns a Ford, or Brown is not in Barcelona,
Q_6 Either Jones owns a Ford, or Brown is not in Brest-Litovsk.

Now let B be some proposition about Brown's current stay, say, 'Brown is in Barcelona'. As, by presupposition, the evidence $\mathcal{E}_S$ does not hint either way, wherefore $B|\mathcal{E}_S =_s \neg B|\mathcal{E}_S$, we get (not surprisingly) that S is justified in *withholding B*.

What then about Q_2, formally $P \vee B$, and Q_5, formally $P \vee \neg B$? Given $P \mathrel{\dot{\mp}} B$, we have on the one hand, $P \vDash Q_2, Q_5$, but, on the other, $B \vDash Q_2$ and $\neg B \vDash Q_5$, such that the *truth-values* of Q_2 and Q_5 depend not only on P but may depend on the truth-value of B as well. And, although S's justification for *believing P* is based on $P|\mathcal{E}_S >_s \neg P|\mathcal{E}_S$, the evidence with

25 "Smith is therefore completely justified in believing each of these three propositions." Op. cit., p.123.

26 SMITH would fulfill the *JTB* definition of knowledge because (*i*) SMITH is (by force of *G-Clsr*) justified in believing that Q_2 is true, (*ii*) Q_2 is true and (*iii*) SMITH believes that Q_2 is true.

27 Of course, *we* presuppose that S is in error with her knowledge claim because we have presupposed the falsity of P for this case. The decisive point here, however, is S's *withholding* the (incidentally) true proposition that Brown is in Barcelona *given her total evidence*.

respect to B suggests that $B|\mathcal{E}_S =_s \neg B|\mathcal{E}_S$. But then it is trivially the case that $P \vee B|\mathcal{E}_S =_s P \vee \neg B|\mathcal{E}_S$, hence $Q_2|\mathcal{E}_S =_s Q_5|\mathcal{E}_S$. And this is, given total evidence, what justifies 'withholding Q_2 beyond believing P' and forbids believing *just* Q_2.

The point is that, by neglecting Q_5, SMITH does not proportionally distribute the supportive strengths of his total evidence over *all* the propositions he is reasonably expected to consider when forming his opinions. He has justified belief of P, which is supported by his evidence $\mathcal{E}_S$. Given this, he infers *blindly* that $P \vee B$ ($\equiv Q_2$) by just introducing the disjunct B. However, given, as presupposed, that $B|\mathcal{E}_S =_s \neg B|\mathcal{E}_S$, it is *inconsistent* with the given evidence to believe P and *just* $P \vee B$ while not believing that $P \vee \neg B$, as was demonstrated above for *Scheme 2*.

The result is this: *Either* SMITH keeps on insisting on believing *just* Q_2 (which happens to be true) at the expense of not believing Q_5 as well: Then he is not justified in this belief because of neglecting his evidence. *Or* he accepts also Q_5, as the evidence demands: Then he is thrown back to his justified, but false, belief that P. So, SMITH hasn't any justified *and* true belief in either case.

There is an explanation for this kind of 'mixed attitude'. On the one hand, evidence (supporting that Jones owns a Ford) justifies S's *believing P* because of $P|\mathcal{E}_S >_s \neg P|\mathcal{E}_S$. But on the other hand, the evidence (that Jones' whereabouts are unknown, therefore $B|\mathcal{E}_S =_s \neg B|\mathcal{E}_S$) justifies S's *withholding B*. Thus, total evidence bears *differently* on the justifications of believing P and believing the composed propositions $P \vee B$ ($\equiv Q_2$) and $P \vee \neg B$ ($\equiv Q_5$). The result of all this is that, in the *Case II*-scenario, SMITH is not justified in believing *just* Q_2, but merely in 'withholding Q_2 beyond believing P'. Consequently, and contrary to Gettier's claim, he does not *know* Q_2 even in the sense of a *JTB*-account of knowledge.

In summary, we can state that SMITH, by not checking the justification of his inferred beliefs against the evidence, counteracts any doxastically conscientious person's ambition: In *Case I* he misses to believe what he should take for *the whole truth*, while in *Case II* he misses to believe what he should take for *nothing but the truth*.

4. *Upshot*

There is a lesson in all this: My argument does not essentially depend on any definition of knowledge. Rather, it shows that already Gettier's condition *G-Clsr* (like so many analogous ones) on *justification* is faulty. This strongly indicates that, right from the start, we were not really dealing with a problem of correctly defining knowledge, but that the bewilderment stemming from Gettier's examples is just *a secondary effect of a faulty conception of evidential justification*.

The suspicion that the difficulty presented by Gettier belongs to the theory of justification and that it is not one of defining knowledge correctly is not new. Macdonald and Krishna (2018) report of A. J. Ayer's opinion that "[t]he counter-examples … showed that what was needed was a more careful account of what 'being justified' consisted in. He disputed Gettier's claim that any deduction from a justified, but false, proposition preserves justification".[28]

It is important to distinguish this reaction from the popular attempts to amend the *JTB*-account of knowledge by adding a fourth condition (although such conditions are usually imposed on the *J*-component).[29] Characteristically, such attempts are tested against an *intuitive understanding* of 'knowing' by confronting them with Gettiered scenarios. In contrast to this, the present argument does not relevantly depend on intuitions concerning the concept of knowledge[30] but on a *principle of justification*: Belief, disbelief, and withholding, must be distributed proportionally to the given evidential support for being inferentially justified.

The upshot of all this is that neither *Case I* nor *Case II* are instances of deductively inferred justified true belief, wherefore they cannot serve as counterexamples to the *JTB* account of knowledge. This, however, does not save *JTB*, because cases of justified belief that are true only by lucky coincidence could only conclusively be excluded if justification would ensure certainty. Gettier-cases will remain *possible*, wherefore neither the *JTB* account nor any other analysis of knowledge in terms of necessary and sufficient conditions can hold (cf. Williamson 2007, 2015). It is vain to keep on searching for conditions of knowledge like, for instance, attempted by Pritchard (2017) with his "analytical project", or other enterprises in that direction. But this does not imply any need for a knowledge-first approach like Williamson's (2000) for fending off the threat of getting misled by Gettier-cases. Instead of searching for a kind of knowledge that could make us know that we know if it is (objectively) the case that we know, we should remain content with the slightly less ambitious, but more realistic, goal of attaining the highest achievable standards in justifying our opinions. This is what we can do, and it is all we can do in our pursuit of knowledge: rely on our justifications and, consequently, hold such opinions which we are justified in holding based on our evidence. Of course, such an enterprise

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28 Apparently, Ayer did not detail this in writing. Thanks to Graham Macdonald for this information.

29 Lycan (2006) counts "the search for the 'fourth condition' of knowing" among the "uninteresting solutions".

30 Referring to intuitions (for evoking a kind of hunch) may help prepare an argument. Beyond this, I agree thoroughly with Cappelen (2012) that talk of intuitions is not (and cannot be) conducive to any interesting (meta-)philosophical claims.

Williamson's view of the matter (2015, p.139) is that "the mutual confirmation of the results of [formal methods vs. thought experiments] … should increase our confidence in each method." Be this as it may, I think it is an advantage to have formal methods for deciding on intuitive hunches.

cannot supply any guarantee of acquiring knowledge. But there is no hope for guarantees in epistemic matters. Suffice it that the range of possible Gettiered scenarios can be restricted by paying full attention to what our evidence allows us to believe, disbelieve, or withhold. Funny enough, though, that Gettier's originals (like so many analogous examples) are not Gettier problems.

Acknowledgments: I would like to thank the discussants at the International Rudolf Haller Memorial Conference in Graz, November 2019, particularly Johannes Brandl, Kevin Mulligan and Barry Smith for their helpful comments on the first German version of this paper. Leopold Stubenberg's incisive criticism prompted me to drastically shorten the first English version and concentrate on what I think to be the essentials, while Johannes Brandl's shrewd questions concerning the second version, caused me to re-introduce some of the eliminated material into the third one. Their interventions were of great help in clarifying my point. Further thanks are due to Christian Piller and William Peden for their critical remarks, and to Graham Macdonald for valuable information.

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