

dialectica

International Journal of Philosophy

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PROOF

Lying, Tell-Tale Signs, and Intending to Deceive

VLADIMIR KRSTIĆ

Arguably, the existence of bald-faced (i.e., knowingly undisguised) lies entails that not all lies are intended to deceive. Two kinds of bald-faced lies exist in the literature: those based on some common knowledge that implies that you are lying and those that involve tell-tale signs (e.g., blushing) that show that you are lying. I designed the tell-tale sign bald-faced lies to avoid objections raised against the common knowledge bald-faced lies but I now see that they are more problematic than what I initially thought. Therefore, I will discuss these lies in more detail, refine the existing cases, and resolve some anticipated objections. I conclude that tell-tale sign bald-faced lies are genuine lies not intended to deceive.

Consider this case (derived from [Krstić 2020, 758–759](#)):

PINARTIO. A vicious murderer, Tony, is hiding from the police in Pinocchio's house. In search of Tony, the police knock on Pinocchio's door asking whether Tony is hiding in his house. Pinocchio wants to give Tony away but he is afraid that, if he gives any indication of this to Tony, Tony will hurt him. Luckily, Pinocchio knows both that the police know that his nose starts to grow at the very instant he forms the intention to lie and that they know that he knows that they know how his nose behaves, but that Tony does not know anything about this. Therefore, he asserts "Tony definitely isn't in my house" to the police. Pinocchio does this not because he intends to deceive the police in any sense (he doesn't want them to think that he is protecting a murderer), but rather because he intends to let them know that Tony *is* in his house by having them recognize the full content of his intention.

Pinocchio intends to cause the police to realize (i) that Tony is in Pinocchio's house, (ii) that Pinocchio is lying by saying that Tony is not in Pinocchio's house, and (iii) that he is lying because he intends to cause them to deductively infer the relevant true proposition from his assertion and the behaviour of his nose. Since he intends to cause them to learn the whole truth—i.e., where Tony is, that he (Pinocchio) is lying, and why—Pinocchio does not count as intending to deceive the addressee and, because the nose is an indicator of lying rather than uttering something he believes to be false, Pinocchio seems to be genuinely lying.

PINARTIO appears to be an excellent counterexample to the view according to which intending to deceive is necessary for lying. Mahon (2015) names this view *deceptionist*. Some proponents of deceptionism are Davidson (1998), Williams (2002), Derrida (2002), Faulkner (2007, 2013), Lackey (2013, 2019), Keiser (2016), Meibauer (2014a, 2014b, 2016), Maitra (2018), and Harris (forthcoming). **PINARTIO** is a counterexample to this view because Pinocchio does not intend to cause the police to believe what he asserts (or to make them more confident in this proposition) and he does not intend to cause them to believe that he believes what he asserts (or to make them more confident in this proposition), which are the standard ways of deceiving discussed in the literature on the nature of lies. In fact, Pinocchio does not intend to mislead the police with respect to anything or to conceal any information.¹ He is trying to help them.

PINARTIO suggests that the *non-deceptionist* analysis, according to which asserting what you believe (or judge) is false is (necessary and) sufficient for lying, is correct.² Some proponents of the non-deceptionist view are Aquinas (*Summa Theologica*, II-II, Q.110, article 1), Johnson (1755a), Carson (2006, 2010), Sørensen (2007, 2010, 2022), Fallis (2009, 2012, 2013, 2015), Saul (2012), Stokke (2013, 2016, 2017, 2018), Rutschmann and Wiegmann (2017), Krstić (2018, 2019, 2020), Marsili (2021), Sneddon (2021), and Michaelson and Stokke (2021). And while Pinocchio's lie is a so-called bald-faced lie, i.e., knowingly undisguised lie, it is different from all other cases of bald-faced lies in a very

1 According to Lackey (2013, 246), liars merely need to intend to *be deceptive* towards their hearer in stating that *p*, where this may involve concealing information from the hearer regarding whether *p*. My idea is that Pinocchio is not being deceptive because he intentionally *reveals* (rather than conceals) the whole truth. Lackey could reply that it is not the saying that does the truth-revealing but rather the nose growing and that the statement is thus deceptive. This reply fails because, even if the statement was deceptive, it was not *intended* to be deceptive: the statement *plus* the nose are supposed to reveal the whole truth.

2 However, please see footnote 3.

important way. Standardly, bald-faced lies involve situations in which the liar believes that it is common knowledge that what the liar says is false. The *common knowledge* bald-faced liar does not intend to deceive their addressee because they think that the addressee already knows the truth. Say that a gambler asserts to his wife that he was not gambling when she caught him with the betting tickets from that afternoon's races (Arico and Fallis 2013); it seems sensible to think that he did not try to make his wife believe him, since he should think that she already knows everything.

However, the deceptionists promptly responded to the argument from the existence of these bald-faced lies by saying that the proposed examples (1) are either lies intended to deceive in some of the senses I mentioned above or (2) are not genuine lies in the sense in which they do not involve genuine assertions—and you need to assert in order to lie.³ These replies do make the common knowledge bald-faced lies much less effective. A desperate gambler may hope that his lie could cause his wife to become slightly less confident in her true belief and he could add that the ticket belongs to a friend. Alternatively, it might be that, since he does not intend his wife to believe him, the gambler does not assert what he says but rather merely makes it look like he does; he could be playing a kind of a (language) game, he could be doing something similar to acting or even to being verbally aggressive (e.g., Keiser 2016; Maitra 2018; Harris forthcoming; Meibauer 2014a; against, e.g., Marques 2020; Viebahn 2019; Marsili 2021).

These two general objections are well-known and, in one form or another, they have been put forward in detail by many contemporary philosophers (e.g., Faulkner 2007, 2013; Kenyon 2010; Lackey 2013, 2019; Meibauer 2014a, 2014b, 2016; Leland 2015; Dynel 2011, 2015; Hawley 2018; Keiser 2016; Maitra 2018; Harris forthcoming). I do not intend to discuss their application to common knowledge bald-faced lies for two reasons. The first is that some replies already exist (e.g., Fallis 2015; Stokke 2017, 2018; Marques 2020; Viebahn 2019; Marsili 2021). The second, and more important, is that I designed cases like PINARTIO to avoid both deceptionist objections. PINARTIO involves what I named a “tell-tale kind” bald-faced lie (Krstić 2020), in which the addressee not only does not know the truth (no common knowledge) but rather *learns* the truth by observing the behaviour of the lie-disclosing sign and, vitally, Pinocchio

3 Not all scholars believe that the only way to lie is by asserting what you say—some think that one may lie by implicating false information (e.g., Meibauer 2014b; Reins and Wiegmann 2021; Wiegmann, Willemssen and Eibauer 2022), or by adding false presuppositions (Viebahn 2020) or by making false promises (Marsili 2016, 2021)—but this is the predominant view.

93 *intends* this to happen. He wants the police to deductively infer the truth
 94 from his false assertion and the behaviour of his nose. Therefore, the lie is
 95 not intended to deceive the addressee in any sense. Since it is clear that the
 96 speaker does not intend to deceive, **PINARTIO** seems to be an importantly
 97 different counterexample to the deceptionist analysis of lying; it gives us a new
 98 perspective on the issue and thus it opens the door for a new and promising
 99 debate.

100 This paper is designed to fill this void and bring the debate regarding lies
 101 and intending to deceive closer to a fruitful end. In section 1, I argue that
 102 cases such as **PINARTIO** are not uncontroversial but that more convincing
 103 cases can be developed from them. In section 2, I discuss two objections to my
 104 argument. In section 2.1, I reject the popular objection according to which
 105 bald-faced lies are not genuine lies on the count of them not involving genuine
 106 assertions. In section 2.2, I argue against the interpretation that tell-tale liars
 107 (indirectly) assert not the literal meaning of the descriptive sentence they utter
 108 but rather the proposition they want the hearer to infer from their behaviour.
 109 In section 3, I conclude my argument.

110 **Finding the Right Case**

111 My original cases do avoid some standard objections but I see now that they
 112 also generate new problems. In this section, I discuss these problems and offer
 113 a case that avoids them. In the next section, I discuss two further objections
 114 that arise.

115 In my analysis of **PINARTIO**, I write:

116 The non-[deceptionist] definition counts this [Pinocchio saying
 117 “Tony definitely isn’t in my house”] as lying because Pinocchio
 118 asserts what he believes is false, I count this as lying because
 119 the nose grows, and the [deceptionist] definition does not count
 120 this as lying because Pinocchio does not intend to deceive his
 121 addressee notwithstanding the fact that *the nose indicates that*
 122 *Pinocchio is lying*—this is why (**PINARTIO**) is a counterexample
 123 to the [deceptionist] definition. (Krstić 2019, 653; italics added)

124 In short, I argue that **PINARTIO** is a counterexample to the deceptionist anal-
 125 ysis because (i) Pinocchio does not intend to deceive his addresses and (ii)
 126 the nose indicates that he is lying. **PINARTIO** cannot be dismissed on the

127 count of it being a fairy-tale case. True, Pinocchio is a fictional character and
128 the situation I put him in is uncommon. However, this is not relevant to the
129 question under discussion. My main idea is to present a situation in which a
130 speaker *believes* (correctly or incorrectly, it does not matter) that their lie will
131 undoubtedly be disclosed to the addressee and they use this circumstance to
132 communicate the truth. In real life, police may convince their suspect that
133 their lie detector makes no mistakes and there could be a real-life person who
134 mistakenly believes that they always blush when they lie, or that their inter-
135 locutor can read their thoughts, or is skilled enough in detecting lie-betraying
136 cues. In *Meet the Parents* (Universal Pictures, 2000), Jack Byrnes convinces
137 his future son-in-law, Greg Focker, that he will unmistakably detect when
138 Greg lies just by feeling Greg's pulse. I merely flesh this situation out using
139 the character of Pinocchio as a communicative device.

140 Moreover, the issue of whether the nose will grow or not is irrelevant: the
141 deceptionist definition assumes that the *intention* to deceive is necessary
142 for lying. If the nose does not grow, Pinocchio will still lie; he will just fail
143 to communicate the truth. The examples are effective as long as (i) *the liar*
144 *believes* that something will show that he is lying and (ii) the liar and their
145 audience are in a standard context (i.e., unless some further conditions apply)
146 in which it is common ground that one asserts what one says. Thus, even if
147 Pinocchio misleads the police by asserting what he says, this would be against
148 his intention, which still sits uneasily with the deceptionist analysis. Consider
149 the following case.

150 **ARTOCCHIO.** A vicious murderer, Tony, is hiding in Artie's house.
151 The police come to question Artie about Tony's whereabouts but
152 Artie is too afraid to tell them that Tony is right here—Tony might
153 hear him. Luckily enough, Artie believes that he blushes only and
154 always when he lies and that Tony does not know about this. Artie
155 decides to use this to let the police know the truth without thereby
156 alarming Tony. Therefore, he asserts "Tony is *not* in my house" to
157 them excepting that he will immediately start blushing, that this will
158 be a clear sign to the police that he is lying, and that they will realise
159 from this that Tony *is* in Artie's house. Of course, Artie blushes not
160 because blushing is somehow connected to whether he believes

161 what he asserts but rather due to the highly stressful situation he is
162 in.⁴

163 In **ARTOCCHIO**, Artie believes that there is a perfectly reliable giveaway of
164 lying and he intends to use it to cause the police to infer the truth from his
165 lie. Artie's blushing is not a real tell-tale sign of lying but it worked as one
166 nonetheless. Furthermore, Artie and the police are in a standard context, he
167 thinks that he will be understood as asserting what he says and they expect
168 him to assert what he says, and thus there seem to be no reasons to think that
169 he did not assert what he said. Importantly, Artie's blushing is not analogous to
170 winking or finger-crossing: the function of winking is set by a convention that
171 is a part of common ground (the context is not standard) and Artie's blushing
172 is not. Therefore, we should think that Artie is understood as asserting what
173 he says and his plan is not unwise: if the police are sufficiently attentive to
174 detail, they will realise that he is lying and why he is lying. Nevertheless, there
175 is an important concern that Tony was intentionally caused to believe falsely
176 that Artie deceived the police. Tony was misled, that is; just as Artie planned.

177 In Krstić (2019, 656), I argue that the issue of whether Artie intended to
178 deceive Tony is irrelevant for the question of whether lies must be aimed at
179 deceiving—since Artie was addressing the police, not Tony. However, it may
180 be that Artie was addressing Tony after all: Artie needed Tony to hear what
181 he is saying. Hence, Tony does appear to be Artie's intended hearer and, it
182 seems to follow, Artie did intend to deceive someone by lying—Tony.⁵ The
183 conclusion that Artie intends to deceive Tony by lying, however, does not
184 follow. Tony expects and coerces Artie to say to the police that Tony is not
185 in Artie's house and Artie says this because he knows that Tony expects him
186 to do it. Therefore, Artie cannot reasonably intend to cause Tony to believe
187 as true a proposition for which Artie knows that Tony knows is false. Thus,
188 even if Artie addresses Tony, he cannot be *lying* to Tony in the sense in which
189 this requires intending to deceive him. In fact, he does not seem to be lying

4 In my original version of **ARTOCCHIO** (Krstić 2019, 655), "Artie *believes* that he always stutters when he lies," which leaves it open whether Artie may also believe that he always stutters when he utters something false in a way that does not count as lying (e.g., when being sarcastic). I avoid this ambiguity by saying that Artie believes that he blushes "only and always" when he lies. Also, rather than "telling" the truth, in this version, Artie lets the police know the truth.

5 Goffman (1981) divides hearers into ratified (official) and unratified. Ratified hearers can legitimately listen to the speaker whereas unratified cannot; they are bystanders.

190 to Tony at all: he just says what Tony wants him to say.⁶ Say that a company
191 manager orders his assistant to present false data at the board meeting in
192 exchange for a promotion. This assistant will lie to other board members but
193 not to his boss. The same applies to Artie.

194 So, it seems as if Artie lies while not intending to deceive anyone by as-
195serting what he says. However, whether **ARTOCCHIO** is enough to reject the
196 deceptionist view depends on how broad our analysis of lying is. On the view
197 that one may lie only by asserting something one believes is false, **ARTOCCHIO**
198 vindicates the non-deceptionist definition. However, broader analyses exist
199 (see footnote 3) and so one may argue that Artie's lie is intended to deceive
200 Tony—only in a sense that does not involve asserting. Artie may, for instance,
201 intend to deceive Tony by falsely implicating that he led the police off Tony's
202 track. On this analysis, then, Artie both counts as asserting what he says
203 and as intending to deceive by lying (i.e., by implicating false information to
204 Tony). Therefore, while **ARTOCCHIO** does appear to put reasonable pressure
205 on the deceptionist analysis, there still are some controversies about it. Most
206 of these controversies can be eliminated with simple modifications. Consider
207 the following case.

208 **WITNESSIO.** A gruesome murder happened in Artie's bar. The police
209 do not know who did it but Artie knows that Tony did it. Artie
210 wants Tony off his back but he is afraid to testify against Tony. Artie
211 believes that he blushes always and only when he lies, he believes
212 that the police know this as well, and he decides to use this to let the
213 police know that Tony is the murderer without actually testifying
214 against him (thus avoiding the imminent retribution). Tony went
215 to Polly's place to hide the murder weapon and Artie knows this.
216 Therefore, Artie says to the police "Maybe you could talk to Tony? A
217 minute ago, he rushed to Polly's house regarding a matter of great
218 urgency. Tony definitely did *not* commit the crime." Artie hopes that
219 he will start blushing while uttering the last sentence, that this will
220 be a clear sign to the police that he is lying, and that they will realise
221 from this that he wants to let them know both that Tony committed
222 the crime and where they can find him. Artie hopes that they will
223 catch Tony with the murder weapon.

6 On coerced speech acts and how they may not count as assertions, see Kenyon (2010) and Leland (2015).

224 **WITNESSIO** and **ARTOCCHIO** involve a rather plausible idea that some people
 225 may think that something will unmistakably show that they are lying and
 226 they are similar to the context of two recent movies. The first is *Knives Out*
 227 (Lionsgate, 2019) in which the character of a nurse, Marta Cabrera, cannot
 228 lie without vomiting (“Just the thought of lying [...] It makes me puke,” she
 229 says), the detectives that are questioning her know this, she knows that they
 230 know, and indeed she does vomit every time she lies. The second is *Meet the*
 231 *Parents* (Universal Pictures, 2000), in which Jack Byrnes convinces his future
 232 son-in-law, Greg Focker, that he will unmistakably detect when Greg lies just
 233 by feeling Greg’s pulse (the pulse is a lie-betraying sign). The main difference
 234 is that, on the one side, Marta avoids lying by giving true but incomplete
 235 answers to questions when asked and Greg simply goes for telling the truth,
 236 whereas, on the other side, Artie comes up with a plan to make lemonade
 237 when life gives him lemons: he decides to use what he thinks is his otherwise
 238 unfortunate reaction to his advantage and cause the police to learn the truth by
 239 lying to them. Another difference is that, if Artie blushes at the right moment,
 240 this will be not because blushing is somehow connected to whether he lies
 241 but rather because of the highly stressful situation he is in.

242 In **WITNESSIO**, Tony did not end up with a false belief; rather he was left
 243 without any belief regarding Artie’s conversation with the police. More im-
 244 portantly, not only is Artie not addressing Tony, he hopes that Tony never
 245 learns about the conversation. Therefore, neither did Artie intend to deceive
 246 Tony, nor was he lying to Tony. Even if one can lie by making false promises,
 247 implicatures, or presuppositions, Artie does not lie to Tony in any of those
 248 senses; he is not addressing Tony. While Artie does not lie intending to deceive
 249 the police, misleading them about Tony’s whereabouts or Artie’s intentions is
 250 possible in **WITNESSIO** (they do not believe that Artie blushes always and only
 251 when he lies) but this is irrelevant for our discussion. We are not analysing
 252 whether epistemic harm will be caused but rather whether the liar *intends*
 253 to cause it or whether he *expects* that he might cause it (see Krstić 2020, sec.
 254 2.1) and Artie clearly lacks the intention to deceive them and he does not
 255 expect them to end up misled (he believes that they will understand why he
 256 blushes). Finally, because the belief that Artie blushes always and only when
 257 he lies is not common ground between Artie and the police, we cannot say
 258 that blushing implies that Artie does not assert what he says.

259 **WITNESSIO** avoids the most obvious objections, but it fails to avoid all
 260 objections. I anticipate two. The first is that, because he does not intend to
 261 give the police a reason to believe what he says, Artie does not assert what

262 he says and thus does not lie. The second is that Artie (indirectly) asserts
 263 the proposition he intends the police to infer from his behaviour and the
 264 literal meaning of the uttered proposition (“Tony committed the crime”) and,
 265 because he believes this proposition to be true, he does not count as lying. I
 266 will resolve these objections in turn.

262 2 Objections

268 2.1 Not an Assertion

269 According to one influential analysis of assertion (Gricean in nature), I as-
 270 serted that p by uttering x if and only if I uttered x intending to induce in
 271 you the belief that p or give you grounds for believing it by means of your
 272 recognition of the full content of my intention (e.g., Bach and Harnish 1979;
 273 Récanati 1987; similarly, Peirce 1935; Grice 1989).⁷ Accounts of this sort are
 274 typically called *Gricean* or *Neo-Gricean*, Keiser (2016) calls them *epistemic*,
 275 and Harris (forthcoming) and Siebel (2020) call this approach to communi-
 276 cation *intentionalism*. I will refer to the view as NEO-GRICEAN ANALYSIS OF
 277 ASSERTION.

278 According to one influential argument based on the NEO-GRICEAN ANALY-
 279 SIS OF ASSERTION, because he does not intend to give his audience grounds
 280 for believing what he says because he says so, Artie does not count as asserting
 281 what he says in WITNESSIO and therefore—on the popular assumption that
 282 lies are a subset of assertion—he does not lie (e.g., Chisholm and Feehan 1977;
 283 Meibauer 2014a, 2014b, 2016; Keiser 2016; Harris forthcoming, 13, 15). That
 284 is to say, I assume that one would object that, while there is nothing in the
 285 context that could prevent Artie’s utterance to count as an assertion, Artie did
 286 not act on an intention constitutive of asserting and *this failure* (rather than
 287 pragmatic considerations or linguistic conventions) disqualifies the utterance
 288 from counting as an assertion and a genuine lie (which requires asserting
 289 what you say).

290 Many influential philosophers think that this is a very serious problem for
 291 any non-deceptionist analysis of bald-faced lies. The idea is that, because Neo-
 292 Griceans think that the ordinary language concept of lying is too ambiguous,

7 Although Grice did not explicitly attempt to define assertion, Pagin and Marsili (2021) argue that his analysis of non-natural meaning can be straightforwardly applied to provide one. Peirce (1935, 547) writes that asserting involves giving a reason to believe what is said but his account also assumes that the asserter makes certain commitments.

293 they are looking for a definition of lying that fits neatly within their definition
 294 of assertion, which in turn fits neatly within a relevant broader theory of
 295 speech acts and communication. Therefore, they will maintain that bald-
 296 faced lies are not genuine lies because they do not involve genuine assertions.
 297 While Artie believes that his blushing signals that he is lying when he is lying,
 298 his conception of lying is too broad and he does not intend to lie in the relevant
 299 sense (which involves asserting what you say).

300 I will reject this objection in three steps, where each step gives my argu-
 301 ment a premise. In step 1, I argue (by analogy) that the argument from the
 302 objection generates an unfalsifiable position. In step 2, I argue that it entails
 303 that competent language users unreliably track assertions, which is a very
 304 bold and empirically unsupported claim. The first two steps only show that
 305 the objection is much less serious than what initially seems; they do not show
 306 that it fails. The third step, however, shows that the argument fails. In step
 307 3, I argue that, if understood as not allowing exceptions (such as bald-faced
 308 lies), the **NEO-GRICEAN ANALYSIS OF ASSERTION** misclassifies some sincere
 309 assertions as not assertions: some sincere asserters do not act on the intention
 310 to give their hearers grounds for believing what they say. I conclude that,
 311 considering steps 1–3, this specific argument claiming that bald-faced lies are
 312 not genuine assertions fails. I now proceed to step 1.

313 In his *Introductory Lectures on Psycho-analysis (1916–1917)*, Freud defends
 314 his dream theory from the concern that dreams do not reveal our unconscious
 315 mental life. His defence is strikingly similar to the comeback presented above:
 316 he dismisses counterexamples by reinterpreting them. The following is one
 317 such case.

318 A woman dreamer says: “Am I supposed to wish that my husband
 319 were dead? Really that is outrageous nonsense! Not only is our
 320 married life very happy, though perhaps you won’t believe that,
 321 but if he died I should lose everything I possess in the world.”
 322 (Freud 1929, 121)

323 This woman directly challenges Freud’s diagnosis in the same way **WITNESSIO**
 324 challenges the deceptionist account of lying (Artie thinks that he is lying;
 325 the woman thinks that she wants her husband alive). Freud’s answer is very
 326 interesting.

327 *Assuming that* unconscious tendencies do exist in mental life, the
 328 fact that the opposite tendencies predominate in conscious life

329 goes to prove nothing. [...] What does it matter if you [the woman]
330 do find the results of dream-interpretation unpleasant, or even
331 mortifying and repulsive? “*Ça n’empêche pas d’exister*” [“It doesn’t
332 prevent things from existing”]. (Freud 1929, 122; italics added)

333 Freud practically says that the woman incorrectly believes that she does not
334 want her husband dead because her desire is unconscious. This reply raises
335 two important problems (see Derksen 2001). According to the reply, Freud’s
336 theory is correct no matter what the woman says: the only difference is in
337 whether the desire is conscious or unconscious. A theory defended in this
338 way can never be disproved since any testimony becomes evidence in support
339 of it. Therefore, the reply makes Freud’s position unfalsifiable; the first flaw.
340 The second flaw is that the comeback is viciously circular (i.e., it begs the
341 question). Freud correctly says “*assuming that* unconscious tendencies do
342 exist in mental life [i.e., that his theory is correct],” the fact that this woman’s
343 testimony contradicts his theory “goes to prove nothing.” But, whether his
344 theory is correct is exactly what is at stake. This testimony is a counterexample
345 to his theory and the theory cannot be used as a reason to disregard it.

346 The argument to the conclusion that bald-faced lies do not involve genuine
347 assertions involves the same fallacious line of reasoning. This is the analogy
348 between the two replies: Freud says that, if the woman concurs with his
349 diagnosis, her desire is conscious and, if she denies it, the desire is unconscious,
350 she just thinks that she does not have the desire. Analogously, according to
351 the given argument, if speakers intend to deceive by lying, then their lies
352 involve genuine assertions and, if they do not intend to deceive, then their
353 “lies” do not involve genuine assertions; these speakers just think that they
354 are genuinely lying.

355 And here is the immediate problem with this comeback: if we cannot
356 trust the speakers’ judgements as to whether they are lying or not, then no
357 testimony can be used as a counterexample to the given analysis of assertion.
358 Therefore, the reply causes the view to become unfalsifiable. This reply uses
359 the idea that intending to give grounds for beliefs is *necessary* for asserting to
360 discredit cases of bald-faced lies but whether this intention really is necessary
361 for asserting is exactly what is at stake in this debate. Therefore, the reply begs
362 the question.

363 The circularity is actually very visible in this argument. What the reply is
364 actually saying is that the deceptionist definition of lying fits neatly within
365 the Neo-Gricean definition of assertion, which in turn fits neatly within a

366 relevant broader Gricean theory of speech acts and communication, but this
 367 is the same theory. In effect, then, the argument says that *assuming that Neo-*
 368 *Griceanism is correct*, the fact that other people (e.g., Artie, Pinocchio, Marta)
 369 see bald-faced lies as genuine lies goes to prove nothing; their testimonies
 370 do not matter. This is not to say that Neo-Griceanism is incorrect but this
 371 specific defence is problematic and, as philosophers, we should be basing
 372 our views on good arguments. Therefore, because it is viciously circular and
 373 unfalsifiable, this argument should not be accepted unconditionally. I now
 374 proceed to argue that it also makes a very daring claim; this is step 2 in my
 375 argument.

376 This dispute is not only about what people (Artie, Marta Cabrera, etc.)
 377 recognize as lying but also about what they recognize as asserting. Therefore,
 378 in discrediting bald-faced lies in this particular way, one is not just saying
 379 that common folks have a broader conception of lying, but also that they
 380 cannot recognize when a proposition is being asserted.⁸ This strikes me as
 381 a rather bold position, which is the second premise in my argument, step 2.
 382 In a standard context, assertion simply seems to be a default interpretation
 383 of a declarative sentence, and this view seems to be common ground in the
 384 debate. Williamson (2000, 258), for instance, writes: “In natural language, the
 385 default use of declarative sentences is to make assertions.” That being said,
 386 even though the idea is bold, it is not completely unwarranted. Consider the
 387 following argument made by Keiser (2016).

388 In *The Godfather 2* (Paramount, 1974), “Frankie Five Angels” Pantangelli is
 389 called in as a surprise witness in a Senate hearing against the mob boss Michael
 390 Corleone but, to everyone’s utter shock, he goes against the agreement and
 391 claims under oath that he has no knowledge of any wrongdoings committed
 392 by Michael Corleone. Keiser (2016, 471) argues that, since he does not intend
 393 to give his audience grounds for believing what he says, Frankie does not
 394 assert what he says; rather, he is playing a “courtroom [language] game,” a
 395 game in which a speaker can avoid asserting what they say but still achieve a
 396 specific intended effect (e.g., go for the record).

397 People standardly think that witnesses assert statements they make while
 398 testifying under oath—witnesses assume many assertoric commitments (they,
 399 e.g., guarantee that what they say is true)—and the terms “lying on the stand”
 400 or “lying under oath” are standardly understood as lying by asserting what

8 Harris (forthcoming, 7) writes that adherence to ordinary usage should be even less appealing in the case of assertion since the term is technical and the term rarely shows up in ordinary usage. Against this argument, see Krstić and Wiegmann (2024, sec. 5).

401 the witness believes is false. According to Keiser, however, Franky was just
402 making a move in a courtroom game. If he lied, this was not in the sense
403 we are discussing here (it does not involve the default use of a declarative
404 sentence) and our intuitions about the case are incorrect. Following this
405 analysis of *Frankie*, one may say that, while we may allow that common
406 folk can recognize asserting in standard contexts, the cases I discuss are all
407 fictional and very unusual (nose growing, blushing). Therefore, even if it is
408 true that people can reliably detect assertions in standard contexts, this is of
409 limited value for my argument.

410 Keiser does not offer an unreasonable interpretation of this particular case,
411 people's intuition may go in the wrong direction in the "courtroom" context,
412 but the idea that bald-faced lies are not genuine assertions is not only bold,
413 it is also controversial. For one, choosing *Frankie* to support a very general
414 claim—namely, that *no* bald-faced lie involves a genuine assertion—is rather
415 unfair: *Frankie* involves a specific, non-standard context that allows Keiser to
416 apply her "game" analogy but people predominantly lie in standard contexts.
417 Therefore, we cannot apply insights from *Frankie* to all cases of bald-faced
418 lying: the analogy breaks. People would have been equally shocked if *Frankie*
419 had said that he knew no Godfather in a standard context far away from the
420 courtroom (e.g., in a private conversation), they would have been shocked
421 because they would think that he is lying, and Keiser's argument would not
422 apply here as easily as in the courtroom context.

423 *Gambler*, for example, involves a standard context and there are good reasons
424 to say the same about **WITNESSIO**. After all, Artie is not in a courtroom,
425 and the police did not arrest him or bring him in for questioning; they were
426 just talking. Consider the following combination of *Gambler* and **WITNESSIO**.

427 **GAMBLESSIO**. Tony has a gambling addiction and Tony's wife,
428 Carmela, knows this. Tony lies to Carmela by saying that he has
429 quit gambling and he makes Artie keep his betting ticket. However,
430 Artie accidentally drops it when he goes to Tony's place to pick up
431 a thing and Carmella sees the ticket. Artie is worried about Tony
432 but he does not want to openly tell Carmela that Tony did not stop
433 gambling; he does not want to hurt Tony's feelings by betraying his
434 trust. However, Artie believes that he blushes always and only when
435 he lies, he believes that Carmela knows this as well, and he decides
436 to use this to let her know that the ticket belongs to Tony without
437 actually saying this out loud (which would give him an excuse in

front of Tony). Therefore, Artie says to her “Don’t worry, Carmela, the ticket does not belong to Tony, it’s mine” hoping that he will start to blush and that Carmela will infer from this that Artie is lying, that the betting ticket is Tony’s, and that Artie is trying to preserve everybody’s dignity by acting this way (it’s a kind of a prosocial tell-tale sign bald-faced lie).

GAMBLESSIO preserves the virtues of **WITNESSIO** while making the stakes lower. Therefore, even though the position according to which our intuitions about lying may be unreliable may make sense when applied to cases such as *Frankie*, it fails to easily generalise to all cases of bald-faced lying.

As I argued in step 2, the claim that no bald-faced lie is an assertion is very bold: it entails that many people are not competent speakers. Of course, there is nothing wrong with making bold claims *per se* but, other things being equal, we should go for less demanding claims. And other things are not equal: this bold argument not only begs the question and generates an unfalsifiable position, it also suffers from three additional problems. Two can be immediately noticed. One problem is that this position cannot be easily generalised to all cases of bald-faced lies. I discussed this problem here. It is not really obvious that we can say that Artie and Carmela do not know what it is to assert a proposition in the context of **GAMBLESSIO**. Another problem is that Artie and Pinocchio assert according to many successful accounts of assertion and so we do not need to commit ourselves to very demanding positions.

Other views will say that Artie and Pinocchio assert what they say because they take themselves as being in a warranting context (Saul 2012), because they propose that what they say be added to official common ground (Stalnaker 1984, 1999, 2002; Stokke 2013, 2016, 2017, 2018), because they represent themselves as believing what they say (Black 1952; Davidson 1998; Fallis 2013) and even as knowing what they say (Unger 1975, 250–270; DeRose 2002, 185). They also count as asserting what they say because they make many assertoric commitments: they warrant the truth of what they say (Carson 2006, 2010), they undertake the responsibility of justifying their assertion and what follows from it (Brandom 1994, 173–175), they commit themselves to act in accordance with what they say (Dummett 1981) or that they will withdraw it if the proposition is shown to be untrue (MacFarlane 2005; similarly, Dummett

1991, 165), they commit themselves to the truth of what they say (Marsili 2021; similarly, Dummett 1981, 300), and so on.⁹

With all of this in mind, while one need not think that Neo-Griceanism delivers a failed analysis of assertion, one must wonder whether making bold claims just to keep a particular interpretation of Neo-Griceanism is justified. It may just be that Neo-Griceanism allows for exceptions.¹⁰ If this is correct, we get to keep both the Neo-Gricean analysis of assertion and the idea that some lies not intended to deceive are genuine assertions. This is why, in my final step 3, I argue that the intention to give grounds for believing what you say cannot be necessary for asserting what you say; this is the additional third problem this bold position faces. Consider a real-life case involving a sincere speaker.

ARANGIO. Stephen Miller puts credence 0 in the proposition that refugees benefit the American economy more than they cost. Jennifer Arangio, a lower-level aide who has looked at the relevant studies, has credence 1 that refugees benefit the American economy more than they cost. Arangio is well aware that, whatever she says, Miller's credence in this proposition will not be shifted one bit. Nevertheless, she tells Miller the truth and thereby risks her job.¹¹

Because she is well aware that, whatever she says, Miller's credence in the proposition will not be shifted one bit, ARANGIO cannot reasonably intend to give Miller grounds for believing what she says based on her say-so. Therefore, according to the given argument, because she cannot rationally intend to give Miller grounds to believe what she says, ARANGIO cannot rationally assert to Miller a proposition she believes to be true. In other words, according

⁹ For more analyses of assertion, see Pagin (2015).

¹⁰ Krstić and Wiegmann (2024, sec. 5) offer one plausible NEO-GRICEAN ANALYSIS OF ASSERTION that does not sit uneasily with the existence of bald-faced lies. The suggestion is that Neo-Griceans may simply hold that, just as a certain company systematically pays men higher salaries than women (some men will still be less paid than their female peers), asserters *systematically* intend to give grounds for believing that p by asserting this. Bald-faced lies now can count as genuine assertions because lies are systematically, rather than necessarily, intended to deceive.

¹¹ Please do not confuse ARANGIO with a case discussed by Benton (2018). In ARANGIO, Miller's credence in p is 0 and nothing can change his mind simply because he is unresponsive to reasons whereas, in Benton's (third) case, B's credence in p is 1 and this is why A cannot make A more confident in p . However, in Benton's case, A can give B a reason not to become less confident in p . ARANGIO was suggested to me by an anonymous reviewer of one of my earlier papers that does not discuss the connection between lying and intending to deceive.

498 to a consistent application of the argument claiming that no bald-faced lie
 499 is an assertion, in this situation, it is *impossible* for ARANGIO to assert a
 500 proposition she believes is true. This result is surely counterintuitive: the issue
 501 of whether it is *possible* for me to sincerely assert something to you should
 502 depend on me (i.e., on whether I can utter the proposition, etc.), not on you
 503 (i.e., on whether you will believe me or not). Therefore, we should think that a
 504 consistent application of the deceptionist argument misclassifies some sincere
 505 assertions.

506 Given the arguments from steps 1–3, this particular argument cannot be
 507 used as a reason to say that bald-faced lies are not genuine assertions. In
 508 particular, the line of reasoning is such that it misclassifies some sincere
 509 assertions, because the argument begs the question, generates an unfalsifiable
 510 position, and is difficult to generalise to all bald-faced lies, we can safely
 511 assume that it is not a reason to think that bald-faced lies are not genuine
 512 assertions.

513 However, my argument needs to resolve one more issue: we need to see
 514 whether Artie asserted the proposition he uttered ($\neg p$) or the proposition he
 515 intended his hearers to infer (p). For, if he asserted the latter, then he asserted
 516 what he believed was true and thus did not lie. I discuss this interpretation
 517 below.

2v2 *Indirect Assertion*

519 The sentence “He’s (She’s) a friend of Dorothy” in the early 20th century US
 520 and British homosexual subculture made a claim about a person who was
 521 a homosexual.¹² Because expressing their sexual orientation was a criminal
 522 offence, homosexuals had to hide it. This sentence made it possible for people
 523 to say that a certain person is gay without uttering that proposition. With that
 524 in mind, consider this situation.

525 DOROTHY. Will and Grace, both familiar with the terminology of
 526 US and British homosexual sub-culture, are at a party where they
 527 meet Grace’s friend Bill. Grace notices that Will fancies Bill. Thus,
 528 when Bill goes to order a drink, Grace says to Will: “Bill’s a friend of
 529 Dorothy, you know. Why don’t you buy him that drink?”

12 Possibly, “Dorothy” refers to Dorothy from *The Wizard of Oz*, who accepted those who are different.

530 Arguably, Grace asserts that Bill is gay because she means “Bill is gay” when
 531 she utters “Bill’s a friend of Dorothy” and because they are in a context in
 532 which it is common ground that she asserts the proposition she means (this is
 533 what she says) rather than the proposition she utters (the literal meaning of the
 534 uttered sentence). Our intuitions seem to correspond with this interpretation:
 535 it is natural to think that Will will think that Grace lied to him if Bill turns
 536 out not to be gay but not if it turns out that Bill does not know a girl named
 537 Dorothy.

538 **DOROTHY** highlights a difficulty that may arise concerning my cases: in
 539 these cases, someone is intending to communicate proposition p by means of
 540 uttering $\neg p$ under certain circumstances, and hence it may be that they are
 541 asserting p , rather than $\neg p$. That is, it may be that Artie actually asserts that
 542 Tony committed the crime (p) by uttering “Tony definitely did *not* commit
 543 the crime” ($\neg p$). The means by which Artie asserts p (i.e., by uttering $\neg p$)
 544 is unusual, but it is hardly impossible to assert one proposition by uttering
 545 another.¹³

546 Indirect assertion is not an uncontroversial concept (see, e.g., LePore and
 547 Stone 2014; García-Carpintero 2018) but this interpretation of **WITNESSIO** is
 548 plausible and interesting enough to be seriously considered. I assume that
 549 the relevant analysis of my cases would go something like this. Just as Grace
 550 intends that her utterance “He’s a friend of Dorothy,” in the light of the relevant
 551 subculture’s linguistic conventions, means “Bill is gay,” Artie intends that his
 552 utterance “Tony did *not* commit the crime,” in the light of his blushing, be
 553 understood as meaning “Tony committed the crime.” And, because he asserts
 554 what he says (standard context) and he says what he means rather than what
 555 he utters, Artie is not lying—since he believes that the meant proposition is
 556 true.

557 It is pertinent to note that this interpretation is not consistent with the main
 558 idea behind the **PINARTIO**-style examples. Artie believes that his blushing
 559 signals that Artie *believes* the opposite of what he says (i.e., it signals that Artie
 560 lies). He does not believe that blushing signals that he *means* the opposite
 561 of the literal meaning of his utterance.¹⁴ However, this is not a reason not to

13 I thank the anonymous reviewer for bringing this important concern to my attention.

14 According to Maynard Smith and Harper (2004), signals have evolved specifically to alter the receiver’s behaviour, whereas cues are incidental sources of information detected by unintended receivers. Consider engaging in “cue mimicry” (mimicking a cue of another organism). The predatory jumping spider (*Portia fimbriata*) attracts orb-web spiders (*Zygiella x-notata* and *Zosis geniculatus*) by vibrating their web to resemble a fly struggling (Tarsitano, Jackson and Kirchner

562 consider this interpretation, my descriptions of the cases could be misguided.
 563 Let us therefore consider how the received analyses of assertion explain Artie's
 564 and Grace's behaviour.

565 Artie warrants the truth of *the uttered proposition* (the literal meaning of
 566 the uttered declarative sentence) rather than the truth of the proposition he
 567 intends the audience to infer from his behaviour. He proposes that the uttered
 568 proposition be added to official common ground, he represents himself as
 569 believing or knowing the uttered proposition ("Tony is not the murderer"), he
 570 commits himself both to the truth of this proposition and to act in accordance
 571 with this proposition. This is in clear contrast with Grace's behaviour. Grace
 572 warrants the truth of the "Bill is gay" proposition, she proposes that "Bill is
 573 gay" be added to official common ground, she represents herself as believing
 574 that Bill is gay, she commits herself both to the truth of this proposition and
 575 to acting in accordance with this proposition. Therefore, the fact that it does
 576 not seem odd to think that Grace indirectly asserts "Bill is gay" is not a reason
 577 to think that Artie indirectly asserts "Tony is the murderer."

578 We see that neither Pinocchio nor Artie is willing to accept any asser-
 579 toric responsibility for the communicated propositions but only for the literal
 580 meaning of the uttered declarative sentences. Grace, however, does seem to
 581 be taking assertoric responsibility for the "Bill is gay" proposition. Therefore,
 582 while the idea that Artie indirectly asserts the proposition he intends the
 583 police to infer from his blushing and the uttered proposition is rather interest-
 584 ing, it does not seem to capture the relevant cases in the right way. Artie and
 585 Pinocchio intend to cause their hearers to realise that they are non-deceptively
 586 lying to them. This is vital for the success of their plan: the hearers should
 587 infer the truth from the fact that the blushing and the nose growing show that
 588 Artie and Pinocchio are lying.

589 3 Concluding Remarks

590 The idea that some lies can be intended to communicate the truth by having
 591 the hearer recognize that the speaker is lying is both plausible and important.

2000). The web vibrations of a struggling fly are cues, not signals: the fly is trying to set itself free rather than signal the orb-web spider to come down. Nevertheless, the predatory jumping spider is *using* the web vibrations to lure orb-web spiders in; therefore, this is a signal rather than a cue. Analogously, cues such as blushing when lying are not signals *per se*; however, when Artie uses blushing to send a certain message, it is a signal—since the idea is to alter the receiver's behaviour.

592 By showing that one can lie without intending to deceive anyone, tell-tale
 593 sign bald-faced lies also vindicate the non-deceptionist interpretation of the
 594 common knowledge bald-faced lies. Since we now know that lying without
 595 intending to deceive is possible, we can think that common-knowledge bald-
 596 faced liars—the gambler, for instance—could be genuine liars who did not
 597 intend to deceive. The tell-tale kind of bald-faced lies, thus, takes the debate
 598 out of the impasse and suggests that the deceptionist analysis of lying should
 599 be abandoned.

600 We can now move on and focus on other aspects of lying. For example,
 601 we can start analysing scenarios in which people typically lie to themselves
 602 and try to identify their motivation for such behaviour. Lying to myself is an
 603 *intrapersonal* analogue of *interpersonal* tell-tale sign bald-faced lies: I will
 604 immediately know when I form the intention to lie to myself, I will know that
 605 I will know this, etc. Therefore, tell-tale sign bald-faced lies can help us to
 606 understand a much bigger class of human behaviour. Because a bald-faced
 607 self-liar will probably have similar motives as a bald-faced interpersonal liar,
 608 understanding other people’s behaviour—namely, why others bald-faced lie
 609 to us—will help us to understand our own behaviour. And *vice versa*, we will
 610 be able to understand why other people lie better if we investigate our own
 611 motives for lying to ourselves. So, I suggest that this is the direction in which
 612 our analysis of lying should take.*

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The Primitivist Response to the Inference Problem

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While the inference problem is widely thought to be one of the most serious problems facing non-Humean accounts of laws, Jonathan Schaffer has argued that a primitivist response straightforwardly dissolves the problem. On this basis, he claims that the inference problem is really a pseudo-problem. Here I clarify the prospects of a primitivist response to the inference problem and their implications for the philosophical significance of the problem. I argue both that it is a substantial question whether this sort of response ought to be accepted and that the inference problem, contra Schaffer, remains a significant problem with important implications for the non-Humean position. I also argue that this discussion indicates grounds to be wary about applying the Schaffer-style strategy of straightforwardly dissolving problems by stipulation to other philosophical problems.

Jonathan Schaffer has argued that taking it to be axiomatic that non-Humean laws entail regularities “immediately dissolves” (2016b, 580) the well-known inference problem for the non-Humean conception of the laws of nature. In a slogan, the non-Humean should simply stipulate that “it is the business of laws to govern” (2016b, 577). On this basis, Schaffer (2016b, 579) claims that the inference problem is “no problem whatsoever” and that “whatever problems the non-Humean about laws might have, the Inference Problem is not among them.”

There are two parts to Schaffer’s proposal. The first is the idea that non-Humeans ought to respond to the inference problem by taking the entailment between laws and regularities to be primitive. The second is that this primitivist response straightforwardly dissolves the inference problem with no significant implications or costs for the non-Humean. So, Schaffer thinks both that the non-Humean should give a primitivist response to the inference problem and that doing so shows that the problem is really a pseudo-problem.

853 I argue here that, while there are potential primitivist responses to the
854 inference problem, contra Schaffer, these responses come with substantial
855 metaphysical commitments and argumentative burdens. This argument has
856 important implications for both the prospects of primitivist responses to the
857 inference problem and the philosophical significance of the problem. Regarding
858 the former, it shows that it is a substantial question whether these responses
859 can succeed and whether they are preferable to more traditional explanatory
860 responses. Regarding the latter, it shows that the inference problem remains
861 a serious philosophical problem that has important lessons to teach us about
862 the implications of the non-Humean view.

863 I also draw some general lessons from this discussion for primitivist re-
864 sponses to philosophical problems in general. Schaffer (2016b, 586–587) thinks
865 that his stipulative dissolution of the inference problem can be generalised to
866 other philosophical problems, such as Bradley’s regress. My argument here,
867 though, indicates grounds for thinking that this strategy may often simply
868 ignore the motivation for philosophical problems and, in so doing, obscure
869 the lessons we ought to learn from those problems. Primitivist responses to
870 philosophical problems, then, ought to proceed only with careful attention
871 to the initial motivation for the problems and how that motivation might
872 complicate any such response.

873 In section 1 and section 2 I outline Schaffer’s proposed strategy and argue
874 that it is based on a misinterpretation of the inference problem. In section 3,
875 though, I outline an alternative primitivist strategy that avoids this problem. I
876 then argue, in section 4, that this strategy comes with a substantial argumen-
877 tative and theoretical burden and so does not simply dissolve the inference
878 problem. In section 5 and section 6 I consider some potential objections
879 to my argument and, in the process, identify a second potential primitivist
880 strategy. Like the first strategy, though, this strategy involves substantial com-
881 mitments and does not simply dissolve the inference problem. The result is
882 that, while there are potential primitivist strategies for responding to the infer-
883 ence problem, they do not dissolve the problem and it is a substantial question
884 whether they succeed. In section 7, I argue that this result also indicates gen-
885 eral grounds to be wary of attempts to dissolve philosophical problems via
886 stipulation.

1 Schaffer's Stipulative Response

Non-Humeans about the laws of nature hold that laws are distinct from regularities but, nonetheless, entail regularities. The inference problem, basically, is the problem of making good sense of this entailment. While it has generally been assumed that an adequate response to this problem would consist in a plausible explanation of the entailment, Schaffer defends a stipulative response to the problem on which the entailment is axiomatized rather than explained. In effect, Schaffer's recommendation is that non-Humeans take it as a primitive fact that laws entail regularities.

Schaffer bases his proposal on the point that any theory is entitled to primitives that do sufficient theoretical work to pay their way. In the case of primitive governing laws, the non-Humean can justify this posit by appealing to the standard motivation for non-Humean laws, on which such laws provide the best explanation of nomic regularities (2016b, sec. 4.1). Schaffer, then, thinks that the inference problem is really "no problem whatsoever," because it can be dissolved by simply saying that "it is the business of laws" to govern (2016b, 579). So, Schaffer's proposal is to dissolve the inference problem by taking the entailment between laws and regularities to be primitive rather than attempting to explain it.

It will be helpful, though, to say more about the sense in which taking the entailment to be primitive avoids the need to explain it. Benovsky (2021) has recently proposed that metaphysical primitives are, in general, unexplained specifically in the sense that they are *ungrounded*. A theory's primitives, then, are those entities or facts that the theory takes to be fundamental. This idea fits well with Schaffer's (2016b, 581–583) repeated description of primitive laws as "fundamental posits" or "fundamental laws." It also provides a plausible account of explanatory responses to the inference problem as attempts to specify the grounds for the entailment from laws to regularities. Tooley's (1987) "speculative" response, for example, looks like an attempt to show that the entailment can be grounded in facts about conjunctive universals.

Understanding primitives just in terms of grounding, though, may be too narrow. On some views, there are forms of metaphysical explanation other than grounding. To take a view that I discuss further in section 6, Glazier (2017) thinks that "essentialist explanation" is a form of metaphysical explanation distinct from grounding. Essentialist explanations explain the fact that *a is F* in terms of the fact that *a is essentially F*. For instance, the fact that *Socrates is essentially human* can explain the fact that Socrates is human. If the fact

924 that Socrates is human is explained in this way, though, then it is surely not a
925 primitive.

926 To accommodate these sorts of cases, I am going to understand explanation
927 here in terms of the broader notion of metaphysical explanation rather than
928 grounding. Traditional explanatory responses to the inference problem, then,
929 are attempts to metaphysically explain how laws entail regularities. Schaffer's
930 primitivist proposal, on the other hand, is to take the entailment to be a
931 metaphysically unexplained, fundamental posit. This interpretation is, of
932 course, consistent with the idea that axiomatizing the entailment provides a
933 kind of epistemic explanation for the entailment by, for instance, clarifying
934 its place in a theoretical system.

935 Schaffer's proposal, then, is based on the idea that the following sort of
936 argument drives the inference problem:

- 937 (1) If governing laws involve a metaphysically unexplained connection
938 between laws and regularities, then there are no governing laws.
- 939 (2) Governing laws involve a metaphysically unexplained connection be-
940 tween laws and regularities.
- 941 (3) Therefore, there are no governing laws.¹

942 Given this motivation for the inference problem, the problem, as ordinarily
943 understood, consists in showing that (2) is false by metaphysically explaining
944 the relevant connection. Schaffer's argument, though, is based on the fact that
945 (2) only counts against non-Humean laws once (1) is accepted. Given this
946 point, Schaffer thinks that the problem can easily be blocked by taking the
947 connection between laws and regularities to be primitive and, on that basis,
948 rejecting (1).

949 Schaffer's approach, then, entails that the motivation for the inference
950 problem depends on overlooking the mundane point that theories are, in gen-
951 eral, entitled to invoke well-motivated primitives. Indeed, Schaffer makes this
952 claim quite explicitly at various points in the paper. For instance, in discussing
953 Lewis's claim that Armstrong's account of laws founders on the inference
954 problem, Schaffer says that Lewis "has not understood that Armstrong can

1 A referee has pointed out that this presentation of the inference problem in terms of an argument is unusual. The problem is generally presented as a problem of *how* governing laws entail regularities rather than as an argument. Nonetheless, discussions of the problem generally take place against the backdrop of an implicit argument that failure to solve the problem provides grounds to reject the non-Humean view. The argument given in the main text is a reconstruction of Schaffer's apparent interpretation of that argument.

955 and should stipulate that N is a relation” (2016b, 580) for which the law to
 956 regularity entailment holds. Similarly, in his concluding paragraph, he writes
 957 (2016b, 587):

958 It is a bad question—albeit one that has tempted excellent philoso-
 959 phers from Bradley through to van Fraassen and Lewis—to ask
 960 how a posit can do what its axioms say, for that work is simply
 961 the business of the posit. End of story.

962 At these points, Schaffer explicitly ascribes the motivation for the inference
 963 problem to a simple failure to understand that theories are entitled to posit
 964 primitives that do specified theoretical work.

965 At face value, though, it seems implausible that the inference problem
 966 could have been so widely taken to be a serious problem just on the basis of
 967 such a basic error. The details of Lewis’s presentation of the problem do not
 968 make this interpretation any more plausible. Lewis’s (1983, 366) objection to
 969 Armstrong’s theory is:

970 I find its necessary connections unintelligible. Whatever N may
 971 be, I cannot see how it could be absolutely impossible to have
 972 $N(F, G)$ and Fa without Ga . (Unless N just is constant conjunc-
 973 tion, or constant conjunction plus something else, in which case
 974 Armstrong’s theory turns into a form of the regularity theory he
 975 rejects.)

976 On Schaffer’s interpretation, Lewis’s objection to the claim that $N(F, G)$ en-
 977 tails that Fa only if Ga is premised just on an implicit rejection of primitives
 978 in general. As Lewis’s objection is that the entailment is unintelligible, Schaf-
 979 fer’s reading implies that Lewis is actually relying on the implicit claim that
 980 primitives are *unintelligible*. On this reading, Lewis accepts (1) just because
 981 he implicitly endorses:

982 (4) Any primitive is unintelligible.

983 It seems hard to believe that Lewis would be arguing, either explicitly or
 984 implicitly, on the basis of anything as implausible as (4). Indeed, as Schaffer
 985 (2016b, n. 2) notes, in an earlier section of the same paper, Lewis (1983, 352)
 986 himself points out that one way for any theory to accommodate a fact is by
 987 taking it to be primitive. Schaffer’s reading, then, requires that Lewis, in the
 988 same paper, moves from this explicit defence of primitives to the unsupported

989 assumption that unexplained facts are *unintelligible*. Charity demands that
990 we look for an alternative reading.

992 **Understanding the Inference Problem**

992 In expanding on his concern, Lewis (1983, 366) says:

993 I am tempted to complain in Humean fashion of alleged necessary
994 connections between distinct existences, especially when first-
995 order states of affairs in the past supposedly join with second-
996 order states of affairs to necessitate first-order states of affairs
997 in the future. That complaint is not clearly right: the sharing of
998 Universals detracts from the distinctness of the necessitating and
999 the necessitated states of affairs. But I am not appeased. I conclude
1000 that necessary connections can be unintelligible even when they
1001 are supposed to obtain between existences that are not clearly
1002 and wholly distinct.

1003 What drives Lewis's reasoning here is not an out-of-hand rejection of primi-
1004 tives, but rather general considerations about the sorts of necessary connec-
1005 tions that are intelligible. Lewis's concern is that the Armstrongian law and
1006 the first-order state of affairs intuitively are not connected in a way that allows
1007 any two entities to stand in a necessitation relation. While Lewis is not clear
1008 on whether the putative entailment violates "Hume's dictum,"² he clearly
1009 thinks that it violates some closely related intuition or principle.

1010 This interpretation of Lewis's objection sheds light on his earlier claim that
1011 he can understand the entailment only if N "just is constant conjunction, or
1012 constant conjunction plus something else." If $N(F, G)$ were identical with
1013 the fact that all F s are G s or had this fact as a constituent, then the two facts
1014 would plausibly be connected in a way that, in general, allows one fact to
1015 entail another. As Lewis points out, though, the facts cannot be connected
1016 in this way, because, if they were, Armstrong's theory would collapse into a
1017 Humean regularity theory.

1018 Given these points, Lewis's argument can be reconstructed as follows:

2 Wilson (2010, 595) gives a standard contemporary statement of Hume's dictum as "there are no metaphysically necessary connections between distinct, intrinsically typed, entities." See Stoljar (2008) and Wilson (2010) for discussion of how to interpret the principle.

- 1019 (5) An entity, Φ , necessitates an entity, Ψ , only if Φ stands in the sort of
 1020 connection with Ψ that is necessary for any entity to necessitate another.
 1021 (6) Governing laws do not stand in the sort of connection with regularities
 1022 that is necessary for any entity to necessitate another.³
 1023 (7) Therefore, governing laws do not necessitate regularities.

1024 The key premise here is clearly (6). While Lewis is less clear than might
 1025 be hoped about this, the intuition supporting (6) appears to be that, even if
 1026 governing laws are not fully distinct from regularities, they are too distinct
 1027 or different for the putative necessary connection between the two to be
 1028 intelligible.

1029 I think that this interpretation of Lewis is clearly preferable to the inter-
 1030 pretation that follows from Schaffer's response to the inference problem. It
 1031 is clearly the more charitable interpretation, as it avoids ascribing anything
 1032 as implausible as (4) to Lewis and avoids the inconsistency that (4) would
 1033 entail in Lewis's own views. Instead of, rather oddly, premising his argument
 1034 on an unmotivated dismissal of theoretical primitives, Lewis is arguing on
 1035 the basis of intuitions about the kinds of modal connections that make sense.
 1036 This interpretation also makes sense of Lewis's appeal to general consider-
 1037 ations about which necessary connections are intelligible, while Schaffer's
 1038 interpretation ignores this part of Lewis's argument.⁴

1039 A similar argument can be made for van Fraassen's (1989) discussion of the
 1040 inference problem. Far from ignoring the possibility of a stipulative response to
 1041 the problem, van Fraassen (1989, 97) explicitly argues against such a response.
 1042 Like Lewis, his argument is based on the point that the regularity cannot be

3 Proponents of governing laws, of course, claim that such laws are not only necessary but also sufficient for a necessitation relation to obtain. However, showing that governing laws fail to satisfy some necessary condition for such a relation to obtain would show that they do not suffice for such a relation. I take it that this is the idea underlying Lewis's argument and, as I argue below, other influential discussions of the inference problem. Thanks to a referee for pushing me to clarify this point.

4 My interpretation also fits well with Lewis's well-known, closely related discussion of chance, which Schaffer (2016b, 586–587) gives as another example of an unmotivated rejection of working primitives. Lewis writes, "I don't begin to see [...] how knowledge that two universals stand in a special relation N^* could constrain rational credence about the future coinstantiation of those universals. Unless, of course, you can convince me that this special relation is a chancemaking relation: that the fact that $N^*(J, K)$ makes it so, for instance, that each J has 50% chance of being K ." On my interpretation, what underlies Lewis's discussion here is his conviction that the facts that $N^*(J, K)$ and "that each J has 50% chance of being K " are too different to stand in a necessitation relation.

1043 constitutive of the non-Humean law. The problem, then, is how non-Humean
 1044 laws can entail regularities, given that they are “so distinctly different” (1989,
 1045 97) from each other. It is this point that van Fraassen appears to think rules
 1046 out the stipulative response and motivates the demand—which he ultimately
 1047 thinks cannot be met—for an explanatory response.

1048 So, like Lewis, van Fraassen’s presentation of the inference problem is not
 1049 premised on an unmotivated rejection of primitives. Instead, also like Lewis,
 1050 his argument is based on the idea that non-Humean laws and regularities are
 1051 too distinct or different for the laws to entail the regularities, at least without
 1052 a compelling explanation of the entailment. I take it, then, that the interpreta-
 1053 tion developed in this section does a better job than Schaffer’s interpretation
 1054 of capturing van Fraassen’s reasoning in addition to Lewis’s reasoning.

1055 The interpretation also makes sense of Tooley’s early “speculative” response
 1056 to the inference problem, which puzzles Schaffer (2016b, 585). Schaffer is
 1057 confused that Tooley (1987) feels the need to go beyond his own stipulative
 1058 response and propose a speculative response that involves substantial claims
 1059 about the metaphysics of universals.

1060 To see how the current proposal dispels this confusion, we can begin with
 1061 Tooley’s interpretation of the inference problem. Tooley (1987, 110–111) un-
 1062 derstands the problem as follows:

1063 how, exactly, are we to think of the relationship which purport-
 1064 edly obtains, on the present account of laws, between statements
 1065 asserting that universals stand in certain nomological relations,
 1066 and corresponding generalizations about the properties and/or
 1067 relations of first-order particulars? The relation is to be one of
 1068 logical entailment. But is it a formal relation, or does one have to
 1069 postulate *de re* relations between distinct states of affairs?

1070 The concern here is clearly whether the entailment from laws to regularities
 1071 requires accepting necessary connections between distinct entities. Indeed,
 1072 I think no other discussion of the inference problem is so explicitly cast in
 1073 terms of a concern over Hume’s dictum.

1074 Tooley is equally explicit about what his speculative theory might offer to a
 1075 solution to the inference problem. He says “it may provide an answer to the
 1076 question [...] of whether the present account of laws commits one to holding
 1077 that there can be logical relations between distinct states of affairs” (1987,
 1078 123). He goes on to argue that his speculative theory provides a way to avoid
 1079 this commitment (1987, 128–129).

1080 Tooley, then, interprets the inference problem as the problem of how laws
1081 can entail regularities *without violating Hume's dictum*, and his speculative
1082 response is intended to show how this is possible. This interpretation and
1083 response are clearly in line with my interpretation of the inference problem,
1084 on which the problem is how laws can entail regularities without violating
1085 general modal principles. So, Schaffer's confusion at Tooley's proposed re-
1086 sponse is ultimately driven by Schaffer's failure to note how these general
1087 modal considerations motivate the problem.

1088 My interpretation of the inference problem, then, fits better with the original
1089 presentations and discussions of the problem than Schaffer's interpretation.
1090 While general modal principles play a central role in these discussions, Schaf-
1091 fer's interpretation simply ignores this aspect of the discussions. I have argued
1092 that, as a consequence, he gives uncharitable and unconvincing interpreta-
1093 tions of Lewis and van Fraassen and fails to make good sense of Tooley's
1094 discussion.

1095 My interpretation, on the other hand, makes better sense of each of these
1096 discussions by accommodating the central role that general modal consider-
1097 ations play in them. Given this interpretation, the inference problem arises
1098 specifically as the need to show that (6) is false by showing that governing
1099 laws and regularities *are* connected in the manner required to stand in a
1100 necessitation relation. The motivation for the problem, then, comes from the
1101 kinds of general modal considerations that drive Lewis, van Fraassen, and
1102 Tooley's discussions rather than from an unmotivated rejection of primitives.

1103 **The Genuine Primitivist Alternative**

1104 The interpretation of the inference problem that I just defended entails not
1105 only that Schaffer's interpretation of the problem is misguided but also that his
1106 response to the problem is misguided. If Schaffer were right that the inference
1107 problem is motivated just by a general rejection of theoretical primitives,
1108 then he would be right that it could be solved by simply stipulating that non-
1109 Humean laws necessitate regularities. Given the interpretation of the problem
1110 that I just defended, though, this response begs the question. If the problem
1111 is motivated by the concern that non-Humean laws necessitating regularities
1112 has unacceptable modal implications, then stipulating that non-Humean laws
1113 *do* necessitate regularities simply assumes that those concerns are misguided.

1114 This point can also be put in terms of general considerations about primi-
1115 tives. While any theory is entitled to invoke primitives to do theoretical work,

1116 certain primitives may be independently problematic. While positing a primi-
 1117 tive always comes at some theoretical cost, positing such primitives comes
 1118 at an inflated cost. Indeed, if the posit is sufficiently problematic, it may be
 1119 unacceptable regardless of the work that it does.

1120 On the interpretation I have defended, though, the inference problem
 1121 is motivated by the idea that the entailment between non-Humean laws
 1122 and regularities—at least in the absence of a plausible explanation of the
 1123 entailment—violates general principles or intuitions about necessary connec-
 1124 tions. This idea, however, also implies that the entailment is a problematic
 1125 primitive that would either come at an inflated theoretical cost or actually
 1126 be untenable. On Lewis’s view, the general intuition that counts against the
 1127 entailment renders it unintelligible, and, so, clearly entails that it is an *unac-*
 1128 *ceptable* primitive.

1129 The motivation for the inference problem, then, is also motivation for
 1130 thinking that the entailment between non-Humean laws and regularities is
 1131 an unacceptable or, at least, a problematic primitive. So, responding to the
 1132 inference problem by simply positing this entailment as a primitive fails to
 1133 address the problem. One does not show that the entailment is an acceptable
 1134 primitive by positing it as a primitive.

1135 Against this backdrop, it is also clear how a successful explanatory re-
 1136 sponse to the inference problem would do the necessary work. As I proposed
 1137 in section 1, the kind of explanation involved in attempted explanatory re-
 1138 sponses is metaphysical explanation. A successful explanatory response, then,
 1139 would work by identifying metaphysical grounds—or some other metaphys-
 1140 ical explanantia—for the entailment that do not violate the relevant general
 1141 modal principles. In so doing, such an account would show how non-Humean
 1142 laws respect the relevant principles in a way that simply stipulating that non-
 1143 Humean laws entail regularities clearly does not.

1144 This result, though, does not show that no primitivist response to the infer-
 1145 ence problem could succeed. Instead, it shows that such a response would
 1146 have to come with an argument that the motivation for the inference prob-
 1147 lem does not, in fact, show that the entailment is an unacceptable primitive.
 1148 Specifically, the response would have to be supported by an argument that
 1149 general modal considerations actually fail to support (6). Given such an argu-
 1150 ment, rejecting (6) without explaining how laws entail regularities would be
 1151 legitimate rather than simply begging the question.

1152 So, the genuine primitivist alternative to explanatory responses to the in-
 1153 ference problem is to argue that, even without an explanation of how non-

1154 Humean laws necessitate regularities, general considerations about modality
1155 do not motivate (6). When made explicit, this line of reasoning might look
1156 quite plausible. At least given Lewis's relatively inchoate appeal to intuition,
1157 it seems that the non-Humean may quite reasonably deny the motivation for
1158 (6). This approach might be bolstered by arguing that the intuition in question
1159 is distinctively Humean, and, so, begs the question against the non-Humean.

1160 To the degree that (6) is motivated specifically by Hume's dictum both the
1161 idea that the motivation is unconvincing and the idea that it begs the question
1162 against the non-Humean may look particularly plausible. Hume's dictum
1163 is generally thought to be a distinctively Humean principle and recently
1164 significant questions have been raised about whether there are any good
1165 grounds to accept the principle (Wilson 2010).

1164 4 The Prospects of the Primitivist Response

1167 On closer inspection, though, I think that widespread intuitions and signifi-
1168 cant modal principles provide non-circular support for (6). The consequence is
1169 not that a primitivist response to the inference problem is *impossible* but rather
1170 that such a response comes with a significant theoretical and argumentative
1171 burden.

1172 In the first place, even if (6) is motivated by a distinctively Humean intuition,
1173 there would still be significant dialectical reasons for non-Humeans to attempt
1174 to adequately address it. A non-Humean who could make good sense of laws
1175 in a way that is consistent with as many Humean commitments or intuitions
1176 as possible would, after all, be in a better dialectical position. So, even if the
1177 motivation for the inference problem were, in important respects, based on
1178 Humean intuitions, there would still be substantial grounds for non-Humeans
1179 to attempt to avoid violating those intuitions.

1180 Perhaps more significantly, though, it is not at all clear that the relevant
1181 intuition is distinctively Humean. At least some non-Humeans appear to
1182 endorse the concern that an unexplained necessary connection between laws
1183 and regularities would be highly problematic. For instance, Armstrong (1997,
1184 226) contrasts his explanatory response to the inference problem with the
1185 "profoundly mysterious doctrine" that "[u]niversals, whether instantiated
1186 or uninstantiated, stand above the flux and certain relations between the
1187 universals 'govern' their instances, lay down the law to their instances." Tugby
1188 (2016, 1156), in developing his own explanatory dispositionalist response

1189 to the problem, agrees that the position described here by Armstrong is “a
1190 difficult picture to comprehend.”

1191 Indeed, a plausible diagnosis for why so many non-Humeans have taken
1192 the inference problem to be a pressing problem is that they share this sort
1193 of intuition. There is certainly nothing obviously inconsistent about both
1194 thinking that there is important potential theoretical work for non-Humean
1195 laws, and being concerned that such laws involve a problematic necessary
1196 connection between laws and regularities.

1197 Bird (2005; 2007, 91–97), moreover, has developed the inference problem
1198 against Armstrong specifically as the problem that $N(F, G)$'s entailing that all
1199 F s are G s violates Armstrong's *own* general modal commitments. In particular,
1200 he argues that the entailment is inconsistent with Armstrong's combinatorial
1201 approach to modality and his associated principle of INDEPENDENCE, on
1202 which there are no entailments between fully distinct states of affairs. In pur-
1203 suing this argument, Bird argues, in a similar vein to Lewis and van Fraassen,
1204 that the Armstrongian law cannot have the regularity as a constituent.

1205 So, Bird's presentation of the inference problem follows very closely the
1206 reconstruction that I gave in section 2. The idea is that, because $N(F, G)$
1207 cannot have *all F s are G s* as a constituent, general principles concerning
1208 necessary connections mean that $N(F, G)$ cannot entail that all F s are G s. In
1209 this case, though, the argument is based on Armstrong's own quite precise
1210 modal claims, and, so, cannot be dismissed as being based on inchoate or
1211 distinctively Humean intuitions.

1212 Furthermore, another precise and influential general modal principle that
1213 does not obviously beg the question against the non-Humean conception of
1214 laws straightforwardly rules out the primitivist approach. This is the principle
1215 that there are, in general, no brute necessary connections between entities.⁵
1216 While this principle is again consistent with thinking that there is important
1217 theoretical work for non-Humean laws to do, it is clearly inconsistent with
1218 taking the necessary connection between laws and regularities to be primitive.

5 Van Cleve (2018) provides a useful overview of the many different uses to which this principle has been put in recent metaphysics. Van Cleve's own conclusion is that it is a substantial question whether the principle ought to be accepted and whether the various uses to which it has been put are justified. The key point here, though, is that the principle is widely accepted and that denying it involves taking on a substantial general modal commitment.

1219 So, given this principle, the only way to block (6) is via a plausible account of
1220 how laws “do their stuff.”⁶

1221 It is also worth noting that Wilsch (2018, 808–809; 2021, 916) has recently
1222 pointed to grounds for rejecting brute necessities that may look especially
1223 compelling to the non-Humean. He argues that “[d]istribution patterns across
1224 possibilities cry out for explanations in the way distribution patterns in the
1225 actual world cry out for explanation” (2021, 916). The idea that non-Humean
1226 laws are necessary to explain actual distribution patterns, though, is central
1227 to the case for non-Humean laws. So, if Wilsch is right, a non-Humean who
1228 takes it as primitive that laws necessitate regularities is in serious danger of
1229 undermining the original case for non-Humean laws.

1230 The point of this section has been to show that widely accepted intuitions
1231 and principles about necessary connections support (6) without in any ob-
1232 vious way begging the question against the non-Humean. This conclusion,
1233 of course, does not rule out the possibility of a primitivist response to the
1234 inference problem. It remains possible to argue either that taking the entail-
1235 ment between laws and regularities to be primitive does not, in fact, violate
1236 significant modal principles or that, all things considered, any such violation
1237 is a price worth paying for non-Humean laws.

1238 What the conclusion does indicate, though, is that a primitivist response to
1239 the inference problem cannot deliver a Schaffer-style stipulative response that
1240 “immediately dissolves” the problem and shows that it is “no problem at all.”
1241 Instead, as the primitivist response assumes a substantial argumentative and
1242 theoretical burden, it leaves the inference problem in place as a significant
1243 problem that raises serious difficulties and potentially generates important
1244 commitments for the non-Humean.

1245 Furthermore, in demonstrating the commitments and apparent costs that
1246 come with the primitivist response, the discussion here indicates that it is a
1247 substantial question whether the response can ultimately be made plausible or
1248 appealing. Certainly, the burden that attaches to this kind of response means
1249 that there remain significant initial grounds for favouring an explanatory
1250 response over such a response. So, my conclusion here is not only that the
1251 Schaffer-style stipulative dissolution of the inference problem fails but also
1252 that it is unclear how successful a more substantive primitivist response might
1253 be.

6 As Schaffer (2016b, 585) notes, Sider (1992, 262) uses this expression in this context. Schaffer expresses puzzlement at the demand for this sort of account.

125 **5 Non-Humean Laws and General Modal Principles**⁷

1255 On the account of the inference problem that I have defended here, general
 1256 modal considerations, such as Hume's dictum and the ban on brute necessities,
 1257 are central to the problem. A resulting concern might be that the account
 1258 simply collapses the inference problem into the distinct problem of whether
 1259 these general modal principles ought to be accepted. Indeed, Hildebrand
 1260 (2020, 6–7) has recently implied that the inference problem does disappear
 1261 into these general modal questions. The idea is that, if these sorts of principles
 1262 provide the only reason to deny that non-Humean laws primitively entail
 1263 regularities, then the question really becomes whether we ought to accept
 1264 these principles.

1265 On my interpretation, though, the inference problem is not simply the
 1266 problem of whether the relevant general principles ought to be accepted;
 1267 rather, it is a problem that *presupposes* those principles. So, it is true that
 1268 *one* possible response to the problem, the primitivist response, is to question
 1269 the presupposition of those principles. However, a second possible response,
 1270 the explanatory response, accepts the principles and attempts to show that
 1271 non-Humean laws need not violate them.

1272 Furthermore, as I argued in the previous section, while the primitivist
 1273 response is a genuine option for the non-Humean, there is also significant
 1274 initial motivation for pursuing the explanatory response. So, on my interpre-
 1275 tation, one well-motivated response to the inference problem is to show how
 1276 non-Humean laws can respect the relevant general modal principles. The
 1277 interpretation, then, does not simply collapse the inference problem into the
 1278 question of whether those modal principles ought to be accepted.

1279 This point, though, leads to a second potential concern with my interpreta-
 1280 tion. In his recent survey article, Hildebrand (2020, 2) identifies non-Humean
 1281 theories just as views that invoke modal primitives in accounting for nomic
 1282 necessity. If this is right, then it seems that, irrespective of considerations
 1283 about the inference problem, non-Humean theories will in general violate
 1284 both Hume's dictum and the ban on brute necessities. The concern, then,
 1285 is that my interpretation renders the inference problem redundant because
 1286 non-Humean theories generally involve primitives that violate the relevant
 1287 modal principles.

7 I'd like to thank a referee for *Dialectica* for raising the objections to my argument that I discuss in this section.

1288 As I indicated earlier, though, prominent non-Humeans, like Armstrong
1289 and Tooley, endorse Hume's dictum and shun brute necessities. Furthermore,
1290 in their responses to the inference problem, both Tooley and Armstrong
1291 attempt to produce non-Humean theories that get by without modal primitives.
1292 This is especially clear in Tooley's case, as he says that his speculative theory
1293 is a view "according to which what laws of nature there are is capable of
1294 being unpacked simply in terms of what universals there are, together with
1295 part-whole relations between universals" (1987, 123). His goal here is clearly
1296 to provide a theory that does *not* involve any modal primitives.

1297 While just how to understand Armstrong's (1997, 224–230) response to the
1298 inference problem is less clear, a similar interpretation seems plausible. On
1299 Armstrong's view, while N only contingently relates F and G , where $N(F, G)$
1300 is the case it constitutes a structural universal (1997, 227). Armstrong's key
1301 idea appears to be that this fact ensures that, when a instantiates F , a also
1302 instantiates G . Whether this idea works is, I think, a substantial question, but
1303 the key point for now is that it does not appear to invoke modal primitives
1304 that violate Hume's dictum or involve brute necessities.

1305 There are also more recent cases of non-Humeans explicitly rejecting brute
1306 necessities. In the previous section, I alluded to an argument by Wilsch against
1307 brute necessities that seems particularly appealing from an anti-Humean point
1308 of view. Wilsch (2021) proceeds to develop an anti-Humean view that eschews
1309 brute or fundamental necessities.⁸ Kimpton-Nye (2021), in turn, has recently
1310 argued that invoking brute necessities fits poorly with dispositionalist views.
1311 Partly on this basis, he proposes a dispositionalist or power-theoretic view
1312 that grounds modal facts in instances of essentially qualitative properties.⁹
1313 As the modal facts in this theory are grounded in qualitative states of affairs,
1314 the theory does not appear to involve modal primitives or brute necessities.

1315 There are, then, both prominent and recent cases of non-Humeans explicitly
1316 attempting to avoid any commitment to modal primitives that involve brute
1317 necessities. So, I do not think it should be assumed from the outset that non-
1318 Humeans are committed to these sorts of primitives. Given that the discussion
1319 in the previous section indicated significant initial reasons to be wary of such
1320 a commitment, this looks like good news for the non-Humean.

8 I discuss Wilsch's view further in the next section.

9 This sort of theory has recently received a fair amount of attention. In addition to Kimpton-Nye (2021), Coates (2021), Tugby (2021), and Azzano (2021) all discuss versions of it at length. Earlier discussions of a view along these lines are Jacobs (2011) and Tugby (2012).

1321 Non-Humean theories, then, should not simply be assumed to involve brute
 1322 necessities or to violate Hume’s dictum, nor should the inference problem be
 1323 thought to collapse into the problem of whether the relevant general modal
 1324 principles should be accepted. Instead, the inference problem turns on the
 1325 substantial question of whether non-Humean accounts of the laws of nature
 1326 can respect these sorts of principles. As I argued in the previous section,
 1327 this question has bite because the non-Humean would incur a significant
 1328 argumentative and theoretical burden by rejecting these principles.

1326 6 The Essentialist Primitivist Response

1330 I have thus far interpreted the primitivist response to the inference problem as
 1331 taking the necessitation between laws and regularities to be brute. Schaffer’s
 1332 understanding of the axioms with which primitive posits are outfitted, though,
 1333 points to the possibility of an alternative interpretation. Schaffer (2016b, n. 1)
 1334 interprets these axioms as “meaning postulates and so [...] analytic to their
 1335 terms,” but he allows that they may also be thought of as essential truths. So,
 1336 the entailment between laws and regularities is either analytic to the term
 1337 “law” or essential to laws.

1338 Both approaches might be thought to provide an explanation of the ne-
 1339 cessitation between laws and regularities rather than taking it to be brute.
 1340 Given the analytic conception of axioms, the idea would be that laws entail
 1341 regularities *because* doing so is part of what it *means* to be a law. Given the
 1342 essentialist conception, on the other hand, the idea would be that laws entail
 1343 regularities *because* doing so is part of what it is to *be* a law. In providing
 1344 these explanations, though, these approaches might be thought to show how
 1345 the non-Humean can reject (6) without violating general modal principles.
 1346 The key idea would be that these explanations show how laws *are* related
 1347 to regularities in the manner required for laws to entail regularities without
 1348 violating these principles.¹⁰

1349 While, as I just mentioned, Schaffer does suggest both the analytic and the
 1350 essentialist interpretations of the axioms he proposes, I do not think that the
 1351 strategy just outlined can be reasonably attributed to him. That is, I do not
 1352 think he can reasonably be read as proposing that the axioms, in virtue of
 1353 being analytic or essential to laws, can explain the entailment of regularities
 1354 by non-Humean laws. Schaffer nowhere acknowledges the role that I have

10 I would like to thank a referee for *Dialectica* for raising this possibility.

1355 argued general modal considerations play in motivating the inference problem.
 1356 Nor does he at any point allude to axioms, conceived either in the analytic or
 1357 essentialist fashion, as being capable of explaining necessary facts. Instead, in
 1358 line with my earlier interpretation of his proposal, he focuses on the *general*
 1359 acceptability of axiomatizing rather than explaining facts, including in cases
 1360 that do not involve any concerns about brute necessities.¹¹ Nonetheless, the
 1361 strategy just outlined provides an alternative primitivist approach that is worth
 1362 considering.

1363 Given the analytic interpretation of axioms, though, the approach is not
 1364 promising. In her discussion of Hume's dictum, Wilson (2010, 625) points
 1365 out that the fact that a sentence is analytic does not answer the metaphysical
 1366 question of why the entities referred to in the sentence stand in a necessary
 1367 relation. Using the example of the sentence "necessarily, anything that is
 1368 scarlet is red," she points out that, while the truth of the sentence

1369 may be established by attention to its constitutive words or con-
 1370 cepts [...] [it remains an open question] what metaphysical facts
 1371 about the entities at issue in [...] [the sentence] are such that
 1372 expressions for or concepts applying to these entities incorporate
 1373 their necessary connection (Wilson 2010, 625–626)

1374 In the case of governing laws, there is no obstacle to defining the term "law"
 1375 such that laws are distinct from, but entail, regularities. However, doing so
 1376 provides no *metaphysical* explanation of how the entities, laws, and regulari-
 1377 ties, are related to each other in such a way that the former necessitates the
 1378 existence of the latter. So, if axiomatizing the entailment is simply a matter of
 1379 defining "law" in a certain way, then it does not address the concerns about
 1380 brute necessities or Hume's dictum.

1381 The proposal in terms of essences, on the other hand, is more promising.
 1382 On this approach, to axiomatize the governing role of laws is to posit that
 1383 it is essential to governing laws that they entail regularities. As I noted in
 1384 section 2, Glazier (2017) has recently argued that, in general, the fact that *a*
 1385 *is essentially F* can metaphysically explain the fact that *a is F*. If this is right,
 1386 though, then the fact that *Law(Φ) essentially entails Φ* can explain the fact that

11 In a particularly clear example, Schaffer (2016b, 586) writes "I am saying that everyone needs their fundamental posits, and every posit needs to be outfitted with axioms (or else it is idle). One never needs to do anything further to explain the nature of these inferences beyond saying that they are axiomatic, and one never needs to say anything further about how the posit does its stuff beyond saying that it is the business of the posit to do so."

1387 *Law(Φ) entails Φ . Indeed, Wilsch (2021, 917) has recently proposed employing*
 1388 *Glazier's argument to make precisely this essentialist move in response to the*
 1389 *inference problem.*

1390 *If one accepts Glazier's general claims about essentialist explanation, this*
 1391 *approach clearly avoids the concern that non-Humean laws involve brute*
 1392 *necessities. The approach may also avoid violating Hume's dictum, as on one*
 1393 *interpretation entities are not distinct in the sense relevant to the dictum if they*
 1394 *are essentially connected (Stoljar 2008). So, this essentialist approach appears*
 1395 *to provide a potential primitivist approach that, unlike the modal primitivist*
 1396 *approach discussed in the previous sections, blocks (6) by showing that non-*
 1397 *Humean laws are consistent with the relevant general modal principles.*

1398 *The essentialist approach, though, comes with a significant commitment*
 1399 *not only to essentialism but to a particularly robust essentialism, on which*
 1400 *objects have non-modal essences that metaphysically explain their essential*
 1401 *properties. Indeed, for just this reason, this approach is not one that could be*
 1402 *endorsed by Schaffer who is a skeptic about essence (2016a, 83).*

1403 *The essentialist view also appears to raise difficulties for the idea that laws*
 1404 *ground regularities (Emery 2019). The problem is that, if regularities are*
 1405 *essential to laws, then laws ontologically depend on regularities. However,*
 1406 *if laws ground regularities, then regularities also ontologically depend on*
 1407 *laws. The apparent result would be an objectionable circularity in relations of*
 1408 *ontological dependence.¹²*

1409 *Perhaps more significantly, though, the approach appears to be inconsistent*
 1410 *with the Dretske-Tooley-Armstrong view (DTA). The obvious way to extend*
 1411 *the approach to this view is to claim that it is essential to N that $N(F, G)$ entails*
 1412 *that all F s are G s. However, that N essentially stands in this non-trivial modal*
 1413 *relation with distinct universals is inconsistent with the categoricism about*
 1414 *properties that is central to DTA.*

1415 *I think, then, that the essentialist approach does provide a possible primi-*
 1416 *tivist response to the inference problem. However, like the primitivist modal*
 1417 *response, it comes with substantial metaphysical commitments and looks*
 1418 *to be inconsistent with both a grounding conception of governing laws and*
 1419 *DTA. So, this primitivist response also incurs a substantial burden and cannot*
 1420 *deliver on Schaffer's straightforward dissolution of the inference problem.*

12 Jaag (2014, 18) and Kimpton-Nye (2021, 3432) both raise closely related difficulties about dispositional-essentialist accounts of laws of nature.

1427 Philosophical Problems and the Stipulative Strategy

1422 My primary goal here has been to clarify the prospects and implications of
1423 a primitivist response to the inference problem. I identified two genuine
1424 primitivist options that involve taking it as primitive, respectively, that laws
1425 entail regularities and that laws *essentially* entail regularities. I argued that,
1426 while both approaches represent open possibilities for at least some non-
1427 Humeans, they both come with significant commitments and complexities. In
1428 so doing, I hope to have cleared the way for further consideration of whether
1429 either of these approaches ought ultimately to be accepted, and, if so, what
1430 the implications are for non-Humean theories of laws.

1431 Whatever the ultimate verdict on these primitivist responses, though, I
1432 have argued that they do not deliver on Schaffer's idea that a primitivist
1433 response to the inference problem can straightforwardly dissolve the problem.
1434 Instead, these primitivist approaches leave the inference problem in place as
1435 a significant philosophical problem that has important implications for the
1436 prospects and commitments of non-Humean theories of laws.

1437 I now want to clarify the implications of this result for Schaffer's attempt
1438 to generalise his stipulative strategy beyond the inference problem. Schaffer
1439 claims, for instance, that the strategy can be applied to Bradley's regress
1440 (2016b, sec. 3.2), to the connection between chance and rational credence
1441 and to issues in the metaphysics of grounding (2016b, sec. 5). In the case of
1442 Bradley's regress, he argues that the right response to the question of how
1443 relations relate is just to stipulate that "it is the business of relations to relate"
1444 (2016b, 586). My discussion thus far, though, indicates general grounds for
1445 being wary of this strategy.

1446 To see why, it is useful to see how my account of the inference problem
1447 fits with Robert Nozick's account of the form of many central philosophical
1448 problems. According to Nozick (1981, 9), these problems have the form "how
1449 is one thing possible, given (or supposing) certain other things." Nozick refers
1450 to the "other things" here as "apparent excluders", as they are things that
1451 apparently exclude the possibility in question.

1452 For instance, on Nozick's (1981, 8) interpretation, the problem of free will
1453 has the form:

1454 How is it possible for us to have free will, supposing that all actions
1455 are causally determined?

1456 The problem is how we can have free will, *given that causal determinism*
 1457 *appears to exclude free will*. Similarly, on my account, the inference problem
 1458 has the form:

1459 How can governing laws necessitate regularities, *given that they do*
 1460 *not appear to stand in the sort of general connection that is required*
 1461 *for one thing to necessitate another?*

1462 The problem is how laws can necessitate regularities, *given that general modal*
 1463 *considerations appear to exclude this kind of necessitation*. As I have already
 1464 argued, the response “laws *do* necessitate regularities” is no solution to this
 1465 problem. Instead, an adequate response to the problem needs to show how
 1466 the apparent excluder does not rule out the relevant necessitation. One could
 1467 argue that the problem is entirely misguided by arguing that there is no reason
 1468 to accept the excluder. However, simply ignoring the apparent excluder and
 1469 stipulating that laws necessitate regularities is no response to the problem.

1470 This result can be generalised. For any problem with the form:

1471 How is it possible that *p*, *given q*?

1472 the simple stipulative response “*p*” is clearly unacceptable. An adequate re-
 1473 sponse needs to acknowledge *q* as the motivation for the problem and attempt
 1474 to show how *q* does not rule out *p*. This could be done by arguing against *q* or
 1475 by arguing that *p* and *q* are, in fact, consistent. As I demonstrated in my dis-
 1476 cussion of the inference problem, these sorts of strategies are consistent with
 1477 taking *p* to be primitive. However, simply ignoring *q* and stipulating *p* begs
 1478 the question against the motivation for the problem rather than addressing it.

1479 The general lesson here is that, prior to applying the Schaffer-style simple
 1480 stipulative strategy to a philosophical problem, one ought to consider whether
 1481 the problem is driven by apparent excluders that render that strategy mis-
 1482 guided. In the case of Bradley’s regress, for instance, one might think that the
 1483 core problem is:

1484 How is it that *R* relates *a* to *b*, *given that it is possible for R, a and b*
 1485 *to exist without R relating a to b?*¹³

13 See Maurin (2011) for this kind of interpretation of the regress.

1486 On this interpretation, it is the apparent excluder that motivates the regress
1487 by indicating that *something more* than R , a and b is needed for R to relate a
1488 to b . Given this construal of the problem, an adequate response needs to give
1489 an account of what makes the difference between, on the one hand, R , a and
1490 b existing independently and, on the other hand, aRb . Simply stipulating that
1491 R does relate a to b does not solve this problem.

1492 Nor does simply saying that “it is the business of relations to relate” clearly
1493 address the problem. Indeed, in this context it is not immediately clear what
1494 this claim would mean. It cannot mean that R necessarily, or essentially,
1495 relates a to b , because R might exist without relating a to b . It may mean that
1496 R cannot exist without relating *some* entities but, of course, this fact does not
1497 explain what distinguishes aRb from the independent existence of R , a and b .

1498 As Maurin (2011) has indicated, though, this line of reasoning appears
1499 to rely on the assumption that relations are universals rather than tropes. If
1500 relations are tropes, then it may be possible to hold that R essentially relates
1501 a and b , and, so, that R exists only if aRb . So, *if one accepts the significant*
1502 *metaphysical claim that relations are tropes*, then it may be possible to respond
1503 to Bradley’s regress by stipulating that relations essentially relate certain
1504 particulars.

1505 Indeed, this point seems implicit in Schaffer’s own discussion. He writes,
1506 “What it is to be a relation between a and b is to relate a to b ” (2016b, 582).
1507 Here Schaffer appears to be implicitly treating relations precisely as tropes
1508 that are individuated by relating particular objects rather than others. If this
1509 is right, then Schaffer’s proposed primitivist response to Bradley’s regress
1510 smuggles in a highly significant ontological commitment, and, consequently,
1511 fails to deliver the advertised innocent, straightforward dissolution of the
1512 problem.

1513 The upshot is that the situation regarding a primitivist response to Bradley’s
1514 regress looks very similar to the situation regarding a primitivist response to
1515 the inference problem. In both cases, clarifying the excluders that motivate
1516 the problem indicates that the straightforward stipulative dissolution of the
1517 problem fails to engage with the motivation for the problem. Furthermore,
1518 clarifying this motivation indicates that the genuine primitivist options in re-
1519 sponding to the problems come with substantial metaphysical commitments.
1520 This result means both that it is an open question whether these primitivist
1521 approaches ought to be accepted and that they constitute substantive meta-
1522 physical proposals rather than straightforward dissolutions of problems.

1523 The general lesson is that any application of the simple, Schaffer-style
 1524 stipulative response to a philosophical problem ought to be preceded by careful
 1525 consideration of whether the problem at hand has the form identified by
 1526 Nozick. Where problems do have this form, the Schaffer-style response simply
 1527 ignores the motivation for the problem. In these cases, a primitivist response
 1528 to the problem ought, instead, to involve a substantive argument that the
 1529 excluders do not, in fact, rule out the primitivist approach. It is then an open
 1530 question, to be addressed in each case, just how successful this argument is
 1531 and which commitments come with it.*

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PROOF

How to Adopt a Logic

DANIEL COHNITZ & CARLO NICOLAI

What is commonly referred to as the *Adoption Problem* is a challenge to the idea that the principles of logic can be rationally revised. The argument is based on a reconstruction of unpublished work by Saul Kripke. As the reconstruction has it, Kripke extends the scope of Willard van Orman Quine's regress argument against conventionalism to the possibility of adopting new logical principles. In this paper we want to discuss the scope of this challenge. Are all revisions of logic subject to the Adoption Problem? If not, are there significant cases of logical revision that are subject to the Adoption Problem? We will argue that both questions should be answered negatively.

What is commonly referred to as the *Adoption Problem*¹ is often considered a challenge to the idea that the principles for logic can be rationally revised. The argument is based on a reconstruction of unpublished work by Saul Kripke.² As the reconstruction has it, Kripke essentially extends the scope of Willard Van Orman Quine's (1936) regress argument against conventionalism to the possibility of adopting new logical principles or rules. According to the reconstruction, the Adoption Problem is that new logical rules cannot be adopted unless one already can infer with these rules, in which case the adoption of the rules is unnecessary (Padro 2015, 18).

In this paper we want to discuss the scope of this challenge. Are all revisions of logic subject to the Adoption Problem? If not, are there significant cases of logical revision that are subject to the Adoption Problem? We will argue that both questions should be answered negatively. Kripke's regress does not arise for all rules of inference and not even for the adoption of those rules that are of relevance for the discussion of the rational revisability of logic.

¹ This label for the problem is due to Padro (2015).

² See Stairs (2006), Padro (2015), Finn (2019), Finn (2021), Kripke (2024) and Devitt and Roberts (2024). Since the basis of this discussion is an unpublished manuscript that is not authorized, we decided to refer to it in the following way: when providing textual evidence for Kripke's views, we quote from papers that are published and directly quote Kripke; in cases in which we want to give credit to Kripke for an observation or argument, we refer to Kripke (2024).

1631 We will begin the paper in section 1 with a brief summary of the use that
 1632 Quine made of the regress argument against a conventionalist conception of
 1633 logic and sketch Quine's own view on the revisability of logic. Kripke seems to
 1634 claim that the point that Quine makes against conventionalism should equally
 1635 apply to Quine's own view on the rational revisability of logic. In section 2
 1636 we will look at which logical principles are at all subject to a potential regress
 1637 or circularity problem and we will discuss whether the principles that are
 1638 potentially subject to such problem are principles that are of relevance for the
 1639 discussion of the rational revisability of logic.³ Our arguments in section 2 will
 1640 thereby follow the specific setup that Kripke introduced for the discussion of
 1641 the Adoption Problem. In section 3 we will investigate actual cases of proposed
 1642 logical revisions in order to show how the more abstract considerations of the
 1643 previous sections may apply to 'real life' examples.

1644 Since we arrive at a negative answer to the two questions above, we will
 1645 close the paper in section 4 by considering alternative targets for for the
 1646 Adoption Problem. Perhaps it doesn't primarily target Quine's view on the
 1647 revisability of logic but some other aspect of Quine's view on logic. However,
 1648 as we will argue, Kripke's argument doesn't pose a real challenge for these
 1649 alternative targets either.

1650 The main claims of the paper are then that there is no adoption problem that
 1651 would compromise rational revision of our logic, provided that we already
 1652 possess some basic reasoning skills. This is the case both for the thought
 1653 experiment considered by Padro and Kripke, and for more realistic scenarios
 1654 of logical revision. Moreover, that basic reasoning skills are unadoptable is
 1655 consistent with a Quinean philosophy of logic.

1656 **1 The Adoption Problem**

1657 According to Padro (2015), Kripke uses the following example to illustrate the
 1658 problem of adoption:

1659 Let's try to think of someone—and let's forget any questions about
 1660 whether he can really understand the concept of 'all' and so on—
 1661 who somehow just doesn't see that from a universal statement
 1662 each instance follows. But he is quite willing to accept my author-

3 Since our discussion can't cover all possible revision to logic that one can come up with, we will limit our discussion to logics that are plausible alternatives to classical logic. We will motivate this choice in due course.

1663 ity on these issues—at least, to try out or adopt or use provisionally
 1664 any hypotheses that I give him. So I say to him, “Consider the
 1665 hypothesis that from each universal statement, each instance fol-
 1666 lows.” Now, previously to being told this, he believed it when I
 1667 said that all ravens are black because I told him that too. But he
 1668 was unable to infer that this raven, which is locked in a dark room,
 1669 and he can’t see it, is therefore black. And in fact, he doesn’t see
 1670 that that follows, or he doesn’t see that that is actually true. So I
 1671 say to him, “Oh, you don’t see that? Well, let me tell you, from ev-
 1672 ery universal statement each instance follows.” He will say, “Okay,
 1673 yes. I believe you.” Now I say to him, “‘All ravens are black’ is a
 1674 universal statement, and ‘This raven is black’ is an instance. Yes?”
 1675 “Yes,” he agrees. So I say, “Since all universal statements imply
 1676 their instances, this particular universal statement, that all ravens
 1677 are black, implies this particular instance.” He responds: “Well,
 1678 Hmm, I’m not entirely sure. I don’t really think that I’ve got to
 1679 accept that.” (Padro 2015, fn. 49)

1680 *Quine against Conventionalism*

1681 Lewis Carroll’s (1895) similar dialogue between a tortoise and Achilles has fa-
 1682 mously been used by Quine (1936) in order to show that the logical positivists’
 1683 conventionalism about logic is in trouble.⁴ Conventionalism about logic (of
 1684 the kind that Quine considers) explains why logic should have a special status:
 1685 Logical principles are knowable *a priori* and necessarily true. According to
 1686 conventionalism, we decide to maintain the statements of logic ‘independ-
 1687 ently of our observations of the world’ and thus assign them a truth-value
 1688 by convention. This accounts for their epistemic and modal status.

1689 Although Quine expresses considerable sympathy for the view (granting
 1690 that it is “perhaps neither empty nor uninteresting nor false”), he nevertheless
 1691 sees it facing a difficulty that he summarizes as follows:

1692 Each of these conventions [Quine refers here to the schematic
 1693 axioms of propositional logic] is general, announcing the truth
 1694 of every one of an infinity of statements conforming to a certain

4 Who the target of Quine’s paper “Truth by convention” eventually is, is not clear. Quine doesn’t explicitly say that it is Carnap and there are reasons to think he targeted his own view (Ebbs 2011) and that of C.I. Lewis (Morris 2018).

1695 description; derivation of the truth of any specific statement from
 1696 the general convention thus requires a logical inference, and this
 1697 involves us in an infinite regress. (Quine 1936, 103)

1698 In Carroll's dialogue, the tortoise challenges Achilles to get it to infer in
 1699 accordance with Modus Ponens. Achilles fails to achieve this even though
 1700 the tortoise is ready to accept an explicit statement of Modus Ponens as a true
 1701 principle. For Quine, the upshot of that dialogue is that logic can't be based on
 1702 convention alone, since it seems that we need to have the ability to apply the
 1703 supposed conventions and derive consequences from them in order to follow
 1704 them. But then logic must be prior to such conventions (rather than the other
 1705 way around): "In a word, the difficulty is that if logic is to proceed *mediately*
 1706 from conventions, logic is needed for inferring logic from the conventions"
 1707 (Quine 1936, 104).

1708 Quine does see a way for the conventionalist to address this difficulty. What
 1709 if we can adopt a convention 'through behaviour' (1936, 105) instead of adopt-
 1710 ing it via explicitly announcing it first? Perhaps the explicit formulation of
 1711 these conventions can come later, once we have language and logic and all that
 1712 at our disposal. For Quine this is a live option, but not one that he is still will-
 1713 ing to describe as logic being based on 'convention.' From Quine's behaviorist
 1714 point of view, behavior that follows a conventional rule is indistinguishable
 1715 from behavior that displays firmly held beliefs.⁵ Since the label 'convention'
 1716 is then without explanatory power, we can drop it from our account of logic.⁶

172 *Kripke against Quine*

1718 As Padro (2015) explains, Kripke now turns the regress⁷ argument against
 1719 Quine himself. Quine had famously suggested in "Two dogmas of empiri-
 1720 cism" (1951) that not even logic is immune to revision. Empirico-pragmatic

5 In fact, Quine only makes the much weaker observation that it would be "difficult to distinguish" a behavioral adoption of conventions from behavior that displays firmly held beliefs.

6 See Azzouni (2014) for a discussion of conventionalism and Quinean arguments against it. Thanks to the work of David Lewis and others we now have a much clearer idea of how behavior that is based on firmly held belief can be distinguished from behavior that is guided by an implicitly adopted convention.

7 In Carroll's original argument, the structure of the problem is a regress: the tortoise requires always new meta-principles in order to apply Modus Ponens at a given level. The regress is provoked, because the very rule that is supposed to be adopted is the rule that is necessary to apply that new rule. In that sense, the regress obtains because of that *circularity*. In what follows we will sometimes refer to that argument/problem as a regress or a circularity argument/problem.

1721 considerations may lead us to the adoption of a new logic. A view that is, of
1722 course, quite compatible with the idea that logic is nothing but firmly held
1723 belief in the first place. Perhaps—so Quine’s own example—we may decide
1724 to adopt a logic that drops the principle of excluded middle because it may
1725 help to simplify quantum mechanics (Quine 1951). However, Kripke seems
1726 to believe that Quine’s picture, viz. that we can treat principles of logic just
1727 like any other empirical hypothesis, is prone to the exact same objection that
1728 Quine mounted against conventionalism. Padro cites Kripke as follows:

1729 [...] the Carnapian tradition about logic maintained that one can
1730 adopt any kind of laws for the logical connectives that one pleases.
1731 This is a principle of tolerance, only some kind of scientific utility
1732 should make you prefer one to the other, but one is completely
1733 free to choose. Of course, a choice of a different logic is a choice
1734 of a different language form.

1735 Now, here we already have the notion of adopting a logic, which
1736 is what I directed my remarks against last time. As I said, I don’t
1737 think you can adopt a logic, Quine also criticizes this point of view
1738 and for the very same reason I did. He said, as against Carnap and
1739 this kind of view, that one can’t adopt a logic because if one tries
1740 and sets up the conventions for how one is going to operate, one
1741 needs already to use logic to deduce any consequences from the
1742 conventions, even to understand what these alleged conventions
1743 mean.

1744 This is all very familiar as a criticism of Carnap. Somehow people
1745 haven’t realized how deep this kind of issue cuts. It seems to me,
1746 as I said last time, obviously to go just as strongly against Quine’s
1747 own statements that logical laws are just hypotheses within the
1748 system which we accept just like any other laws, because then,
1749 too, how is one going to deduce anything from them? I cannot
1750 for the life of me, see how he criticizes this earlier view and then
1751 presents an alternative which seems to me to be subject to exactly
1752 the same difficulty. (Padro 2015, 113)

1753 Stairs (2006) and Devitt and Roberts (2024) interpret the adoption problem as
1754 targeting in particular Quine’s idea that logic is revisable and that we can adopt

1755 a *new* logic.⁸ Padro (2015) seems to see the adoption problem as a problem for
 1756 adopting a logic in the first place and Kripke (2024) is vague about the target of
 1757 the argument. Kripke discusses the adoption problem in a paper on Putnam's
 1758 views on the possibility of revising logic for empirical reasons and clearly
 1759 seems to think that the adoption problem should have some relevance for
 1760 the revisability of logic. His main target is the use that Putman (1969)—and
 1761 others who follow Quine's views on the revisability of logic—makes of the
 1762 phrase that we can 'adopt' a new logic (Stairs 2006, 2016). Thus, we take it
 1763 that discussing the adoption problem as a problem in the context of logic's
 1764 revisability gets at what is ultimately at stake in Kripke's original argument.
 1765 (However, as we will discuss in section 4, Kripke also makes some remarks in
 1766 his paper that suggest that he, too, may have the adoption of a first logic in
 1767 mind.)

1768 We will begin this paper by considering the Adoption Problem as a problem
 1769 for Quine's idea that logic is revisable but will discuss in section 4 whether
 1770 that is the best interpretation of Kripke's attack on Quine. We hope that this
 1771 brings some clarity into what the adoption problem possibly is and for which
 1772 view this might be a problem. The idea that logic is rationally revisable is
 1773 broader than the idea that a first logic can be adopted via the acceptance of
 1774 logical principles, thus the former seems to be the natural starting point for
 1775 our analysis.

1776 According to this reconstruction of the argument, logic is not only not based
 1777 on convention, but logic can't be rationally revised either, because whatever
 1778 empirico-pragmatic reasons we may have for preferring some alternative logic,
 1779 we can't adopt a new logic. Presumably the argument is then that the adoption
 1780 of a new logical principle (as in Kripke's example) would already presuppose
 1781 the logical competence that allows us to apply such principle. However, as in
 1782 Kripke's example, if that competence is in fact the very rule we are supposed
 1783 to adopt, then this can't work.

1784 A *prima facie* reasonable reaction to the argument so understood—due to
 1785 Devitt and Roberts (2024), for instance—is to distinguish the way in which we
 1786 come to know the propositional form of a logical principle, its representation,
 1787 such as 'from a universal statement, each instance follows,' and the way in
 1788 which an agent can come to be *governed* by such logical principle, a state

8 Finn (2019) interprets Kripke to pose a problem for 'anti-exceptionalism' about logic, but leaves it vague what aspect of anti-exceptionalism is the target. Revisability is, however, a central aspect of the anti-exceptionalist doctrine and clearly a potential target if there was a problem with *adopting* new rules.

1789 that may not necessarily require a representational form. The first kind of
1790 knowledge may be dubbed *declarative*, the second *procedural*. According to
1791 this first reaction, therefore, the sort of revision involved in Carroll's example
1792 concerns the fact that declarative knowledge of a rule alone may not be
1793 sufficient to rationally revise one's logical beliefs. But this does not rule out
1794 the possibility of training someone in acquiring procedural knowledge of a
1795 new logical principle.

1796 A similar position is assumed by Graham Priest (2014), although framed in
1797 his distinction between the *logica docens*, *utens*, and *ens*. The logic we teach
1798 (*docens*) can be revised by means of a broadly abductive methodology. What is
1799 commonly called a 'logic,' for Priest, should in fact better be seen as a 'logical
1800 theory,' namely a substantial body of knowledge concerning some notion of
1801 logical consequence. Now, a logical theory can be rationally revised in the
1802 same way as other scientific theories can be revised, namely by comparing
1803 it with alternatives according to theory-choice criteria such as explanatory
1804 power, strength, adequacy to data, unifying power, and whatever else these
1805 may be. The logical theory we teach, therefore, can be rationally revised, and
1806 so can the logical theory we *use*. How? Simply by training oneself in a chosen
1807 *logica docens*. To connect Priest's approach to rational revisability of logic
1808 with the Carroll-Kripke example, what seems to be clear is that for Priest the
1809 process of acquisition of a rule is not a local procedure, but rather a global
1810 process of acceptance of a logical theory that goes well beyond the rules of a
1811 formal system. This point will be further expanded in section 3.

1812 In the next three sections we leave aside these attempts to undermine the
1813 Adoption Problem that deny a significant role to the declarative knowledge
1814 of a rule or principle. We will work under the assumption that the declara-
1815 tive knowledge of a logical principle does indeed play a role in one's actual
1816 adoption, and consider in more detail how such process could actually work.
1817 This is indeed how Padro (2015, 31) understands 'adoption': we adopt a way
1818 of inferring (for example, in accordance with Modus Ponens), if we pick it up
1819 on the basis of the acceptance of the corresponding logical principle alone.

1820 As it will turn out in sections 2 and 3, there is no problem of adoption that
1821 would arise for the *revision* of logic (as Kripke seems to claim). It is true that
1822 one needs *some* basic reasoning skills in order to be able to adopt and apply
1823 new ones, but in pretty much all cases in which one has already a logic, these
1824 will be available.

143 *Logica Utens*

1826 Although we will set aside Priest's solution to the problem of adoption, it will
 1827 still be useful for our discussion to help ourselves to a distinction between
 1828 *logica docens* and *logica utens*. The former is an explicit theory that may or
 1829 may not be formalized in precise mathematical terms.

1830 A *logica utens*, on the other hand, is—in our terminology—the logic that
 1831 we reason with under suitably idealized circumstances. What matters is that
 1832 the *logica utens* is not just a description of all of our actual inferences (in-
 1833 cluding all inferences we would ourselves accept to be mistakes) but rather
 1834 a reconstruction of the rules we recognize as normatively governing correct
 1835 reasoning. While Aristotle is widely credited with having started the business
 1836 of developing a *logica docens*, *homo sapiens* much earlier started to develop a
 1837 *logica utens*.

1838 *Logica utens* will play an important role in our analysis of the Adoption
 1839 Problem. We will argue that Kripke's thought experiment is best understood
 1840 as the attempt to revise one's *logica utens*, and we will pinpoint precisely when
 1841 this task is bound to fail, and when it is instead unproblematic. Even the
 1842 more general context of revision of one's logical theory can be thought of as
 1843 an attempt to revise one's *logica utens*: in those cases revision of *logica utens*
 1844 amounts to a revision of one's logical metatheory, and we will investigate
 1845 whether this is a feasible task also in that context.

1842 **Patterns of Adoption**

2471 *What Can We Adopt?*

1848 As noticed already in Cohnitz and Estrada-González (2019), when one looks
 1849 carefully at the Carroll-Kripke example, it becomes clear that not all principles
 1850 are equally problematic. To see this, let us frame our discussion in a logical
 1851 formalism in which one has finitely many rules for introduction and elimina-
 1852 tion for a finite set of logical connectives (natural deduction or sequent calculi
 1853 are both adequate options). Consider the following version of our original
 1854 dialogue in which universal instantiation is now replaced by the introduction
 1855 of the existential quantifier. It involves subjects A and B and we assume, for
 1856 the sake of the argument, that B is not able to perform inferences according
 1857 to *Existential Introduction*. As before, we assume that B is willing to cooperate
 1858 in accepting and reasoning according to the hypotheses that A provides.

- 1859 A: Consider the hypothesis that, if some predicate φ holds of t , then there
 1860 is something that satisfies φ .
- 1861 B: OK, I am considering it.
- 1862 A: This piece of paper is white, isn't it?
- 1863 B: Yes.
- 1864 A: Therefore, since if some predicate φ holds of an individual t , then there
 1865 is something that satisfies φ , it follows that *there is something that is*
 1866 *white*.
- 1867 B: Sure, thanks!

1868 In the above dialogue, unlike what happens in the Kripke case, nothing
 1869 prevents B from following and accepting A's instructions. The reason is that
 1870 *no prior* understanding of Existential Introduction is needed for B to follow
 1871 the instructions given by A.

1872 However, there is something else that *needs* to be presupposed by B. First
 1873 of all they need the ability of inferring via Modus Ponens, as we learnt from
 1874 Carroll's example. To be clear, we employ the label 'Modus Ponens' for a
 1875 rule of inference akin to the standard natural deduction rule, *or* the cut rule
 1876 in a sequent calculus. A choice between one or the other may depend, for
 1877 instance, on whether we conceive of the 'if..., then...' in A's hypothesis as an
 1878 entailment sign—in which case one needs cut—or as an object linguistic
 1879 conditional—in which case one needs a rule for the elimination of such a
 1880 conditional. Of course we are not fixing a specific system in our discussion,
 1881 and therefore these are at best structural analogies. We will come back to this
 1882 point below.

1883 In the light of Kripke's example, it would *prima facie* seem that Universal
 1884 Instantiation is also required. However, both in Kripke's example and here
 1885 we need much less than Universal Instantiation in full generality. Consider
 1886 A's last sentence: it presupposes the capability of recognizing the validity of
 1887 the step that goes from an argument of the form $\varphi(t/v) \therefore \exists v\varphi$, for all φ , to an
 1888 argument of the form $P(t/v) \therefore \exists vP$ for a particular P . Similarly, in Kripke's
 1889 example, the step that prevents the receiver of the instructions from agreeing
 1890 on the desired conclusion is her incapability of recognizing the validity of
 1891 the inference from an argument of the form $\forall v\varphi \therefore \varphi(t/v)$ to one of the form
 1892 $\forall vP \therefore P(t/v)$. In both cases, it is a form of universal instantiation that is at
 1893 stake. But at a closer look, the inferences under considerations are in fact of
 1894 the form:

1895 SCS. For any *formula* φ , if $\Phi(\varphi)$, then $\Phi(P/\varphi)$, for some fixed argu-
1896 ment pattern Φ .

1897 **SCS** is a very distinguished form of Universal Instantiation. First, quantifiers
1898 range over a fixed *set* of formulae of the language under consideration. Under
1899 the natural assumption that the languages we speak are countable, the size of
1900 such set is then countable too, whereas no such assumption is required for
1901 the general form of Universal Instantiation. Moreover, **SCS** has a form that is
1902 well-known to logicians: it is a *schematic substitution principle*—whence the
1903 label **SCS**—, according to which, by accepting the schema, one accepts all its
1904 specific instances in the language under consideration.

1905 This discussion can be generalized by formulating a more abstract recipe
1906 for adoption below.

1907 **RECIPE FOR ADOPTION.**

1908 i. One starts with a schematic logical principle of the form

1909 (1) if $\Phi_1(\vec{X}; \vec{z})$ and ... and $\Phi_k(\vec{X}; \vec{z})$, then $\Psi(\vec{X}; \vec{z})$,

1910 with \vec{X} and \vec{z} possibly empty strings of variables of finite length. Here
1911 the X_i 's are one sort of variables to be replaced with formulae, and the
1912 z_j 's are meta-variables for terms possibly including a different sort of
1913 variables for objects. Some machinery for renaming variables is also
1914 assumed.

1915
1916 ii. One is then given a schematic instance of the antecedent of the condi-
1917 tional

$$\Phi_1(\vec{A}; \vec{t}) \text{ and } \dots \text{ and } \Phi_k(\vec{A}; \vec{t})$$

1918 for \vec{A} formulae of the language and \vec{t} actual terms in the language.

1919
1920 iii. **SCS** enables one to go from (i) to

$$\text{if } \Phi_1(\vec{A}; \vec{t}) \text{ and } \dots \text{ and } \Phi_k(\vec{A}; \vec{t}), \text{ then } \Psi(\vec{A}; \vec{t}),$$

1921 iv. by Modus Ponens applied to (ii) and (iii), one concludes $\Psi(\vec{A}; \vec{t})$, thereby
1922 inferring according to (i).

1923 A few comments to the **RECIPE FOR ADOPTION** are in order. First, we are
 1924 analysing Kripke's pattern for adoption. As such, the intended application of
 1925 our pattern is the scenario envisaged by Kripke: we are not putting forward a
 1926 recipe to adopt *any possible logical principle*, but a list of notable examples.
 1927 That being said, the recipe possesses some degree of flexibility intended to
 1928 deliver fruitful applications under several specific formalisms. As anticipated,
 1929 a first (deliberate) scope of manoeuvre is given by the way in which premisses
 1930 of inferences are gathered in (1). The most straightforward way to understand
 1931 'and' is as a metatheoretic juxtaposition sign, very much like commas in a
 1932 sequent calculus formulation.⁹ In this way, the final detaching step that we
 1933 call 'Modus Ponens' becomes akin to an application of the structural rule of
 1934 cut. One then easily sees that, under this reading, the principle of conjunction
 1935 introduction 'if φ and ψ , infer $\varphi \wedge \psi$ ' is unaffected by the adoption problem.

1936 As noticed by Kripke (2024) himself, if instead one identifies 'and' with the
 1937 object linguistic conjunction, conjunction introduction might acquire a status
 1938 analogous to Modus Ponens and Schematic Substitution, because gathering
 1939 premisses via conjunction presupposes the rule of conjunction introduction.
 1940 An alternative may be to dispense with conjunction, and consider the operation
 1941 of gathering premisses via nested conditionals (e.g., 'if φ and ψ , then χ '
 1942 is turned into 'if φ , then ψ only if χ '). Under this assumption, other principles
 1943 will become unadoptable, such as the principle of conditional introduction.¹⁰

1944 The extent to which **SCS** is a logical rule can be debated at length: it can
 1945 even be argued that it is *the* logical rule, as it is possible to axiomatize, say,
 1946 classical logic, by resorting to axioms involving specific predicate letters—and
 1947 not axiom schemata or rule schemata—and some principle akin to **SCS**. For
 1948 our concerns, however, what matters is that the form of universal instantiation
 1949 that Kripke suggests is presupposed by our capability of acquiring
 1950 Universal Instantiation is not as strong. Rather, it is a very specific form of
 1951 universal instantiation that has much to do with our ability of recognizing
 1952 and combining syntactic patterns.

9 Again, some vagueness concerning different implementations of this idea is assumed: we do not take a stance on whether commas should be understood as distinguishing elements in a set, a multiset, or a sequence.

10 We would like to thank an anonymous referee for asking for a clarification of the status of what we call 'Modus Ponens.' Given our purpose, any choice that is more specific than our current proposal would lead to specific choices that are not compatible with the general analysis of Kripke's project that is the main aim of the paper.

1953 The problems encountered with the adoption of a logical rule—as far as
 1954 Kripke's example is concerned—boil down, therefore, to the necessity of
 1955 certain presuppositions to the process. Under a plausible reading of the pattern
 1956 isolated by Kripke, such presuppositions amount to competence with Modus
 1957 Ponens and the validity and a very specific form of universal instantiation
 1958 SCS.¹¹

2.5.2 Where Can We Adopt?

1960 In Kripke's example, the receiver of the instructions may not be able to perform
 1961 any inference. The scenario is compatible with a *tabula rasa* adoption. Let
 1962 us now consider a more realistic, although still highly idealized, scenario in
 1963 which an agent is in possession of *some* inferential abilities that are in need
 1964 of revision. In general, revisions can reasonably involve either dropping some
 1965 principle from the set of one's logical beliefs, or adding principles to it.¹² We
 1966 call the former process **DROP**, and the latter **ADD**.

1967 Most cases of proposed logical revision at the heart of modern and contem-
 1968 porary debates involve **DROP**. Starting with classical reasoning, intuitionists
 1969 proposed to drop the law of excluded middle or, equivalently, to weaken one of
 1970 the rules for negation. Paracomplete and paraconsistent logicians also propose
 1971 to drop one of the rules for negation, although their weakening of classical
 1972 negation is more severe than the one proposed by the intuitionists. Some sub-
 1973 tler proposals are also possible. Supervaluationists, for instance, agree with
 1974 all inferences of classical logic of the form $\langle \Gamma, \varphi \rangle$, but disagree on inferences
 1975 with multiple conclusions.¹³

1976 Let us start with **DROP**. There are various scenarios compatible with drop-
 1977 ping a logical principle. In the trivial case, revision simply amounts to disre-

11 A recent paper by Finn (2021) makes use of the same idea, but erroneously assumes that the ingredients of this 'recipe' are Modus Ponens and Universal Instantiation and that both of these rules are individually necessary and jointly sufficient for the adoption of any other logical rule. As we argue here, the recipe doesn't require Universal Instantiation in full generality but only a very restricted form. Also, depending on the logical rule in question, Modus Ponens is not always necessary either (just consider rules that allow adding theorems to any step in the reasoning). As explained, those two rules may also be not jointly sufficient.

12 Of course it is possible that the proposed adoption in question leads from a set of logical beliefs to another which is inconsistent with the previous one, but in the reasonable cases in which this happens one can always describe this process as the result of first dropping some rule and then adding to the remaining principles some other principles.

13 For instance, they drop the classical inference $\langle \{ \varphi \vee \neg \varphi \}, \{ \varphi, \neg \varphi \} \rangle$.

1978 guarding some principle, previously regarded as logical. There is no adoption
1979 involved in the revision, and *a fortiori* there is no adoption problem. In a
1980 slightly less trivial case, the rule that needs to be adopted is not one of the
1981 principles that fall under our understanding of Modus Ponens.¹⁴ In this case,
1982 it is clear that the pattern of adoption straightforwardly applies (modulo
1983 some adjustments required by the specific formalism employed and discussed
1984 above). For instance, an agent who is able to infer according to Modus Po-
1985 nens and *SCS* is in the position to adopt the familiar principles involving
1986 conjunction, disjunction, negation.

1987 Another case of *DROP* may concern the adoption of a new rule by restricting
1988 the scope of previously acquired rules. The crucial (and non-trivial) case in-
1989 volves adoption of restricted versions of Modus Ponens. Some paraconsistent
1990 logics, Priest's LP for instance, result from classical logic via the restriction of
1991 the elimination rule for the conditional to formulae that are not truth value
1992 gluts (Priest 2008). Similarly, non-transitive logics restrict the meta-inference
1993 of Cut (Ripley 2015), by allowing it only for some non-pathological sentences.
1994 In such a scenario, a crucial issue concerns whether the pattern of adoption
1995 should be itself revised to feature such restricted detachment principles in-
1996 stead of the original form of Modus Ponens. Luckily, the answer is positive.
1997 If one wanted to apply the pattern for adoption to the restricted Modus Po-
1998 nens, schematic substitution and the restricted form of Modus Ponens would
1999 suffice. The (re)adoption of *other* principles by means of restricted Modus
2000 Ponens may be more problematic. For instance, paraconsistent logics such
2001 as LP feature unrestricted principles governing conjunction and disjunction,
2002 and therefore the adoption of such principles will not involve only sentences
2003 with a classical truth value.

2004 Problems can occur only, if the logical resources become too weak to apply
2005 the principle even with suitably restricted rules. Whether there are interesting
2006 cases of that kind will be explored below.

2007 Let us now turn to *ADD*. *Prima facie* there are good reasons to doubt the
2008 significance of *ADD*, if one assumes that the process of adoption has classi-
2009 cal logic as its starting point and restricts oneself to the propositional case.
2010 The Post completeness of classical propositional logic tells us that the only
2011 consequence relation that properly extends it is the trivial one. On the other
2012 hand, when we move to first-order classical logic, which isn't Post-complete,
2013 it is also clear that Modus Ponens and Universal Instantiation are already

14 We are leaving out *SCS* from the picture, because of its special status.

2014 in place. Therefore, any revision that follows our schema for adoption is
 2015 also unproblematic—new rules can be adopted and applied by following
 2016 the pattern for adoption isolated above. For instance, we might consider a
 2017 higher-order version of the rule of existential introduction:

2018 (2) from $\varphi(R)$, infer $\exists X\varphi(X)$

2019 with R a set variable which is free for X in φ . As before, the adoption of such
 2020 a rule would require the capability of applying **SCS**. In the specific case of (2),
 2021 the schematic variable needs to be of a suitable type; it should be capable of
 2022 taking variables like X as arguments. This process, however, is still carried out
 2023 once a suitable language is fixed. The substitution involved in the adoption
 2024 of (2) does not require any substantial decision on the semantic status of the
 2025 different types of variables. Similarly, a higher-order version of the rule of
 2026 (monadic) Universal Instantiation

2027 (3) from $\forall X\varphi(X)$, infer $\varphi(P/X)$

2028 can be accommodated in our framework via **SCS** once a suitable language is
 2029 fixed. What is required is only that the schematic variable φ can be instantiated
 2030 to a specific formula of the higher-order language one is considering. In other
 2031 words, in the pattern of adoption for (2) and (3), one always assumes a specific
 2032 domain of syntactic entities on which **SCS** operates. And this is all that seems
 2033 to be required.

2034 As expected, the only problematic candidates in the context of **ADD** are
 2035 logics that either don't have what we called Modus Ponens or do not have
 2036 **SCS**. It is fair to say that, if one operates in Kripke's idealized scenario of
 2037 a *tabula rasa* adoption, our analysis deems the unrestricted rule of Modus
 2038 Ponens as unadoptable. However, it is equally fair to say that the debate is
 2039 still open on whether logics that do not feature Modus Ponens satisfy some
 2040 fundamental adequacy requirements for playing the role of a *logica utens*,
 2041 i.e. whether a logic without such a rule could be an adequate formal model
 2042 for any possible form of natural reasoning. We rest content with the claim
 2043 that, for the overwhelming majority of case studies, the last step (iii to iv) of
 2044 our pattern of adoption applies.

2045 What about **SCS**? It is a common assumption in much of contemporary
 2046 semantics that natural languages must (in some way, Cohnitz 2005) be *compo-*
 2047 *sitional*. How else could it be explained that we can use and understand new
 2048 sentences with novel meanings? However, compositionality requires some

2049 form of systematic syntactic decomposition and of keeping track of how, for
 2050 example, argument places of predicates are filled. It is hard to see why such
 2051 capacity shouldn't already be sufficient for the kind of schematic substitution
 2052 that Kripke's example requires. Compositionality by itself guarantees that
 2053 competence with a sentence like 'Sam kisses Martin' entails competence with
 2054 'Martin kisses Sam,' 'Reinold kisses Julie'—this fact is behind the systematicity
 2055 argument for compositionality (Szabó 2000). But then the basic skills involved
 2056 in processing a compositional language (treating linguistic items as schematic
 2057 and (re)combinable with other linguistic items of certain syntactic categories)
 2058 already allow one to reason in accordance with *SCS*. This skill doesn't seem
 2059 to be in need of 'adoption.'¹⁵

2060 *SCS* is weaker than the rule of Universal Instantiation. It is a basic (logical
 2061 or linguistic) skill that is presupposed by reasoning of any kind. Not just any
 2062 logical rule we learn, but learning any new compositional phrase requires
 2063 mastery of schematic substitution.¹⁶ A fortiori, any logic that is supposed to
 2064 model an actual *logica utens* will have to contain *SCS* then.

2065 Again, there can be formal systems that are weaker than classical logic and
 2066 that do not contain Modus Ponens or *SCS*. But the real question is whether
 2067 there is any formal system that models a *logica utens* but fails to enable the
 2068 reasoner to adopt a new rule. If any application of logical rules requires
 2069 some (suitably restricted form of) Modus Ponens and *SCS*, and if from that a
 2070 reasoner can obtain a (suitably generalized) form of Modus Ponens and *SCS*
 2071 that is sufficient for grasping the application conditions for a new rule, then
 2072 every logic that is a possible *logica utens* will allow upwards adoption (as well
 2073 as downwards adoption to any logic that is a possible *logica utens*). If this is
 2074 right, then Kripke's 'adoption problem' does not actually pose a problem for
 2075 the adoption of a new logic.

2076 But Kripke's scenario is anyway highly artificial. No one adopts a logic sim-
 2077 ply because some oracle told them that the principle behind it is logically valid.
 2078 We may come to reason in new ways, because we adopted a new theoretical
 2079 perspective on matters of validity.

15 To be precise, for the application of *SCS* in reasoning, we need not only the ability to compose new expressions, but also to decompose them. This requires compositionality, as well as *inverse compositionality* (Pagin 2003).

16 And, as we argued above, schematic substitution is implicit in our mastery of composing and decomposing complex expressions in general.

3 Adoption in a Logical Theory

We have argued that the revision of logic by adoption of a new logical principle is best understood as a revision of one's *logica utens*. In this section we consider the patterns of adoption isolated earlier in the arguably more realistic context of a *logical theory*, typically defined as a collection of principles governing the core notions involved in one's specific account of logical consequence: truth-preservation, predication, negation, implication, assertion, formality, consistency, provability and so on. Therefore, giving a full account of one's preferred logical theory is often a highly non-trivial matter. That the Adoption Problem discussed by Kripke should carry over to these more realistic contexts is clear from the discussion of empirically motivated logical revision found in Kripke (2024).

3.2.1 Deflationary Views of Logical Theories

The preliminary characterization of logical theories just given is not the only one considered in the literature. It more or less aligns to what Hjortland (2017) calls *non-deflationary* logical theories. Following this terminology, a typically deflationary account is the one articulated in Williamson (2017), which holds that the ultimate task of logical theories is to unravel general claims about the world. Meta-linguistic notions such as truth and validity are not the primary concern of logic, which is essentially a *non-metalinguistic* enterprise pointed at discovering absolutely general laws of reality. In this, logic does not differ from physics, or from metaphysics; it only proceeds at a much higher level of abstraction.

Williamson suggests that a logical theory is a collection of non-metalinguistic generalizations corresponding to logical truths. This picture is motivated by the following process: Williamson starts from valid inferences in some logic \mathcal{S} in a language $\mathcal{L}_{\mathcal{S}}$ —e.g., $\neg\neg\varphi \therefore \varphi$. It proceeds by extending $\mathcal{L}_{\mathcal{S}}$ with new, higher-order variables of the same type as formulae of $\mathcal{L}_{\mathcal{S}}$ and by replacing the entailment relation with a conditional—in our example, this turns $\neg\neg\varphi \therefore \varphi$ into $\neg\neg X \rightarrow X$. The process is then completed by universally quantifying over the free higher-order variables of the translation of the logical claim under considerations. A logic, in this view, is a collection of claims such as $\forall X(\neg\neg X \rightarrow X)$. Endorsing a logic is endorsing a collection of universally quantified claims: since there is no reason to consider higher-order quantification as more metalinguistic than first-order quantification

2115 (Williamson 2017, 329), a logical theory is no more metalinguistic than any
 2116 other theoretical enterprise seeking universal laws, such as physics itself.

2117 Given our analysis, the problem of adoption in a deflationary logical theory
 2118 of the kind just sketched does not arise. Already the process of turning a
 2119 purported valid inference into a universal generalization of the appropriate
 2120 type requires a prior understanding of quantification. It is hard to see how this
 2121 understanding may not involve something as basic as *SCS*: this is especially
 2122 clear in the step that requires the expansion of one's language with variables
 2123 of the appropriate type. The very adequacy of this process seems to rest on
 2124 the capability of instantiating such variables with formulae of \mathcal{L}_S , as required
 2125 by *SCS*. Moreover, the substitution of the entailment sign with a suitable
 2126 conditional certainly presupposes a conditional that satisfies Modus Ponens.
 2127 How can the reduction be put to use, if one cannot retrieve the original infer-
 2128 ence by assuming an instance of the antecedent of the law-like conditional
 2129 and conclude its consequent via Modus Ponens? The structural assumptions
 2130 required by Williamson's view of logical theories therefore presuppose both
 2131 *SCS* and Modus Ponens; our analysis of the pattern for adoption entails that
 2132 the circularity involved for the adoption of a new rule does not arise in the
 2133 presence of such principles.¹⁷

3.2 Logical Theories

2135 Logical theories, in the abstract—and more substantial—sense considered in
 2136 this section, can be seen as the formal counterpart of *logicae utenses*. In the
 2137 same way as a *logica utens* encodes the agent's dispositions towards a class
 2138 of inferences (or meta-inferences), a logical theory enriches this acceptance
 2139 of a class of validities with a collection of meta-theoretic claims concerning
 2140 semantic and proof-theoretic notions associated with such inferences. For
 2141 instance, the logical theory of intuitionistic logic includes an account of what
 2142 is a canonical or direct method of verification, as opposed to an indirect one.
 2143 Similarly, the logical theory of paraconsistent logic involves a characterization
 2144 of negation and falsity (and truth) that substantially differs from the classical
 2145 exclusive approach to negation. Taken at face value, claims of the sort just

17 Williamson ultimately rejects this Tarski-Bolzano procedure of bringing inferences to their normal form as a tool to compare logical consequences. This is because the procedure requires a strong conditional, and many of the logics involved in the comparison will not have it. What we said however still stands: on this view of logical theories Modus Ponens and *SCS* are essential requirements.

2146 described belong to the metatheory of one's logic. And such a metatheory
 2147 typically amounts to a fragment of classical or intuitionistic mathematics.

2148 There are at least two possibilities to formulate the adoption problem in
 2149 this richer framework, depending on what one considers to be the class of
 2150 logical principles that can be adopted/revised. On the one hand, one might
 2151 consider revision and adoption of the purely logical part of one's metatheory,
 2152 which may not align with the object-theoretic logical principles. On the other,
 2153 one can extend the status of logical principle to core metatheoretic principles
 2154 such as consequence and truth, and consider their adoption and revision.¹⁸

2155 Let us consider the scenario in which one wishes to revise/adopt *logical*
 2156 *principles* of one's overall logical theory, including the logic of metalinguistic
 2157 concepts. In the abstract case, it is clear that this is no more nor less prob-
 2158 lematic than allowing for a revision of object-linguistic logical principles: the
 2159 logical component of one's logical theory is simply a collection of inference
 2160 patterns that one recognizes as valid *in one's metatheory*. There seem to be no
 2161 substantial differences between the analysis of the local adoption problem
 2162 above and the present case: again, the only problematic cases might be cases of
 2163 **ADD**, in which from a weaker metatheory one moves to a stronger metatheory.
 2164 For instance, one might ask whether the intuitionistic logician is able to adopt
 2165 a classical perspective on validity. In the current setting, this can simply be
 2166 reduced to the problem of whether one can instruct an intuitionist to infer
 2167 according to, say, double negation elimination $\neg\neg\varphi \therefore \varphi$. But in the presence
 2168 of **SCS** and Modus Ponens, we have seen that this is unproblematic: one starts
 2169 with exhibiting a specific doubly negated instance $\neg\neg A$ of $\neg\neg\varphi$; by **SCS**, one
 2170 provides the intuitionist with the concrete instance of—a suitable translation
 2171 of—the original principle 'if $\neg\neg A$, then A .' From $\neg\neg A$ and 'if $\neg\neg A$, then A ,

18 One might also think about a third option, in which one's logical theory plays a purely instrumen-
 tal role. In this scenario, one would keep all metatheoretic principles fixed, consider them in a
 purely instrumental role, and take into account only adoption and revision for the object-theoretic
 logical inferences. The discussion of the previous section would then largely transfer to this
 case, with possibly a further complication. Suppose we are in the crucial case of the absence of
 Modus Ponens on one's object-theoretic logical toolbox. In this case the instrumentalist about
 metatheory may find herself in the position of not accepting (yet) object-theoretic claims of the
 form $\varphi, \varphi \rightarrow \psi \therefore \psi$, but accepting—given a standard set-theoretic semantics:

(4) If ' φ ' is true and (if ' φ ' is true, then ' ψ ' is true), then ' ψ ' is true.

where 'is true' is a standard Tarskian truth predicate for the object language. Therefore, the
 instrumentalist would have to argue that, even though she is able to infer on the basis of principles
 such as (4), she is in no position to adopt Modus Ponens at the object linguistic level.

2172 the agent that possesses the general capability of inferring by Modus Ponens
2173 can immediately conclude *A*. Under the assumption that intuitionistic or
2174 classical foundations are the only reasonable candidates for the logic of the
2175 metalinguistic components of one's logical theory, we can safely conclude that
2176 no worries of circularity can arise in this second reading of logical theories.

2177 The assumption that one's logical metatheory is framed in classical or intu-
2178 itionistic set theory may be questioned. There have been interesting attempts,
2179 in the context of some approaches to the semantic paradoxes, to align a weaker
2180 nonclassical approach—generally substantially weaker than intuitionistic
2181 logic, since semantic paradoxes affect classical and intuitionistic logic alike—
2182 in the object theory with a nonclassical metatheory (Leitgeb 2007; Bacon
2183 2013; Weber, Badia and Girard 2016). Such attempts, however, are at best at
2184 an initial stage and cannot yet be considered to be actual rivals of a classical
2185 or intuitionistic metatheory. For instance, most of these meta-theoretic re-
2186 sults heavily rely on a classical meta-meta-theory. What would be required is
2187 a non-classical set theory (or of an alternative foundational framework) in
2188 which all metatheoretic reasoning could be performed.

2189 The status of non-classical set theories, however, is controversial. Let us
2190 consider for instance some paracomplete and paraconsistent options. Partial
2191 set theories have been developed by Gilmore (1974), Aczel and Feferman
2192 (1980), and Feferman (1984): the naive comprehension principle is built on
2193 top of a three valued logic such as Strong Kleene logic. Consistency is obtained
2194 by showing (in a classical metatheory) that membership can be interpreted by
2195 means of a positive inductive definition. The main drawback of such attempts
2196 consists in their deductive weakness: the theories are able to recover only a
2197 fragment of predicative mathematics.

2198 Paraconsistent set theories have also been extensively studied in recent
2199 years. Several combinations of set-theoretic and logical principles are possible.
2200 One option is to formulate naive comprehension on top of the LP (Restall
2201 1992; Priest 2006). Due to the weakness of the conditional of LP, it is not clear
2202 whether this option can deliver standard set-theoretic results such as Cantor's
2203 theorem, or even the existence of two objects (Weir 2004). An alternative is to
2204 replace the conditional of the paraconsistent logic with a relevant conditional.
2205 In this way, a substantial amount of standard results of classical set theory can
2206 be obtained (Weber 2012). However, doubts still remain about the adequacy of
2207 such an option: as argued in Incurvati (2020, chap. 4), the relevant conditional
2208 is insufficiently motivated, and the fundamental extensional nature of the

2209 set concept is compromised in such approaches—there are sets that have the
 2210 same members but that are not identical.

2211 We are left with the possibility of adopting/revising quasi-logical principles
 2212 such as truth and falsity. This is, arguably, the option that is closest to actual
 2213 cases of revision of one's logical assumptions. Paraconsistent and paracom-
 2214 plete logicians motivated by semantic or logical paradoxes, for instance, aim
 2215 at a revision also of foundational tools, such as comprehension axioms, that
 2216 are needed to define their notion of logical consequence. In this context, one
 2217 considers not only a collection of logical inferences, but also the principles of
 2218 quasi-logical notions such as truth, property predication, and consequence
 2219 as possible candidates for revision. Can the worries of circularity/regress ad-
 2220 umbrated in the local case of adoption in the previous sections have some
 2221 bearing on such cases of revision?

2222 If the adoption/revision process is a local process involving some specific
 2223 quasi-logical rules and follows the blueprint of Kripke's setup, our analysis
 2224 in section 2 can be transferred with only little modifications. For instance, if
 2225 one's logical theory makes essential use of the notion of truth, one might want
 2226 to adopt/revise suitable principles for the truth predicate, e.g., a disquotational
 2227 rule of the form 'from φ , infer $\text{True}(\ulcorner \varphi \urcorner)$,'¹⁹ If Modus Ponens and **SCS** are
 2228 available, one can essentially follow the pattern outlined above for the case
 2229 of adopting a logical rule such as double negation in an intuitionistic logical
 2230 theory. The only step that requires care is the selection of a suitable range of
 2231 instances of **SCS**. In the case of unrestricted schemata such as double negation,
 2232 in fact, specifying a range of instances of **SCS** is a trivial affair: all sentences
 2233 of the language are allowed. By contrast, due to the Liar Paradox, selecting a
 2234 suitable range for the instances of φ in the truth rules might prove to involve
 2235 resources that are very complex in computational terms. We cannot choose
 2236 all instances whatsoever to avoid inconsistency, and a more sophisticated
 2237 procedure is needed. Now, if this procedure is purely syntactic, it can be easily
 2238 implemented in the pattern for adoption stated above without any ad hoc
 2239 move. For instance, if one intends to adopt the rule 'from φ , infer $\text{True}(\ulcorner \varphi \urcorner)$ '
 2240 for instances of φ that do not contain "True," the relevant specification of the
 2241 range of **SCS** is a fairly simple procedure—at most primitive recursive—and

19 A couple of qualifications about the example: first, the rule should be intended to apply also to φ that we have assumed, and not only proved. Secondly, this rule should be intended to be adopted together with other truth rules. These qualifications are needed to ensure that the rule characterizes truth, and not weaker notions such as provability.

2242 can be reasonably taken to be part of the conceptual toolbox of anyone that
2243 understands the syntax of the language of their logical theory.

2244 If the specification of the relevant instances of *SCS* is not syntactic, it may
2245 result in a more complex procedure. If, for instance, this involves selecting the
2246 grounded sentences in the sense of Kripke (1975), or the set of stable truths in
2247 the sense of the revision theory of truth (Gupta and Belnap 1993), this would
2248 involve a highly non-computable process (McGee 1988; Burgess 1986). There-
2249 fore, we might have a situation in which there is no Kripke-style circularity
2250 in adopting ‘from φ , infer $\text{True}(\ulcorner\varphi\urcorner)$ ’ but simply the absence of a suitable
2251 schematic substitution rule to implement in the pattern of adoption for such
2252 rule. It should be clear, however, that this scenario is perfectly compatible
2253 with our analysis of the problem of adoption/revision. Whereas the adoption
2254 problem concerns one’s (seeming) impossibility of inferring according to a
2255 rule that is available to her, in the scenario under consideration the agent
2256 *does not* have at her disposal a suitable version of *SCS* to perform inferences,
2257 because its range may be too complex to be specified.

2258 We are then left with the familiar scenario in which one would like to
2259 adopt/revise quasi-logical rules but does not possess Modus Ponens. We have
2260 already cast some doubts on the availability of a workable *logica utens* in the
2261 absence of Modus Ponens. In the context considered here, this is even more so,
2262 since a logical theory may involve complex semantic constructions couched
2263 in classical mathematics, which require a substantial use of classical logic.

2264 **Alternative Quinean Targets for Kripke’s Argument**

2265 For all we have argued so far it seems that there is no adoption problem that
2266 would pose an obstacle or challenge to the idea that we can rationally revise
2267 our *logica utens*, provided that prior to the revision we already possess some
2268 basic reasoning skills and that our revision is supposed to preserve these.
2269 Neither in the abstract scenario that Kripke presents nor in more realistic
2270 cases is it plausible to assume that we lack the resources to apply new logical
2271 rules in reasoning.

2272 As we explained in section 1, we started with discussing the case of revision,
2273 since that seemed to us the broadest target for the adoption problem. In this
2274 last section, we will look at other aspects of a broadly Quinean philosophy of
2275 logic that could be potential targets of an adoption problem.

2276 We could identify four possible alternative targets that are part of Quine’s
2277 conception of logic and may, at least *prima facie*, be affected by the proposed

regress. The candidates are in turn the adoption of a first logic, the transition from the acceptance of a principle to the adoption of certain behavior, the problem of the missing normative force of purely descriptive logical principles, and the *knowledge that/knowledge how*-distinction. We will discuss the candidates in this order.

4.3.1 *The Adoption of the First Logic*

So far we have considered the adoption problem as a challenge for Quine's idea that we can adopt a *new* logic. So it was legitimate in our argument to suppose that some logic and some language is already in place and that an individual has on the basis of some *reasoning* arrived at the conviction that she should adopt a different way of reasoning, that she should adopt a new logic.

But perhaps the adoption problem is best understood in close similarity to Quine's original point against conventionalism and concerns the question how—on Quine's view—logic could have ever gotten off the ground (Quine 1936). After all, also on the conception that logic is just general, firmly held belief (Quine 1951), there seems to be the issue that firmly believing Modus Ponens does not yet allow you to reason with it, if you don't yet have that capacity. Thus, as a general theory of what logic is, Quine's theory isn't better than conventionalism, since it still is open to the challenge that it can't explain how the first logical principles could have been adopted in absence of an already existing logic.²⁰

Although this may well be so, it is not clear that this is a challenge that Quine needs to address. Or, in other words, it seems to us that Quine, quite clearly, does not have to address it. Quine (1936) presents a picture according to which the first principles of logic are not adopted as a result of engaging with some explicit formulation of the principles (as conventionalism has it), but where they get adopted in behavior and only later are reconstructed in terms of explicit reasoning principles or rules. This adoption in behavior does not require that Quine's theory of belief revision applies to it, so he does not at all need to explain how *homo sapiens* managed to develop structured reasoning that is describable in terms of schematic inference principles. This should be part of a general naturalistic account of how higher cognition and

²⁰ This seems to be how Padro (2015) understands the adoption problem.

2311 reasoning in general developed. To require that Quine's conception of logic
 2312 provides some detailed explanation of this process is entirely inadequate.

2313 It is worth emphasizing that conceding that the acceptance of logical prin-
 2314 ciples cannot explain how reasoning got off the ground takes nothing away
 2315 from the idea that principles of logic are (as far as epistemology is concerned)
 2316 just like other hypotheses.²¹ By developing a *logica docens* (as a formal rep-
 2317 resentation of our most general ways of reasoning) we can critically study
 2318 the way we think about most general matters (or matters most generally) and
 2319 maybe decide to make revisions to those central aspects of our web of beliefs.
 2320 Just as we would do with other hypotheses. How we could then 'adopt' the so
 2321 revised logic, we have described above.

4.2.2 *From Belief to Behavior*

2323 A second potential target for the regress argument is Quine's idea of the status
 2324 of logic in the web of belief. Quine (1951) considers logic to be nothing but
 2325 firmly held *belief*, statements that are just like any other statements in the web
 2326 of belief, with the only difference, that they are more central than others, and
 2327 thus less likely to be given up. But adopting a logic is not just adopting some
 2328 belief. It is adopting a way of reasoning. There are two ways to make that
 2329 challenge. The first would be to see this as a critique of Quine's behaviorism.²²
 2330 For a behaviorist, having a certain belief (for example, the belief that Modus
 2331 Ponens is valid) just means to show certain forms of behavior (for example to
 2332 reason in ways that are licensed by Modus Ponens). But perhaps that's too
 2333 short-sighted. As Kripke's thought experiment shows (on this interpretation),
 2334 one may accept a belief (viz. that Modus Ponens is valid) and yet fail to show
 2335 the appropriate behavior (e.g., to assent to implications that are licensed by
 2336 Modus Ponens). The thought experiment then doesn't show that there indeed
 2337 is a regress or circularity problem, but that there may be a problem of a certain

21 To see this, maybe it helps to consider an analogy with scepticism about our senses. Maybe we need to have default trust in our senses already in order to be able to learn anything from them. That may make the hypothesis 'I can trust my senses' special (in comparison to other empirical hypotheses) insofar as my knowledge of the world wouldn't get off the ground without it. But even if that were so, *this* would not make this hypothesis immune to revision, not even immune to revision via information that I receive through my senses.

22 Quine's behaviorism is a well-known aspect of much of his work. We already encountered it in Quine (1936), when Quine argues that there is no difference between firm belief and implicit and spontaneous acceptance of a convention. Most famously, Quine's behaviorism shows in his arguments in Quine (1960).

2338 kind of ‘stubbornness’: someone may count as having grasped and accepted
 2339 a certain belief, but just doesn’t act in a way that may be canonical for the
 2340 ascription of that belief.

2341 This may be a reasonable challenge to the idea that ‘S believes that *p*’ can
 2342 be analysed as ‘S is disposed to assent to this and that under conditions such
 2343 and such.’ But this doesn’t seem to be a specific problem for Quine’s theory of
 2344 logic; it is rather a problem for Quine’s theory of belief. However, while the
 2345 regress/circularity argument *displays* the problem, it doesn’t actually establish
 2346 anything that could seriously be regarded as an argument for the claim that
 2347 such an analysis must fail. It seems still perfectly reasonable to just respond to
 2348 such argument that it merely shows that the person in the dialog who doesn’t
 2349 reason in accordance with, for example, Modus Ponens has not yet actually
 2350 adopted the relevant belief.

4.3 *The Normative Force of Logical Principles*

2352 A closely related challenge (one that actually makes use of a regress) is to
 2353 interpret Kripke’s argument as revealing that Quine overlooked the *normative*
 2354 nature of logic (if one believes that it has such a normative nature). Logic, on
 2355 this view, tells us how we ought to reason. However, the general principles
 2356 that are featured in Kripke’s thought experiment are not norms or imperatives.
 2357 They don’t say anything about how anyone *should* reason. Therefore there
 2358 is a gap between adopting the belief that a certain logical principle is true
 2359 and adopting the *norm* that one ought to reason in a certain way. Quine, who
 2360 takes logical principles to be just like any other general scientific hypotheses,
 2361 overlooks this.

2362 There are two reasons why this is not a plausible target for Kripke’s argu-
 2363 ment. First, not all logical norms or imperatives will hold unconditionally.
 2364 But if they are norms that apply under certain conditions, then a conditional
 2365 norm could do nothing about the regress either. The reasoner in the Kripke
 2366 scenario would still need to be already following that norm in order to ap-
 2367 ply it under the current conditions. Thus, just adding deontic force to a rule
 2368 doesn’t help with the regress at all, as our hypothetical reasoner would still
 2369 have to instantiate the general norm to the current case and then detach a
 2370 consequence concerning what they now ought to infer.

2371 The second reason is that the plausible normative force of logical principles
 2372 is in fact too weak to be of any help in Kripke’s thought experiment. As Besson
 2373 (2018) explains, the recent discussion of the normative force of logic strongly

2374 suggests that in order for the argument to go through, we'd need an imperative
 2375 or a rule that would 'move' a subject to reason in accordance with the logical
 2376 principle at issue. However, as we have learned from Harman (1986) and
 2377 others, logical principles can't give rise to such rules. It simply isn't always
 2378 rational to use Modus Ponens and endorse q whenever you believe p and
 2379 $p \supset q$ for some p and q . However, a weaker principle that would, say, allow
 2380 that it is rationally permissible to believe q whenever you believe p and $p \supset q$
 2381 for some p and q is plausible, but would not lead to a plausible regress (see
 2382 Besson 2018 for details). Once you know the principle

2383 (5) Given your beliefs P and (if P , then Q), you are rationally permitted to
 2384 reason to Q .

2385 we can explain why you should be rationally permitted to reason with Modus
 2386 Ponens. If the regress argument is supposed to make a point about normativity,
 2387 it simply operates with the wrong deontic force.

4.3.4 Knowledge That and Knowledge How

2389 This leaves us with a last candidate which again tries to explain the problem of
 2390 the regress by a certain insufficiency of the merely propositional knowledge
 2391 that we acquire, when we accept the claim that Modus Ponens is valid. We
 2392 mentioned in the beginning in section 1 that Priest as well as Devitt and
 2393 Roberts both see the problem of adoption as primarily an issue of acquiring
 2394 certain *knowledge how* after one has convinced oneself of the relevant
 2395 *knowledge that*. Stairs (2006) also seems to understand Kripke in this way.

2396 Take a familiar analogy: from reading a book about how one rides a bike,
 2397 one doesn't know yet how to ride a bike in the sense that one won't be able
 2398 (yet) to ride a bike. The latter will require certain practical competence, a skill,
 2399 that can not be acquired by simply reading a description of what that skill
 2400 involves. Instead, the acquisition of that skill might require training.²³ In the
 2401 regress argument, the subject accepts Modus Ponens but doesn't have the
 2402 skill to apply it, she thus gets a new bit of propositional knowledge which she
 2403 doesn't know how to apply either, and so forth.

23 We don't distinguish here between knowledge how and a skill, since for the purpose of our argument it is sufficient to note that there are skills for which it is true that they can't be acquired by just understanding an instruction.

2404 Priest as well as Devitt and Roberts seem to think that also the adoption
 2405 of a new logic requires that we train ourselves in the application of a rule
 2406 in order to be able to apply it. However, as our discussion above shows, the
 2407 competence that rule application of logical principles requires is merely the
 2408 competence with basic inferences like Modus Ponens or **SCS** for the examples
 2409 that we considered. For instance, one could infer according to Conjunction
 2410 Elimination by just plugging the conditional rule into our recipe above. The
 2411 relevant knowledge how, in these cases, is a certain basic capacity to reason
 2412 in the first place. Adoption of a new rule thus does not require training in
 2413 new rules.

2414 Another question may be what it takes to ‘see’ new implications that one
 2415 didn’t see as implications with the ‘old’ logic, or how one can get to stop seeing
 2416 implications that aren’t implications according to a new logic. This seems to
 2417 be what Kripke has in mind when he is complaining that a merely formal
 2418 account of logic would not be the same as an intuitive form of reasoning:

2419 What I mean is this: you can’t undermine intuitive reasoning in
 2420 the case of logic and try to get everything on a much more rigorous
 2421 basis. One has just to think not in terms of some formal set of
 2422 postulates but intuitively. That is, one has to *reason*. [...] One can
 2423 only reason as we always did, independently of any special set
 2424 of rules called ‘logic,’ in setting up a formal system or in doing
 2425 anything else. (Stairs 2016, 31–32)²⁴

2426 This version of the adoption problem seems to be what Kripke originally had
 2427 in mind, but it neither leads to a regress, nor is it very convincing. The regress
 2428 is irrelevant, since the problem is not that a logical rule is missing and requires
 2429 the introduction by some explicit statement of the rule (the application of
 2430 which again requires the rule, and so on ad infinitum). The problem is rather
 2431 that any formal statement of logical laws is not the same as a way of reasoning.
 2432 Thus, whether such a formal account is stronger or weaker than our actual
 2433 way of reasoning, or in our terminology, whether revision goes via **DROP** or
 2434 **ADD**, is irrelevant; if a formal logic does not agree with our intuitive way of
 2435 reasoning, we will not be able to adopt such logic. Seeing that a consequence
 2436 follows is as impossible to adopt as unseeing that a consequence follows,
 2437 according to that view.

24 Stairs (2016) and Stairs (2006) are also discussions of Kripke’s lectures, but focus primarily on his case against quantum mechanics and less on a reconstruction of the adoption problem.

2438 The point is then not that we need training to be able to apply a new rule
2439 (i.e. to be able to apply a new general rule to a new concrete case). As we
2440 argued above, application of the rules is easy once you have the skill necessary
2441 to follow our recipe. The problem is rather that such a form of application of
2442 an explicit rule does not count as *reasoning*.

2443 But why should it not? Why should the habituation of a logic have any
2444 special status? Kripke presumably does not want to give the same value to all
2445 our dispositions to draw inferences intuitively. We often make mistakes in
2446 our intuitive reasoning. Maybe reasoning is a complex cluster of dispositions
2447 for Kripke; dispositions to draw inferences as well as dispositions to retract
2448 them after reflection. But if reasoning is such a wide cluster, then reasoning is
2449 malleable. And once reasoning is malleable in light of new information about
2450 our inferences not being valid (maybe on the basis of a formal representation
2451 of that inference), why stop there? Why only consider reasoning as a set of
2452 dispositions stable under such a narrow equilibrium, rather than stable under
2453 a wider equilibrium that considers more general principles of theory choice,
2454 e.g., fruitfulness, etc. The latter is just the anti-exceptionalist, Quinean view.

2455 Carroll/Quine-type considerations do not provide support for excluding a
2456 wide equilibrium view, nor an argument against the possibility of habituation
2457 or the malleability of reasoning.*

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PROOF

Animalism with Psychology

ROBERT FRANCESCOTTI

Here I develop an account of our persistence that accommodates each of the following compelling intuitions: (i) that we are animals, (ii) that we existed prior to the onset of whatever psychological capacities are necessary for personhood, and we can continue to exist with the loss of those and other psychological capacities, (iii) that with suitable psychological continuity, the person goes with the brain/cerebrum in remnant person and brain/cerebrum transplant cases, and (iv) that it is possible for us to survive gradual large-scale replacement of organic with inorganic parts. With the help of a couple of well-known “hybrid” accounts, I develop an analysis of our persistence that entails (ii)–(iv) while being consistent with (i).

Here I develop an account that captures each of four compelling and widely discussed intuitions regarding what we (human persons) are and the changes we can undergo while continuing to exist. What makes this project significant is that each of these intuitions is strong enough that it would be desirable to find an account that allows the truth of all four. Yet, these four initially appear to form an inconsistent set, and they really do seem quite difficult to reconcile. Here are the intuitions.

We are members of the species *Homo sapiens*, which is a species of animal. It would seem to follow that we are animals. The claim here is not merely that each of us is causally or otherwise intimately associated with an animal, as even those who believe that we are immaterial souls can accept. The animalist claim is that each of us *is* an animal in the strict sense of identity. That is:

Each of us is numerically identical with an animal.¹

¹ Rejecting this identity claim does not require believing that there are immaterial souls. One might endorse the *constitution* approach (e.g. Baker 2000, 2007) according to which a human person is constituted by but not identical with the spatially coincident animal. Or one might accept the *brainist* view that we are proper parts of animals, specifically, the functioning brain or the part of it responsible for the psychological states that make us persons. (See, for example, McMahan 2002; Parfit 2012; Campbell and McMahan 2016).

2631 It is also tempting to believe that no special psychological states or capacities
 2632 are necessary for our persistence. As Olson (1997a, 1997b) pointed out, it seems
 2633 that each of us once existed as a fetus, before the onset of the psychological
 2634 capacities commonly associated with personhood (such as rationality and
 2635 self-awareness). It is also tempting to think that we can survive the loss of
 2636 those and various other psychological functions, as arguably happens, for
 2637 example, when one enters a persistent vegetative state.² So in addition to the
 2638 animalist identity claim, there is the following intuition:

2639 We existed prior to the onset of whatever psychological capacities
 2640 are necessary for personhood, and we can continue to exist with the
 2641 loss of those and other psychological capacities.

2642 Of course, this belief is not independent of the view that we are animals. It
 2643 seems that what it takes for an animal to continue to exist is a biological affair
 2644 and not a matter of psychology.

2645 However, suppose that the brain of some person is removed and placed in
 2646 the cranium of a different body. Suppose, also, that the brain transplant is
 2647 a success, with higher-level neural functioning retained in such a way that
 2648 the animal with the brain after the operation is perfectly psychologically
 2649 continuous with the animal that had the brain before the operation. It is
 2650 tempting to think that the person goes with the brain and therefore has
 2651 switched bodies. Or suppose that rather than being placed in a different body,
 2652 the excised brain is kept disembodied but with cerebral functions sustained
 2653 in such a way that psychological capacities definitive of personhood remain.
 2654 There is the intuition that in this case the brain is a person, what Johnston
 2655 (2007) calls a “remnant” person, and the same person as the earlier embodied
 2656 individual, if psychological continuity is maintained.

2657 We can imagine that instead of removing the entire brain, just the cerebrum
 2658 is removed and sustained in such a way that all of the psychological capacities
 2659 definitive of personhood are retained, and with ample psychological conti-
 2660 nuity. Imagine also that lower brain functions are preserved in the body left
 2661 behind so that the body remains alive. Despite the fact that the cerebrumless
 2662 body remains alive, there is the strong intuition in this case, again because of
 2663 the psychological continuity, that the person goes with the cerebrum.³ This

2 Olson (e.g. 1997a, 111–114) expresses the intuition that one would persist in a vegetative state.

3 This thought-experiment assumes that the psychological activity/capacities definitive of personhood are confined to the cerebrum. If you think they extend to other regions of the brain, then

2664 belief seems at odds with the animalist thesis that we are animals, for it ap-
 2665 pears that the animal goes with the cerebrumless body and not the cerebrum.
 2666 Also, if our persistence does not require psychological continuity, if some
 2667 sort of non-psychological (e.g. purely biological) continuity is sufficient, then
 2668 there would seem to be no reason to deny that the person persists as the living
 2669 animal left behind. So there would appear to be a conflict between the first
 2670 two intuitions and the following belief:

2671 With the right sort of psychological continuity retained, the person
 2672 goes with the brain/cerebrum in remnant person and brain/cere-
 2673 brum transplant cases.

2674 If we go with the brain or cerebrum, then assuming that a brain or a cere-
 2675 brum is not itself an animal, we can persist without being an animal.⁴ Given
 2676 that animals are organisms and that to be an organism one must be at least
 2677 largely organic, another way for us to persist without being an animal is
 2678 to have all or most of our organic parts replaced with inorganic bits. If the
 2679 replacement is done gradually enough with physical continuity intact, it is
 2680 tempting to believe that we would persist in that inorganic form. So, there is
 2681 also the following intuition:

2682 It is possible for us to survive gradual large-scale replacement of
 2683 organic with inorganic parts.

2684 That seems to conflict with the view that we are identical with animals, on the
 2685 assumption that animals cannot persist without being sufficiently organic.⁵

imagine that a larger portion of the brain is removed, so long as the portions that control vital functions are left behind.

- 4 One might support the view that the detached whole brain, with activity suitably sustained, counts as an animal or an organism at least. See, for example, van Inwagen (1990, sec. 15) and Olson (1997a, 133). But it seems much less plausible to regard a mere cerebrum as an animal/organism; “a detached cerebrum is not an animal, or a living organism of any other sort” (Olson 1997a, 115). So, as a potential threat to animalism, the transplant case is more effective when imagining that only the cerebrum is transplanted. (Although, see Madden (2016b, fn. 32) who raises doubt for the view that a functioning detached cerebrum is not an animal; also, Madden’s (2016a) account of our persistence discussed here in section 1 might be used to support the idea that an animal can persist as a cerebrum and while remaining an animal.)
- 5 Baker (2016) presents the possibility of surviving inorganic replacement as a reason to reject animalism.

2686 If we wish to develop an account of our persistence that allows the truth of
 2687 all four of the intuitions mentioned, then it seems we will need to emphasize
 2688 both psychological and non-psychological continuity. In section 1, I discuss
 2689 two “hybrid” accounts that have been offered according to which the animals
 2690 that we are have persistence conditions that are partly psychological and partly
 2691 non-psychological.⁶ These proposals go a long way toward reconciling the
 2692 four intuitions, but as shown in section 1 they do not fully succeed. Building
 2693 on these accounts, I develop a hybrid proposal in sections 2 and 3 that more
 2694 successfully captures the four intuitions.

2695 1 The Hybrid Approach

2696 “*The biological continuity approach (BCA)*,” Langford reports, tells us that in
 2697 non-branching cases “we persist iff we have a biological continuer” whereas
 2698 “[*t*]he psychological continuity approach (PCA) affirms that, again restricting
 2699 our attention to non-branching cases, we persist iff we have a psychological
 2700 continuer” (2014, 356–357). With “iff” BCA and PCA are characterized as
 2701 views about what is necessary for our persistence and what is sufficient. Lang-
 2702 ford proposes retaining the sufficiency claims of BCA and PCA and rejecting
 2703 the necessity claims, with a disjunctive account according to which we fall un-
 2704 der the substance concept, *bio-psycho-continuer*, where “[s]omething counts
 2705 as a bio-psycho-continuer only if (in non-branching cases) it can persist by
 2706 way of either biological continuity or psychological continuity” (2014, 361).⁷

6 The title of my paper is inspired by the subtitle of Olson’s (1997a), but unlike his account where our persistence is explained “without psychology,” the analysis developed here, as is characteristic of “hybrid” accounts, makes reference to psychological as well as non-psychological features. The description “hybrid” for this sort of view is not uncommon.

Noonan uses the label “the Hybrid Approach” for the view that “we are animals the persistence conditions of which are partly biological and partly psychological” (2003, 205), with examples of support including Wiggins (1996, 246) and McDowell (1997, 237). Noonan develops a hybrid account, using the label “the hybrid view” for “the complex view that takes psychological continuity as a sometimes sufficient but not a necessary condition for personal persistence” (2019, 196) and mentioning Langford (2014) and Madden (2016a) as advocates (2019, 226, 229). Also see Noonan’s (2021) defense of the hybrid approach. Olson (1997b) uses “the hybrid proposal” for the sort of account that describes our persistence in terms of both psychological continuity and biological continuity, while entailing that neither is necessary for our persistence. In this paper I describe as hybrid any account of our persistence that includes psychological and non-psychological conditions.

7 Compare with Sharpe’s “psychologically-serious animalism,” which is a *conjunctive* approach; “biological and psychological continuity are individually necessary but only jointly sufficient for the persistence of human persons” (2015, 65).

2707 Langford offers reasons for expressing the notion of a bio-psycho-continuer
2708 in terms of a necessary condition alone, with “only if” instead of “if and only
2709 if” (2014, 361). But even with just a necessary condition, the account accom-
2710 modates three of the four intuitions mentioned earlier. Since the account
2711 is disjunctive, it allows that we can persist without psychological continu-
2712 ity, and even in the total absence of psychological capacities, provided there
2713 is non-branching biological continuity. So the account allows that each of
2714 us once existed as a fetus and as an embryo, and that we can continue in a
2715 persistent vegetative state. Being disjunctive, the view also grants that we
2716 can survive major or even total inorganic replacement where biological con-
2717 tinuity is lost; non-branching psychological continuity suffices. Moreover,
2718 Langford’s view that we persist by way of either biological or psychological
2719 continuity is compatible with the claim that we are animals, animals that are
2720 bio-psycho-continuers.

2721 Given that biological continuity is required to continue to be an animal, on
2722 Langford’s view, even though we are animals, we are not animals essentially.
2723 While “animalism” is sometimes used for the view that we are animals essen-
2724 tially, it is often used only for the view that we are animals, with the essential
2725 claim regarded as an additional component.⁸ With Langford’s disjunctive
2726 account, one can be an animalist in the latter sense while also accepting
2727 that we can survive inorganic replacement and thereby become non-animals.
2728 Denying animal essentialism is also a way for animalists to believe that we
2729 follow the brain/cerebrum in remnant person and transplant cases even while
2730 denying that the cerebrum or the whole brain counts as an animal.

2731 But is Langford’s view really compatible with the cerebrum intuition? Sup-
2732 pose the cerebrum is removed with psychological functioning maintained,
2733 and suppose the cerebrumless body is destroyed immediately after. The dis-
2734 junctive view tells us that the person goes with the cerebrum, provided that
2735 psychological continuity is sustained. But suppose that the cerebrumless
2736 body is not destroyed. Suppose, also, that it remains alive with lower brain
2737 functions intact. In this case, we have a biological continuer in addition to a
2738 psychological continuer. So where does the person go on Langford’s account?
2739 Recall his proposal that “[s]omething counts as a bio-psycho-continuer only

8 Olson (2015a) gives the title “weak animalism” to the bare claim that we are animals, and he uses the description “new animalism” for the conjunction of weak animalism and the denial of any further claims animalists often make, e.g. that animals are animals essentially or fundamentally. Olson also uses the labels “accidental animalism” (2015b) and “accidentalism” (2016) for the view that we are accidentally and not essentially animals.

2740 if (in non-branching cases) it can persist by way of either biological conti-
 2741 nuity or psychological continuity” (2014, 361). By explicitly applying only to
 2742 non-branching cases, the analysis yields no verdict in the branching case we
 2743 are imagining.

2744 Is there a way of extending the account to branching cases? The most
 2745 straightforward way of doing so is with the claim that we persist in branching
 2746 and non-branching cases by way of either psychological or biological continu-
 2747 ity. But, as Langford (2014, 365) mentions, we then get the result that in the
 2748 scenario imagined the person survives as both the cerebrum and the cerebrum-
 2749 less animal, and so the person ends up in two places at once, which seems
 2750 implausible. Yet, as Langford points out, non-disjunctivists, including propo-
 2751 nents of PCA and BCA, also have to deal with branching cases (e.g. where
 2752 there is more than one psychological continuer or more than one biological
 2753 continuer), and their options for doing so are also available to the disjunctivist.
 2754 One of the options Langford (2014, 365) mentions (besides holding that the
 2755 person ends up in two places at once) is to accept the view that in the case
 2756 described, there were two persons within one body, two spatially coincident
 2757 persons, before the operation, and one of them goes with the cerebrum while
 2758 the other goes with the cerebrumless body. (See Noonan’s (2019, 2021) way
 2759 of developing a “multiple occupancy” version of the disjunctive approach.⁹)
 2760 However, there is the strong intuition that in the case imagined the person
 2761 goes with the cerebrum and not the living body left behind. So I think a more
 2762 plausible option for the disjunctivist is to add Nozick’s (1981) notion of a
 2763 “closest continuer” to Langford’s account, and then develop the account in a
 2764 way that ensures that the cerebrum is the closest continuer in the branching
 2765 case we are imagining. I will present what I consider the best way to do that
 2766 in sections 2 and 3. The solution proposed is not simply a matter of claiming
 2767 that in branching cases, psychological continuity always wins out over phys-
 2768 ical/biological continuity, and the solution offered is not a disjunctive one. But
 2769 before we turn to my proposal, let’s get a clearer idea of how to proceed with
 2770 a brief discussion of Madden’s (2016a) hybrid account.

2771 With the belief that we are fundamentally biological organisms of the
 2772 kind *human animal*, Madden claims that “[o]ne of us persists if and only if

9 Lewis (1976) and Robinson (1985) defend the view that with fission there is more than one individual there all along. See how Noonan (2019, 140–144, 225–231; 2021) defends this “multiple occupancy” view, within the framework of a disjunctive hybrid account, in order to preserve the “only *x* and *y* principle” that, roughly, whether *x* is identical with *y* can depend only on facts about *x* and *y* and how they interrelate.

2773 a sufficient number of capacities for human-animal-characteristic activity
 2774 are continuously preserved (along a dominant path)” (2016a, 6).¹⁰ Madden
 2775 provides a list of some of the activities characteristic of the kind *human animal*.
 2776 The list includes biological activity of various sorts (such as digesting, ageing,
 2777 and fighting infection) as well as activities characteristic of non-biological
 2778 material aggregates (e.g. resisting penetration and blocking light). In the list
 2779 of activities characteristic of the human animal kind, Madden also mentions
 2780 various psychological functions, including planning, remembering, visually
 2781 attending, and problem-solving. So, on his account, “psychological capacities
 2782 are relevant to our persistence” (2016a, 6).

2783 Requiring only that a *sufficient* number of capacities are preserved allows
 2784 that we can exist without psychological capacities, either before their presence
 2785 or after their loss—provided that enough of the biological or purely physical
 2786 abilities are preserved (continuously along a dominant path). Also, on Mad-
 2787 den’s view, we can persist even with the loss of biological capacities, assuming
 2788 a sufficient number of our purely physical or psychological ones are retained.
 2789 So it seems that on his account, we can survive replacement of organic with
 2790 inorganic parts.

2791 What about persisting as a remnant person? The account allows for that
 2792 possibility by including in the list of activities characteristic of the human
 2793 animal kind various psychological functions. With the inclusion of psycholo-
 2794 gical activity, the person goes with the excised brain/cerebrum on Madden’s
 2795 view, provided that enough psychological activity or the capacity for it is
 2796 continuously preserved (along a dominant path).

2797 But suppose that a living body were left behind. Where would the per-
 2798 son go in that case? If the cerebrum were removed, with all person-making
 2799 psychological features sustained, then certain capacities that Madden consid-
 2800 ers characteristic of the human animal kind would follow the cerebrum. Of
 2801 course, other capacities would go with the remainder of the body, and with
 2802 life sustained via lower brain functions, it seems that many more capacities
 2803 would follow the remainder of the body than would follow the cerebrum.

2804 Wishing to maintain that the person goes with the suitably functioning
 2805 cerebrum even with a living body left behind, Madden (2016a, 7) points out
 2806 that the “single term ‘thinking’ grossly underestimates the number and diver-

10 Madden is following Wiggins’ development of the broadly Aristotelian view that, as Madden puts it, “[a] macroscopic continuant is, most fundamentally, a locus of law-like activity characteristic of its general kind” (2016a, 4). Langford (2014) also appeals to Wiggins’ view of persistence in terms of continuation of an object’s principle of activity.

2807 sity of human-organism-characteristic capacities preserved” by the cerebrum,
 2808 including among others:

2809 [the capacity for] colour discrimination, grammatical string detec-
 2810 tion, social hierarchy navigation, duration sense at different tem-
 2811 poral scales, vertical-horizontal line discrimination, face recogni-
 2812 tion, place recognition, practical know-how, auditory phoneme in-
 2813 dividuation, predictive naïve physics, story-telling, [and] episodic
 2814 memory. (2016a, 7)

2815 If the number and diversity of psychological capacities such as these make
 2816 the path of the cerebrum the dominant path in the brain removal case being
 2817 imagined, then we can say with Madden’s account of our persistence what
 2818 many of us are inclined to say—that the person goes with the cerebrum and
 2819 not the cerebrumless body even if the latter remains alive with the capacity
 2820 to control vital functions.

2821 Granted, the number and diversity of psychological capacities preserved
 2822 by the cerebrum is much greater than what the single term “thinking” im-
 2823 plies. However, as Kotak (2018) mentions, it is doubtful that those functions
 2824 controlled by the cerebrum outweigh the host of other functions (biological,
 2825 chemical, and physical) that remain in the cerebrumless individual. Those
 2826 other functions on Madden’s list of activities characteristic of the human
 2827 animal kind include biological activities found in most kinds of organism
 2828 (e.g. growing, excreting, aging, digesting, sweating, and dying); they also
 2829 include “activities characteristic of simple material concretions,” such as re-
 2830 sisting penetration and blocking light (2016a, 6). It is unclear at best that the
 2831 path of psychological continuity would be the more dominant one if the body
 2832 left behind had the great wealth of non-psychological capacities and activity
 2833 that the life of a human organism requires. Moreover, as Hershenov points
 2834 out:

2835 There won’t clearly be psychological dominance if we imagine the
 2836 transplant of a very unsophisticated human mind due to damage
 2837 or developmental immaturity. Still, most readers would assume
 2838 that the subject of experience has moved with the minimally
 2839 sentient human mind, but it wouldn’t dominate the metabolic
 2840 and homeostatic capacities left behind and controlled by the brain
 2841 stem. (2020, 91)

2842 So it is doubtful that Madden's account adequately captures the intuition
 2843 that we go with the psychologically continuous cerebrum in cases where the
 2844 cerebrumless body remains alive.

2845 I take it that it's a merit of Madden's account, and Langford's, that psy-
 2846 chological continuity is not considered necessary for our persistence, for this
 2847 allows that we predate and can outlast psychological capacities. It is also a
 2848 merit of their proposals that they don't regard biological continuity as nec-
 2849 essary for our persistence, which is consistent with our surviving inorganic
 2850 replacement. There is the additional virtue that their accounts, while not re-
 2851 quiring biological continuity, allow that each of us is identical with an animal.
 2852 The proposal developed in the next two sections maintains these merits, while
 2853 more effectively capturing the intuition that we go with the brain/cerebrum
 2854 in remnant person and transplant cases.

2852 **Towards a New Hybrid Account**

2856 There might have been, and perhaps there are, persons who are immaterial
 2857 substances (gods, angels, or Cartesian egos perhaps) or have immaterial sub-
 2858 stances as proper parts. What I am calling "physically realized" persons, by
 2859 contrast, are those who are confined to physical space and at some level of
 2860 composition are wholly comprised of physical parts.¹¹ Working on the as-
 2861 sumption that we are physically realized, the question arises: What does it
 2862 take for any physically realized person, human or otherwise, to persist?

2863 Let's use "P" to indicate whatever psychological activity and capacities
 2864 are definitive of personhood (such as self-awareness and rationality) and let
 2865 "P-continuity" designate whatever continuity of P-activity/capacities grounds
 2866 the persistence of persons. Also, " x at t " is used here to abbreviate " x as x is
 2867 at t ," and " y at t^* " is used to abbreviate " y as y is at t^* ," without presupposing
 2868 that " x at t " and " y at t^* " name temporal parts.¹² As a first approximation,
 2869 then, the proposal is:

11 I talk of *physically realized* persons rather than physical persons to avoid the assumption that all of the properties of a person are reducible to physical properties. Talk of physical realization allows the truth of a non-reductive physicalist account of our mental and, say, biological properties.

12 The discussion here is meant to be neutral on whether endurantism is true. This formulation and any of the points expressed in this paper in endurantist terminology can be rephrased in 4-dimensionalist terms.

2870 H. Necessarily, if x is a physically realized person at time t , then for
 2871 any y at time t^* , $x = y$ if and only if

- 2872 (i) y at t^* is physically continuous with x at t , and
 2873 (ii) y satisfies the following requirement: its P-continuity at t^* with x at t is
 2874 not exceeded by the P-continuity with x at t of anything else at t^* that
 2875 is physically continuous with x at t .

2876 **H** applies to all physically realized persons, including any non-human phys-
 2877 ically realized persons there might be. According to **H**, we and any other
 2878 physically realized persons persist as *the physical continuer that preserves an*
 2879 *unsurpassed degree of continuity of psychological activity/capacities definitive*
 2880 *of personhood*. I use “**H**” as short for “Hybrid Account,” indicating that like
 2881 Langford’s and Madden’s accounts, **H** emphasizes both psychological and
 2882 non-psychological continuity. Also, **H** is only a first approximation. Some
 2883 modifications are needed, as might already be apparent, and these will be
 2884 added in section 3. For the remainder of this section let’s consider how the core
 2885 analysis, **H**, accommodates the various intuitions regarding our persistence.

2886 **H** does not specify which psychological activity or capacities count as defini-
 2887 tive of being a person, and **H** is also neutral on the type of psychological con-
 2888 tinuity that matters to our persistence (overlapping chains of direct memory
 2889 links, suitable causal connections, sharing a first-person perspective, or simi-
 2890 larity of personality traits). **H** is neutral as well on which factors make it the
 2891 case that one instance of P-continuity outweighs another. Thus, as intended,
 2892 the analysis is compatible with a wide range of differing opinions on what
 2893 type of psychological continuity, and how much and what degree, is a factor
 2894 in our persistence.

2895 **H** also leaves unspecified how best to construe physical continuity. One
 2896 might choose to think of it in terms of spatio-temporal continuity of a suffi-
 2897 cient portion of matter, with different possible views on how much is sufficient
 2898 (e.g. more than half or perhaps some more sizable majority). Or one might
 2899 wish to understand physical continuity in terms of some type and degree
 2900 of causal continuity of physical processes, either in addition to or instead
 2901 of the emphasis on spatio-temporal continuity.¹³ So **H** may be adopted by
 2902 those with differing views on what counts as physical continuity. However,
 2903 while **H** leaves much latitude on how to understand physical continuity, not

13 For better insight on different ways to understand physical continuity, see Sauchelli’s (2017, 212–213) description of different ways to view the persistence conditions of bodies of matter.

2904 just anything goes. The analysis is not meant to require any sort of biological
 2905 continuity—so as to allow that persons like us who are biological might
 2906 survive large-scale replacement of organic with inorganic parts. The physical
 2907 continuity mentioned in H is also to be understood, as one would expect, in
 2908 such a way that one is physically continuous with the earlier fetus and the
 2909 cognitively deprived individual one might become; and it is to be understood
 2910 in such a way that the excised cerebrum is physically continuous with the
 2911 person from which it was removed and the person receiving the implant. This
 2912 allows that the person existed before and can survive the loss of P-capacities,
 2913 and it allows that the person goes with the brain/cerebrum in remnant person
 2914 and transplant cases. And condition (ii) helps ensure these results.

2915 Suppose some person x is awaiting cerebrum-removal. The cerebrum is re-
 2916 moved with P-activity/capacities sustained so that we end up with a remnant
 2917 person, y , who is P-continuous with x . Since y is small relative to the cere-
 2918 brumless body left behind, y is not the item at the time that is most physically
 2919 continuous with x . The cerebrumless body is more physically continuous
 2920 with x than y is. Still, y is physically continuous with x to some degree, and
 2921 on the assumption that P-capacities are housed in the cerebrum,¹⁴ y is a phys-
 2922 ically continuous item with unsurpassed P-continuity—unsurpassed by the
 2923 P-continuity with x of anything else at the time that is physically continuous
 2924 with x . So with the emphasis in (ii) on being a physical continuer with un-
 2925 unsurpassed P-continuity, H gives the intuitively correct result that x goes with
 2926 the cerebrum and not the rest of the body even if the cerebrumless portion
 2927 remains alive. (For ease of exposition here and in some of what follows I
 2928 abbreviate. When I say that y is continuous with x , I mean that y as y is at the
 2929 one time is continuous with x as x is at the other time. For example, saying
 2930 above that y is physically continuous and P-continuous with x is shorthand
 2931 for saying that y as y is in the remnant person state is physically continuous
 2932 and P-continuous with x as x is/was before surgery.)

2933 To satisfy the requirement specified in condition (ii) of H, y 's P-continuity
 2934 with x cannot be surpassed, i.e. cannot be surpassed by the P-continuity with
 2935 x of anything else at the time that is physically continuous with x . However,
 2936 this does not require that y actually is P-continuous with x . Suppose that
 2937 person x begins to lose all P-capacities, and suppose that what is left is a
 2938 living body, y , without any P-capacities. Since y has no P-capacities, y is not

14 As mentioned in footnote 3, if you think the psychological activity/capacities definitive of personhood extend to other regions of the brain, then imagine that a larger portion of the brain is removed. Also, extended mind considerations are set aside here solely for the sake of simplicity.

2939 P-continuous with x . But, we may suppose, nothing else at the time that is
 2940 physically continuous with x has any more P-capacities than y has. In this
 2941 sense, y 's P-continuity with x is unsurpassed. So **H** gives the result that the
 2942 person persists in this case (though presumably not as a person) despite the
 2943 loss of P-capacities.

2944 Also consider some adult person, x , and the former fetus, y , prior to the
 2945 gain of P-capacities. While x and y are physically continuous, there is no
 2946 P-continuity between x and y . However, nothing at the time that is physically
 2947 continuous with x has any more P-capacity than y has. So y 's P-continuity with
 2948 x , albeit lacking, is unsurpassed (by the P-continuity with x of anything else
 2949 at the time that is physically continuous with x). Thus, **H** gives the result that
 2950 x and y are the same individual in this case, thereby capturing the intuition
 2951 that we existed before any P-capacities were acquired.

2952 **H** also allows that we existed prior to and can survive the loss of *all* psycho-
 2953 logical capacities. Suppose that y is physically continuous with x , but y has no
 2954 psychological capacities. Then y is not psychologically continuous with x , and
 2955 since P-continuity is a type of psychological continuity, y is not P-continuous
 2956 with x . But suppose that nothing else at the time that is physically continuous
 2957 with x has any psychological capacities. Then nothing at the time that is
 2958 physically continuous with x has any more P-continuity with x than y has.
 2959 Assuming that x is a physically realized person, $x = y$, according to **H**.

2960 **H** does not entail that we are animals. One might accept the analysis and
 2961 argue that we are constituted by animals and not identical with them. One
 2962 might also accept **H** and believe that the brain is the nonderivative locus of
 2963 mentality, and one might conclude that the person is the brain or some part
 2964 of it even when it is inside an animal. But, clearly, one can consistently accept
 2965 **H** while believing that we are animals, for one can consistently believe that
 2966 the persistence conditions of those human animals who are persons (and any
 2967 other animals that might qualify as persons) are as described by conditions (i)
 2968 and (ii). So suppose that we conjoin **H** with the belief that we are identical with
 2969 animals. The result is an animalist account that has as a strong point in its favor
 2970 the fact that it honors each of the other intuitions—that we existed prior to and
 2971 can survive the loss of person-making and other psychological capacities, that
 2972 we go with the brain/cerebrum in remnant person and transplant scenarios,
 2973 and that we can survive inorganic replacement.

2974 However, there are some concerns with **H** that show that a few additions
 2975 are required.

2976 3 Modifying H

2977 Imagine that a person, x , splits in half, leaving two individuals, y and z , both
 2978 of whom are physically continuous with x (as x was before the division),
 2979 and equally so. Also suppose that y and z are equally P-continuous with x ,
 2980 and nothing else at the time that is physically continuous with x is more P-
 2981 continuous with x than y and z are. According to H, both y and z are identical
 2982 with x , which cannot be given that y is not identical with z . Unless we wish
 2983 to maintain that there were two persons present all along, some addition to H
 2984 is needed.

2985 We might add as a third condition that the person persists only as *the most*
 2986 *dominant* physical continuer with unsurpassed P-continuity. With this ad-
 2987 dition, we get the desired result that in the case imagined where there is no
 2988 dominant physical continuer, the pre-fission person does not survive the divi-
 2989 sion. But imagine the case is slightly different. Person x divides, leaving y and
 2990 z , and y at the time contains just a little more of x 's matter before the division
 2991 than z does—suppose only two ounces more. Also suppose, as before, that y
 2992 and z are equally P-continuous with x , each with unsurpassed P-continuity.
 2993 Many would be reluctant to accept that a difference in just a couple of ounces
 2994 could make a difference in where the person goes.¹⁵ So it seems that the third
 2995 condition added to H's (i) and (ii) should require not just greater physical
 2996 continuity, but *significantly* greater physical continuity—the most dominant
 2997 physical continuer (with unsurpassed P-continuity) and significantly so. For
 2998 the purpose of the analysis, let's leave it open what significantly greater physi-
 2999 cal continuity amounts to, thereby allowing for different views on how much
 3000 additional physical continuity is significant enough to make a difference in
 3001 whether the person survives in cases of physical branching.

3002 In section 2, the physical continuity mentioned in H was left unspecified
 3003 so that H may be accepted by those with differing views on how best to con-
 3004 strue physical continuity. Yet, what counts as physical continuity by some
 3005 standards might not be the sort of physical continuity that is necessary for
 3006 our persistence. So in modifying H we might wish to require *suitable* physical
 3007 continuity. For example, we probably would want to place limits on how far
 3008 along we persist in the process of death and decomposition. One might be
 3009 inclined to accept the *Termination Thesis*, the view that we cease to exist when

15 Thanks to an anonymous referee for *dialectica* for bringing this problem case to my attention. Thanks also to anonymous referees for the journal for each of the other cases discussed in this section.

3010 we die.¹⁶ The proponent of this thesis might believe that the type of physical
 3011 continuity required for us to persist involves continuity of life. Although, if
 3012 we demand continuity of biological life, then it seems we cannot retain the
 3013 idea that we might survive massive inorganic replacement (given that some-
 3014 thing is a biological entity only to the extent that it is largely organic). Rather
 3015 than requiring continuity of biological life, those attracted to the Termination
 3016 Thesis might instead require continuity of a certain sort of *internal complexity*,
 3017 where the requisite internal complexity might be explained in terms of the
 3018 manner and degree to which one's internal processes are causally interde-
 3019 pendent. So long as it is a type of internal complexity that corpses lack, then
 3020 the revised analysis would be acceptable to proponents of the Termination
 3021 Thesis. And as long as it is a type of internal complexity had by the typical
 3022 human fetus, a human in a persistent vegetative state, a remnant person, and
 3023 a human survivor of inorganic replacement, the analysis continues to honor
 3024 the intuition that we persist in those cases.

3025 Even those who reject the Termination Thesis, believing that we survive
 3026 death as corpses, would probably maintain that our persistence requires
 3027 continuity of some degree or type of internal complexity to preclude our
 3028 surviving to the very end of the decomposition process.¹⁷ It is not clear how
 3029 the details of the internal complexity are best specified, although it is clear
 3030 that there are different types and degrees of internal complexity had by a
 3031 freshly dead human corpse but lacked by, say, a human skeleton.

3032 Suppose, then, that we preface the two occurrences of “physically continu-
 3033 ous” in H with the word “suitably,” where “suitably” serves as a placeholder
 3034 for whatever restrictions one might wish to place on the physical continuity
 3035 mentioned in the analysis. Also suppose we add a third condition that re-
 3036 quires being the most dominant suitable physical continuer (with unsurpassed
 3037 P-continuity) and significantly so.

3038 H'. Necessarily, if x is a physically realized person at time t , then
 3039 for any y at time t^* , $x = y$ if and only if

3040 (i) y at t^* is suitably physically continuous with x at t ,

16 See Feldman's (1992) classic discussion and rejection of the Termination Thesis.

17 Mackie, who rejects the Termination Thesis, proposes that “[a]n organism persists for as long as it retains enough of its parts, in a sufficiently similar state of organisation” (1999, 238).

- 3041 (ii) y satisfies the following requirement: its P-continuity at t^* with x at t is
 3042 not exceeded by the P-continuity with x at t of anything else at t^* that
 3043 is suitably physically continuous with x at t , and
 3044 (iii) y exhibits significantly greater suitable physical continuity with x at t
 3045 than does anything else at t^* that satisfies the requirement of unsur-
 3046 passed P-continuity specified in (ii).¹⁸

3047 Provided that suitable physical continuity is not understood in a way that
 3048 prevents any one of us from being suitably physically continuous with a fetus,
 3049 someone in a vegetative state, a cerebrum, or someone with an inorganic
 3050 composition, then like H , H' honors the intuition that we pre-dated the ac-
 3051 quisition of and can survive the loss of P-capacities, that the person goes with
 3052 the P-continuous brain/cerebrum in remnant person and transplant cases,
 3053 and that we can survive inorganic replacement. Also, nothing about the addi-
 3054 tions to H rules out our being identical with animals. One can consistently
 3055 believe that we are animals whose persistence conditions are those described
 3056 by (i)–(iii).

3057 To better understand the *suitable* physical continuity requirement in H' ,
 3058 let's see how the notion of suitable physical continuity might be used to handle
 3059 some other potential problem cases. Suppose that person x starts to experience
 3060 major psychological changes, so that the person y at a later time who is
 3061 highly physically continuous with x before the changes is only modestly P-
 3062 continuous with x . Also imagine that just before the disruption of P-continuity,
 3063 an exact psychological duplicate of x is created out of entirely new matter
 3064 except for a few of x 's atoms. Given the few atoms retained, the psychological
 3065 duplicate, z , is physically continuous with x to a minimal degree. Also, if P-
 3066 continuity does not require *causal* continuity of psychological features, then
 3067 given the perfect psychological duplication z is more P-continuous with x
 3068 than y is, in which case, H' seems to give the result that x survives as z . Some
 3069 might consider it implausible to believe that x and z are the same person in
 3070 this case especially given that y is highly physically continuous with x and
 3071 P-continuous with x to some degree. If we wish to avoid the result that x and
 3072 z are the same person, one obvious way to do so is to insist that more than just
 3073 a relatively minimal amount of physical continuity is required for a person to
 3074 persist (where the sum of only a few atoms is minimal relative to the whole

18 Like H , H' is expressed in endurantist terminology (especially with talk of x being identical with y), but the formulation can be rephrased in 4-dimensionalist terms and with reference to temporal parts made explicit (with “ x -at- t ” and “ y -at- t^* ”) if one wishes.

3075 body while a brain or cerebrum is not). By including in the idea of suitable
 3076 physical continuity that there is more than just a relatively minimal amount
 3077 of physical continuity, we avoid the result in the case described that x and z
 3078 are the same person.

3079 Suppose, instead, that without any major psychological changes, the cere-
 3080 brum is taken from person x and successfully transplanted. Also imagine
 3081 that upon removal, the cerebrum is immediately replaced with a duplicate
 3082 cerebrum, quickly enough that there is no disruption of psychological conti-
 3083 nuity. At the end of the procedure, there are two persons: person y who is the
 3084 recipient of the original cerebrum and person z with the original body and
 3085 duplicate cerebrum. If P-continuity does not require causal continuity, then
 3086 we may suppose that in this case, y and z are equally P-continuous with x , and
 3087 both with unsurpassed P-continuity. Also, because z has all of the original
 3088 body except for the cerebrum, z is highly physically continuous with x and
 3089 significantly more so than y is. H' entails that the original person x survives
 3090 as z (the person with the original body and duplicate cerebrum) and not as y
 3091 (the recipient of the original cerebrum).

3092 It's not clear to me what to think about this result. But those who find the
 3093 result counterintuitive can avoid it while still accepting H' . One option is to
 3094 construe suitable physical continuity as requiring *physical continuity of the*
 3095 *locus of P-features* (person-making psychological features) if any are present.
 3096 Assuming that the cerebrum is the locus of P-features, if suitable physical
 3097 continuity demands physical continuity of the locus of P-features, then z (the
 3098 person with the duplicate cerebrum) is not suitably physically continuous
 3099 with the original person x . So by construing the suitable physical continuity
 3100 mentioned in H' as requiring physical continuity of the locus of P-features,
 3101 we can endorse H' without holding that z is the same person as x . H' would
 3102 instead give the result that x follows the original cerebrum and survives as y .
 3103 There is another way to secure this result. We might construe P-continuity
 3104 as requiring causal continuity of P-features. If P-continuity requires causal
 3105 continuity of P-features, then H' does not entail that x survives as z . The
 3106 result, instead, is that x survives as person y with the original cerebrum. (Of
 3107 course, the appeal to causal continuity might also be used to avoid the result
 3108 in the previous case that the person survives as the psychological duplicate.)

3109 Here's another concern. H' gives the result that if P-continuity is sustained,
 3110 then the person persists as the cerebrum when it is removed. Now suppose
 3111 the cerebrum is successfully placed into another body. After surgery, there
 3112 is the individual, y , that received the cerebrum, and there is the cerebrum

3113 itself, z . Assuming that P-capacities are confined to the cerebrum, it seems
3114 that y and z are equally P-continuous with the pre-implant cerebrum, the
3115 remnant person, x . Many would be inclined to think that in this case after
3116 successful implantation x persists as the entire individual, y , and not just the
3117 cerebrum, z , contained within. But given H' , whether x persists as y or as z
3118 depends on which is more physically continuous with x . It would seem that
3119 on most plausible construals of physical continuity, y is not more physically
3120 continuous with x than z is. In fact, it is arguable that z is more physically
3121 continuous with x given that there is so much of y that is not physically
3122 continuous with x . So there is the worry that, with H' , x remains cerebrum-
3123 sized even after implantation—or perhaps worse, x does not persist at all
3124 assuming neither y nor z is significantly more physically continuous with x
3125 than the other is.

3126 If we wish to secure the result that the person persists as the whole animal
3127 after implantation and not just the cerebrum, we might include in the idea of
3128 suitable physical continuity that a suitable physical continuer is a *maximal*
3129 physical continuer, where a maximal physical continuer is one that does not
3130 have any suitable physical continuers as proper parts. Given that the whole
3131 animal after implantation is a suitable physical continuer of remnant person
3132 x , the maximality constraint entails that the cerebrum after implantation is
3133 not a suitable physical continuer of x . So if the whole animal is a suitable
3134 physical continuer and if being a suitable physical continuer entails being
3135 a maximal physical continuer, then with H' we get the desired result that
3136 the person coincides with the whole animal after implantation (and is the
3137 whole animal given animalism).¹⁹ Although, perhaps we can secure this result
3138 without adding the maximality constraint. One might have some reason, in-
3139 dependently of maximality considerations, to believe that when the cerebrum
3140 is housed in an animal, the bearer of psychological properties is the animal
3141 itself, and not the cerebrum. For example, if we had reason to believe that the
3142 person is the genuine bearer of psychological features and that the person
3143 is the animal when the cerebrum is contained within, then we would have
3144 some reason to believe that the animal, and not the cerebrum, is the bearer of
3145 psychological features. If the implanted cerebrum, z , is not the bearer of psy-
3146 chological features, then it is not P-continuous with the cerebrum, x , before

19 Adding this maximality constraint to the notion of suitable physical continuity in H' does not commit one to the view that personhood is maximal. It places no restrictions on whether persons can have persons as proper parts. Although, it does entail that if y is a suitable physical continuer of person x , then x does not persist as any proper part of y .

3147 implantation. In that case, z 's P-continuity with x would be surpassed by the
 3148 animal's P-continuity with x . So then we would get the result, even without a
 3149 maximality constraint, that the person does not remain cerebrum-sized after
 3150 implantation.²⁰

3151 In further clarification and defense of H' , let us consider some of Olson's
 3152 objections to combining animalism with persistence conditions that are partly
 3153 psychological.

3154 **4 Some of Olson's Objections**

3155 Olson mentions a way to formulate a hybrid account of the persistence of
 3156 human organisms and shows that it has implausible consequences. One might
 3157 wonder whether an animalist who endorses H' faces the same sort of objection.
 3158 Olson considers the following proposal:

3159 if x is a human organism at time t and y exists at time t^* , $x = y$
 3160 iff x is (uniquely) psychologically continuous, at t , with y as it is
 3161 at t^* or no being is psychologically continuous at t^* with x as it is
 3162 at t and y has the appropriate sort of brute-physical continuity, at
 3163 t^* , with x as it is at t " (2015a, fn. 16).

3164 This is obviously a disjunctive account according to which human organisms,
 3165 and we (given the animalist belief that we are human organisms), persist
 3166 with either psychological continuity or physical continuity in the absence
 3167 of psychological continuity. The problem with this analysis is that it has the
 3168 following implausible result:

3169 if your cerebrum were removed from your head and then de-
 3170 stroyed, while the brainless animal left behind survived in a vege-
 3171 tative state, you would first go with the cerebrum and then dis-
 3172 continuously 'jump' to the brainless organism, even though there
 3173 would be neither psychological nor biological continuity across
 3174 the jump (Olson 2015a, fn. 16).

3175 Consider any disjunctive account on which we persist with either psycho-
 3176 logical or physical (including biological) continuity. To capture the cerebrum
 3177 intuition, we might be inclined to add that psychological continuity always

20 Thanks, again, to anonymous referees for the journal for bringing the problem cases discussed in this section to my attention.

3178 wins out when both types of continuity are present, as the disjunctive account
3179 Olson considers entails. But then we get the implausible result that Olson
3180 describes: the person follows the path of psychological continuity and goes
3181 with the cerebrum, and when the cerebrum is destroyed and there is only
3182 physical/biological continuity, the person goes with the cerebrumless body.
3183 However, like *H*, *H'* requires physical continuity (which needn't be biological
3184 continuity), and therefore precludes a person discontinuously jumping from
3185 one region to another. Since, according to *H'*, the person goes with the cere-
3186 brum in its disembodied state and since the naked cerebrum is not physically
3187 continuous with the cerebrumless individual, *H'* entails that the person does
3188 not persist as the latter when the cerebrum is destroyed. On *H'* (and *H*), the
3189 person ceases to exist when the cerebrum is destroyed.

3190 Of course, by requiring physical continuity, *H'* does not capture all of what
3191 some believe about our persistence. There is the not uncommon belief that
3192 psychological continuity of the right sort is sufficient for our persistence,
3193 for example, that if a person's body were completely destroyed and replaced
3194 with a psychological duplicate, then the person would persist as the duplicate
3195 despite the absence of physical continuity. Yet, it is not at all clear that mere
3196 psychological continuity, even continuity of person-making psychological
3197 features, is sufficient for the persistence of a physically realized person, and
3198 requiring physical continuity seems the most effective way to reconcile ani-
3199 malism with the cerebrum intuition while also avoiding the implausible result
3200 that Olson mentions of an animal discontinuously jumping from one region
3201 to another.

3202 Now let's turn to some objections Olson raises that target any attempt to
3203 combine animalism with psychological persistence conditions to preserve
3204 the cerebrum intuition.²¹ The objections to "new animalism," as Olson (e.g.
3205 2015a) calls it, include the following.

3206 (a) Suppose the cerebrum is removed, but biological life continues in the
3207 cerebrumless animal left behind. It would seem that the cerebrumless animal
3208 is the same animal, the same organism, as the animal before surgery. But if we
3209 are animalists who believe that the person goes with the cerebrum, then we
3210 are led to believe that the animal left behind is not identical with the animal
3211 before surgery. This result is implausible given that the same biological life is
3212 present.

21 See, for instance, Olson (1997a, 111–123; 2015b, sec. 4; and 2015a, sec. 9).

3213 Also, (b) if the cerebrumless animal is not the same animal as the one before
 3214 surgery, then a new animal has come into existence with the removal of the
 3215 cerebrum. “But can you really create an animal merely by cutting away an
 3216 organ belonging to another animal—one not even necessary for life?” (Olson
 3217 2015a, 105). It seems not.

3218 Furthermore, (c) if we are animalists and believe that the person follows
 3219 the cerebrum, then we are led to believe that in cases where the cerebrum is
 3220 successfully transplanted into a different body, the animal that has received
 3221 the cerebrum is a different animal than the cerebrumless animal there before
 3222 that was awaiting transplant. Assuming there aren’t two human animals in
 3223 that region after implantation, it follows that the cerebrumless animal has
 3224 gone out of existence. Yet, it does seem odd to suppose that an animal could
 3225 be destroyed with the addition of a cerebrum. “[H]ow could you destroy
 3226 an animal merely by supplying it with the organ—again, not even a vital
 3227 organ—that it was missing?” (Olson 2015a, 105).

3228 In partial response to these objections, it should be noted that there are
 3229 worries for traditional animalists who deny that the person goes with the
 3230 brain/cerebrum, believing that our persistence has nothing to do with psy-
 3231 chology. There are the *remnant person* worries for the traditional animalist
 3232 which are analogous to worries (b) and (c) above that Olson raises for non-
 3233 traditional (“new”) animalists who believe that the person goes with the
 3234 brain/cerebrum. Johnston (2007) points out that if we were to remove some-
 3235 one’s brain and sustain it in such a way that the cerebral activity continues to
 3236 yield personhood, then given that the person does not go with the brain, a new
 3237 person (the remnant person) would be brought into existence when the brain
 3238 is removed. Johnston reminds us that “[y]ou can’t bring a person into being
 3239 simply by removing tissue from something [...] unless that tissue was func-
 3240 tioning to suppress mental life or the capacity for mental life” (Johnston 2007,
 3241 47).²² Olson (1997a, 121; 2015b; 2016) describes an additional remnant person
 3242 worry when the brain or cerebrum (just the cerebrum, suppose) is implanted
 3243 in a new head. For the traditional animalist, the cerebrum does not become
 3244 an animal when it is implanted; rather the animal awaiting transplant simply
 3245 acquires a new part. Since this new part carries with it psychological states
 3246 sufficient for personhood, the animal becomes a person when the cerebrum is
 3247 implanted. So, assuming that there aren’t two persons in the same skin after
 3248 the cerebrum is implanted, the result seems to be that the remnant person

22 Olson (1997a, 120) also mentions this problem.

3249 ceases to exist upon implantation. This result, Olson points out, conflicts with
3250 the *destruction principle* (which is just as plausible as the creation principle
3251 Johnston mentions) that you cannot destroy a person merely by surrounding
3252 the person with sustaining tissues.

3253 Olson (2015b, sec. 4) points out that by denying that we are essentially
3254 animals, an animalist can avoid these remnant person concerns by insisting
3255 that the person goes with the cerebrum. These non-traditional animalists
3256 who support the cerebrum intuition, including any animalists who endorse
3257 *H'*, avoid the remnant person worries by denying that a person comes into
3258 existence with the removal of a cerebrum and that a person ceases to exist with
3259 its implantation. It is true, as Olson adds, that the remnant person problems
3260 are avoided only with the cost of the corresponding “remnant-animal” worries,
3261 (b) and (c), mentioned above. Still, given the remnant person worries, it is
3262 not clear at least from (b) and (c) alone that non-traditional animalists who
3263 support the cerebrum intuition, including those who accept *H'* or certain
3264 other hybrid accounts of our persistence, are in any worse shape than the
3265 traditional animalists who reject the cerebrum intuition.²³

3266 Recall objection (a). If we are animalists who believe that the person goes
3267 with the cerebrum, then we are led to believe that the animal left behind is not
3268 identical with the animal before surgery. But, the objection goes, this result is
3269 implausible given that what is involved is the same biological life. Regarding
3270 the cerebrumless animal, Olson asks, “Would it not be the organism from
3271 which the cerebrum was removed? It would apparently have the same *life*,
3272 in Locke’s sense of the word [...] that the original animal had” (2015a, 104).
3273 However, it is not clear why one should deny that continuity of life can be
3274 imparted to different organisms. Biological fission cases show that continuity
3275 of life is not sufficient for the persistence of an organism; if post-fission *y*
3276 and *z* are equally biologically continuous with *x* (with continuity of vital
3277 functions), then given that *y* is not identical with *z*, at least one of *y* and
3278 *z* is not identical with *x*. It might be insisted that *non-branching* biological
3279 continuity, with continuity of vital functions, is sufficient for the persistence of
3280 an organism. But whether this is true is precisely what’s at issue in the debate
3281 over whether the persistence conditions of organisms who are persons are
3282 partly psychological. It is true that “if an organism’s biological life carries on,
3283 we should expect it to continue to be the life of that same organism” (2015a,

23 Olson (1997a, 120–121) mentions this possible defense by one who supports a psychological account of the persistence of animals who are persons.

3284 104). This is what we should expect given that it usually is the case that
 3285 only one individual partakes of any one life. But that this is what we should
 3286 expect allows that in certain highly unusual cases, where something arguably
 3287 relevant to the persistence of a person (such as unsurpassed P-continuity)
 3288 vies with biological continuity, distinct individuals can partake of the same
 3289 life. So continuity of life, even if non-branching, does not itself seem a strong
 3290 enough reason to conclude that it is the life of the same organism.

3291 It is also worth noting that given the distinction between being the same
 3292 organism and having the same life, objections (b) and (c) make an animalist's
 3293 support of the cerebrum intuition seem at least a bit more implausible than
 3294 it really is. Olson describes the non-traditional animalist's view as entailing
 3295 that animals are "created" and "destroyed" in the transplant case.²⁴ This de-
 3296 scription is somewhat misleading. Talk of an organism being created brings to
 3297 mind a new biological life, a new set of vital processes, coming into existence;
 3298 and talk of an organism being destroyed suggests that a set of vital processes
 3299 has come to an end. But this is not what is happening in the transplant case,
 3300 even for an animalist who believes that the person goes with the cerebrum.
 3301 The animal before the removal of the cerebrum and the cerebrumless animal
 3302 left behind are biologically continuous with continuity of vital functions, and
 3303 when the cerebrum is implanted, the newly equipped animal and the animal
 3304 before awaiting transplant are biologically continuous with continuity of vital
 3305 functions. In either case, it is the same life, i.e. the same set of vital processes.
 3306 This is not creation or destruction of lives. So for the non-traditional animalist
 3307 who believes that the person goes with the cerebrum, the number of animal
 3308 *lives* involved in the transplant scenario is just as we would have expected:
 3309 one on the donor side and one on the recipient side.

3310 It is true, as Olson mentions (e.g. 1997a, 116–117; 2015a, 104–105), that on
 3311 the non-traditional animalist account, the number of *animals* in the trans-
 3312 plant case is more than what one might have thought. According to the "new"
 3313 animalist who believes that the person goes with the cerebrum, two indi-
 3314 viduals partake of the same animal life on the donor side (the one before
 3315 cerebrum removal and the cerebrumless animal left behind). Given that there
 3316 are two distinct individuals and both are animals, there are two animals. On
 3317 the recipient side, there is the individual before the cerebrum was removed
 3318 to make room for a new cerebrum. That's a third animal. And if enough of
 3319 the right sort of cerebral activity is sustained after removal, then with the

24 See, e.g. Olson (1997a, 117–119; 2015b, sec. 4; and 2015a, 105).

3320 non-traditional animalist view, the person follows the cerebrum here too, and
3321 the cerebrumless animal would be a different individual from the one there
3322 before, and a different animal since it is an animal. So, as Olson indicates,
3323 on the non-traditional animalist view the total number of animals involved
3324 in the case is *four* (the animal after implantation being the same individual
3325 as the animal on the donor side before cerebrum removal). That there are
3326 four animals involved might seem too implausible to accept. However, if we
3327 recognize the possibility of more than one organism partaking of the same
3328 life, and if we are also open to there being some good reason to believe that
3329 this is what happens in the transplant case (as an animalist who endorses *H'*
3330 would insist), then the result that there are four animals involved is likely to
3331 seem not as implausible as it might initially appear.

3332 So, in response to Olson's objections, there are the following points to
3333 consider. Animalists can avoid worries (b) and (c) by denying that the person
3334 goes with the cerebrum, but only at the expense of incurring the remnant
3335 person concerns analogous to (b) and (c), concerns which are avoided by
3336 non-traditional animalists who accept *H'* (or various other hybrid accounts of
3337 our persistence). Also, regarding (a): given the conceptual distinction between
3338 being the same organism and sharing the same life, it is not clear why one
3339 should deny that continuity of life, even non-branching continuity of life, can
3340 be imparted to different animals. An animalist who endorses *H'* would believe
3341 that there is good reason not to deny that continuity of life can be shared by
3342 different animals. Moreover, if we remain open to the possibility that there
3343 might really be some good reason to believe that continuity of life is imparted
3344 to different animals in the transplant case, and if we also keep in mind that
3345 on a non-traditional animalist account, life is not created or destroyed with
3346 the removal or implantation of the cerebrum, then the commitments of the
3347 view will perhaps seem not as implausible as Olson's descriptions suggest.²⁵

3348 Also, and very importantly, in weighing the pros and cons of conjoining animalism with *H'*, let's not forget that adding *H'* to the view that we are animals captures more of what many of us are inclined to believe than does a tradi-

25 Also see Sauchelli's (2017, 213–214) explanation of how we can describe what happens in transplant cases in a way consistent with the cerebrum intuition but without any mysterious creation or destruction of animals. There is also Madden's (2016a) mention of plant cutting to show that it is not metaphysically mysterious for an organism to persist as a relatively small portion of its original size with the much larger portion becoming a new organism, and Madden also mentions plant grafting cases to show that it is not odd to suppose that one biomass can fuse with a much larger one, with the smaller mass persisting as the product of the fusion.

3351 tional, non-hybrid animalist view, i.e. each of the four intuitions mentioned
3352 at the start.

3355 **5 In Sum**

3354 Recall the following three compelling claims:

3355 We existed prior to the onset of whatever psychological capacities
3356 are necessary for personhood, and we can continue to exist with the
3357 loss of those and other psychological capacities.

3358 With the right sort of psychological continuity retained, the person
3359 goes with the brain/cerebrum in remnant person and brain/cere-
3360 brum transplant cases.

3361 It is possible for us to survive gradual large-scale replacement of
3362 organic with inorganic parts.

3363 Since each of these is a strong intuition, it is desirable to find a theory that en-
3364 tails all three. To reconcile the first two, we need a hybrid theory on which our
3365 persistence conditions are partly psychological and partly non-psychological.

3366 If we also wish to maintain the following principle with the animalist,

3367 Each of us is numerically identical with an animal,

3368 then we need to hold that the persistence of the animals with which we
3369 are identical is a partly psychological affair. Also, to allow the possibility of
3370 inorganic replacement, our analysis cannot entail that biological continuity is
3371 necessary for the persistence of the animals that we are. Yet, with some sort
3372 of physical continuity required, the hybrid account can avoid the implausible
3373 consequence Olson (2015a, fn. 16) described, and mentioned in section 4,
3374 of a person discontinuously jumping from the removed cerebrum after it is
3375 destroyed to the cerebrumless animal left behind.

3376 So, inspired by the hybrid accounts of Langford (2014), Madden (2016a),
3377 and others, I proposed **H** which includes the idea of *the physical continuer*
3378 *with unsurpassed P-continuity*. The physical continuer with unsurpassed P-
3379 continuity can be wholly inorganic and it is the P-continuous brain/cerebrum
3380 in remnant person and transplant cases. And since unsurpassed P-continuity
3381 might be none at all, **H** allows that we existed prior to P-capacities and can

3382 survive their loss. Also, H allows that we are identical with animals (but not
 3383 that we are essentially animals given that we can persist in an inorganic state
 3384 or as a brain/cerebrum).

3385 The modification of H, H', ensures that we follow the most dominant
 3386 physical continuer in branching cases where there is a tie in P-continuity.
 3387 "Significantly" was introduced to ease concerns about our persisting as more
 3388 than just a very slightly dominant physical continuer, and the requirement
 3389 that one is a *suitable* physical continuer was added to allow, among other
 3390 things, limits on how minimal the physical continuity might be and limits
 3391 on how far along we survive in the process of death or after. H' is compatible
 3392 with various opinions on how dominant the physical continuer should be and
 3393 what sort and degree of physical continuity is suitable. Talk of P-continuity
 3394 in H' (and H) is also unspecified to allow differing views on what sort and
 3395 degree of psychological continuity is relevant to our persistence. Thus, H'
 3396 is a framework within which to accommodate each of the four intuitions
 3397 mentioned with the basic insight that we persist as the appropriate physical
 3398 continuer with unsurpassed P-continuity.*

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PROOF

The Attitudinalist Challenge to Perceptualism about Emotion

MICHAEL MILONA

Perceptualists maintain that emotions essentially involve perceptual experiences of value. This view pressures advocates to individuate emotion types (e.g., anger, fear) by their respective evaluative contents. This paper explores the Attitudinalist Challenge to perceptualism. According to the challenge, everyday ways of talking and thinking about emotions conflict with the thesis that emotions are individuated by, or even have, evaluative content; the attitudinalist proposes instead that emotions are evaluative at the level of attitude. Faced with this challenge, perceptualists should deepen their analogy with sensory experience; they should distinguish types of emotions by their content much as we can plausibly distinguish types of sensory experience (e.g., visual, auditory) by theirs. A second lesson is that perceptualists should distinguish an emotion's representational guise (uniform across emotions) from its formal object (which varies).

Perceptualists maintain that emotions essentially involve perceptual experiences of value. On this approach, anger might be thought to involve an experience of offense, pride an experience of one's own achievement, and so on. The perceptual approach has enjoyed significant support in emotion theory (Roberts 2013; Tappolet 2016, *inter alia*). Theorists have also relied on it in value epistemology (Milona 2016), action theory (Döring 2007), and normative ethics (Stockdale 2017). To be sure, perceptualist theories vary in the details, including important ways that I canvass below. But despite such differences, perceptualists are unified in taking emotions to have evaluative content in much the way that visual, auditory, etc. experiences have empirical content.

At first glance, perceptualism looks like a promising starting point for analyzing emotions. Many philosophers today maintain that emotions are not (mere) bodily sensations; they are *evaluations*. It was once popular to treat

3518 these evaluations as forms of judgment (Solomon 1976; Nussbaum 2004).
 3519 But many have since migrated from *judgmentalism*, as it is often called, to
 3520 perceptualism. One major reason for this trend is simple. When we are over-
 3521 come with fear, to take a familiar example, we sometimes explicitly judge that
 3522 what we fear isn't dangerous. But such cases are not experienced as similar
 3523 to making contradictory judgments (see D'Arms and Jacobson 2003; Naar
 3524 2020). They instead seem more akin to perceptual illusions, whereby things
 3525 appear other than we believe them to be (Tappolet 2016). So if we accept that
 3526 emotions are evaluations, then a perceptual model looks like a promising
 3527 starting point.

3528 However, Julien Deonna and Fabrice Teroni (2012, 2015) forcefully argue
 3529 that perceptualism isn't a great starting point after all. While they agree that
 3530 emotions are evaluative experiences, they maintain that perceptualism goes
 3531 awry in treating all emotions as being the same type of attitude. This leads per-
 3532 ceptualists to distinguish emotion types by virtue of their supposedly differing
 3533 evaluative content. But, Deonna and Teroni argue, there are several ways in
 3534 which ordinary, pretheoretical ways of talking and thinking about emotions
 3535 conflict with emotions being distinguished by their evaluative content, or
 3536 even having such content at all. I refer to these objections as the *Attitudinalist*
 3537 *Objections*, or jointly as the *Attitudinalist Challenge*. They maintain instead
 3538 that the evaluative dimension of an emotion is a feature of the attitude rather
 3539 than its content; and because this evaluative dimension is different for each
 3540 emotion, each emotion is a different type of attitude. Their theory is thus a
 3541 version of *attitudinalism*, according to which emotions are evaluative attitudes
 3542 but do not have evaluative content.¹

3543 This paper defends perceptualism in the face of the *Attitudinalist Chal-*
 3544 *lenge*.² I argue that the objections either rely on subtle mistakes about what

1 Deonna and Teroni's view is the most widely discussed version of attitudinalism. There are important alternatives, however (e.g., Müller 2017). See section 2 and section 6 below.

2 Perceptualism faces numerous other objections. My own view is that they can be answered, though I haven't space to do so here. For example, Deonna and Teroni argue that emotions having cognitive bases makes them importantly different from perceptual experiences (2012, 69). Perceptualist responses include Tappolet (2016, 24–31) and Milona and Naar (2020). Some likewise argue that the phenomenology of emotions is importantly different from perceptual experiences (Salmela 2011; Dokic and Lemaire 2013; Deonna and Teroni 2012, 68–69; Müller 2019). See Roberts (2013, 71–72) and Poellner (2016) for potential responses. More recently, Naar (2022) argues that emotions are better understood on the model of action than on that of perception. For more detail on various debates about perceptualism, see especially Brady (2013) and Döring and Lutz (2015).

3545 perceptualism says, or else turn on optional commitments that perceptualists
3546 can avoid on independent grounds. Having argued how perceptualists should
3547 answer the [Attitudinalist Challenge](#), the paper closes by issuing a challenge of
3548 its own for versions of attitudinalism that share perceptualism’s commitment
3549 to the view that emotions are evaluative experiences.

3550 **1 What Perceptualism Is**

3551 Versions of perceptualism have been defended by Cooper (1699), Meinong
3552 (1972), Roberts (2013), and Tappolet (2016), among others. The basic view is
3553 as follows:

3554 PERCEPTUALISM. Emotional experiences essentially involve non-
3555 doxastic, affective representations of value.

3556 Sabine Döring offers an intuitive illustration with reference to the emotion of
3557 indignation:

3558 In experiencing indignation at the harsh punishment of the tod-
3559 dler, it seems to you that the punishment is in fact unjust: your
3560 occurrent emotional state puts forward your indignation’s content
3561 as correct. This is in analogy to the content of a sense perception.
3562 In perceiving that the cat is on the mat, it seems to you that the
3563 cat is actually there. (Döring 2007, 377)

3564 Several aspects of perceptualism require clarification. First, the theory speaks
3565 of “emotional experiences” because it is only meant as an analysis of occurrent,
3566 conscious emotions. For example, while it may be true that Cassandra loves
3567 Sasha even when Cassandra is sleeping, “love” here is meant dispositionally.
3568 Perceptualism is not about emotions in this sense.

3569 Second, the phrase “essentially involve” is non-committal about a key ques-
3570 tion, namely whether there are any necessary components of emotion other
3571 than non-doxastic, affective representations of value. We can thus distinguish
3572 between the following positions:

3573 PARTHOOD PERCEPTUALISM. Emotional experiences essentially
3574 involve non-doxastic, affective representations of value as a proper
3575 part.

IDENTITY PERCEPTUALISM. Emotional experiences are nothing more than non-doxastic, affective representations of value.

To illustrate these two positions, consider efforts to analyze emotions commonly begin by listing paradigmatic features of emotional experiences. These include evaluations, bodily feelings, action tendencies, and patterns of attention, among other things (Brady 2018, 10). For example, a hiker who fears a nearby bear can be expected to evaluate the bear as dangerous, experience sensations characteristic of fear, be motivated to avert the threat, and attend to whether the bear really is dangerous and what the escape options might be. Identity perceptualists maintain that emotions are in essence their evaluative dimension, which they take to be a non-doxastic representation of value. By contrast, parthood perceptualists see the evaluative dimension as insufficient on its own. Perhaps, for example, it must be paired with a tendency to act in accordance with that representation. In the case of fear, for example, this might be a tendency to act so as to avoid what is experienced as dangerous.

Perceptualism's advocates are almost always identity perceptualists.³ This may come as a surprise, given that perceptualism's close cousin, judgmentalism, does divide into two distinct camps. That is, there are some who think that judgment fully captures the nature of emotion (e.g., Nussbaum 2004), and others who think it must be supplemented (e.g., Green 1992).⁴ As it happens, many of the motivations for perceptualism, including that it can provide a plausible basis for value epistemology and that it can explain how emotions rationalize action, only require parthood perceptualism. Furthermore, perceptualists who are willing to take seriously parthood perceptualism have additional resources for addressing the Attitudinalist Challenge. For if emotions include more than evaluative representations, then they may be distinguished not only by their evaluative content, but also by other features (e.g.,

3 I'm not aware of any philosophers who explicitly defend parthood perceptualism (though some leave open the possibility, e.g., Cowan 2016, 61–62; Milona 2016; Mitchell 2017). We may find inspiration, however, in the work of some appraisal theorists in psychology. For example, Richard Lazarus says the following: “[E]motion is a superordinate concept that includes cognition, which is its cause in a part-whole sense. Cognitive activity, *A*, about the significance of the person's beneficial or harmful relationships with the environment, is combined in an emotion with physiological reactions and action tendencies, *B*, to form a complex emotional configuration, *AB*” (Lazarus 1991, 353–354). According to Lazarus, the role of appraisal (cognition) in emotion is analogous to that of germs in the production of a disease, being both a cause and a part.

4 Although Green maintains that beliefs are essential, these beliefs aren't always evaluative (1992, 78). For discussion of different forms of judgmentalism, see Naar (2019).

3603 action tendencies).⁵ However, because [identity perceptualism](#) is the dominant
 3604 version of the theory, and because the [Attitudinalist Challenge](#) is most serious
 3605 for this version, I focus in what follows on [identity perceptualism](#).

3606 Other key questions for perceptualists concern the relationship between an
 3607 emotion's purported evaluative content and its phenomenology. Perceptualists
 3608 typically view an emotion's representation of value as inseparable from its
 3609 affective (felt) dimension. Here is Roberts:

3610 Affect is not something in addition to emotion [...] Just as in
 3611 the visual experience of a house one is appeared to in the way
 3612 characteristic of house-sightings, so in fear one is appeared to
 3613 (in feeling) in the way characteristic of threat confrontations (the
 3614 threat being directed at something one cares about). (Roberts
 3615 [2013, 47–48](#))

3616 Others make similar claims about the inseparability of emotional affect/feel-
 3617 ing and the representational dimension of emotion (e.g., [Döring 2007, 374](#);
 3618 [Tappolet 2016, 27–28](#); see also [Ballard 2021b, 121](#)).⁶ According to this position,
 3619 to describe *what it is like* to have an emotional experience requires reference to
 3620 value (see [Poellner 2016, 270](#)). In experiencing, say, anger, we cannot describe
 3621 its phenomenology without reference to the property of being wronged. I
 3622 take perceptualists to be committed to this *inseparability* of emotional phe-
 3623 nomenology and value. Such a position is compatible with different views
 3624 about the relationship between how an emotion feels and what it represents.
 3625 For example, on one possible view, the affective aspect of an emotion (or at
 3626 least part of it) grounds the evaluative representation. This would accord with
 3627 an increasingly popular approach to perceptual content which grounds such
 3628 content in the phenomenal character of perceptual experience (see [Kriegel](#)

5 It is an open question for parthood perceptualists whether these additional features are repre-
 sentational. For example, suppose a parthood perceptualist invokes action tendencies as the
 additional feature. On one conception, these action tendencies are non-representational feelings
 of one's body's readiness to act ([Deonna and Teroni 2012](#)). By contrast, [Mitchell \(2021\)](#) proposes an
 intriguing "object-side" model of action readiness (or action tendency) phenomenology. This is an
 experience of an object (e.g., a charging bear or a beautiful painting) as calling for, or demanding,
 action. As [Mitchell](#) points out, object-based action readiness is plausibly representational.

6 This doesn't mean that *all* of the feelings that we typically associate with emotions are inseparable
 from the representation of value. In particular, the bodily feelings that typically come along with
 emotions are naturally treated by perceptualists as representing bodily changes rather than value
 and thus as ultimately non-essential for emotion, at least according to [identity perceptualism](#) (cf.
[Nussbaum 2004, 328–329](#)).

2013). But here I am non-committal about whether the intentionality or phenomenology of emotions is more basic (if either is).⁷

Additional details about how perceptualists should, or at least reasonably can, develop their view will emerge in the course of addressing the **Attitudinalist Challenge**. In particular, I suggest that perceptualists take up more specific views about the affective, non-doxastic representation of value and how it relates to ordinary sensory experience.

2 The Attitudinal Alternative

The *attitudinal theory* is an important alternative to perceptualism. While attitudinalists agree that emotions are evaluations, they deny that emotions have evaluative content (e.g., Deonna and Teroni 2012, 2015; Müller 2017). Emotions are taken to be evaluative at the level of *attitude*.

The basic idea can be illustrated by way of a comparison with belief and truth. A belief that *P* has *P* as its content. But there's more to a belief than its content. After all, one can also *suppose* that *P*. One major difference between a belief and a supposition with the same content is that the former is in some sense *truth-directed*. However, a belief that *P* doesn't *represent* that *P* is true, for a belief that *P* has different content than a belief that *P* is true (see Kriegel (2019b), 10; Ballard (2021a), 852–853). So truth somehow characterizes the very attitude of belief. That is, a belief is a way of *taking-as-true* some content. According to Deonna and Teroni, matters are similar with emotion, except that values, rather than truth, characterize emotional attitudes. So instead of saying, for instance, that fear represents the property of being dangerous and anger represents the property of being offensive, the attitudinalist says that the attitude of fear is a way of *taking-as-dangerous* its content and that the attitude of anger is a way of *taking-as-offensive* its content.

But what is it to take-as-dangerous or take-as-offensive? On the most widely discussed version of attitudinalism, we find another similarity with perceptualism: emotional experiences are a way of experiencing value (Deonna and

⁷ Prinz (2007) draws on a Dretske-style indicator semantics in arguing that emotions have evaluative content. According to him, emotions involve representations of value insofar as they are perceptions of bodily changes and these bodily changes have the function of tracking corresponding values. For the sake of simplicity, I set this version of perceptualism aside (cf. Cowan 2016, 78, n8).

3658 Teroni 2012, 2015).⁸ And as with perceptualism, when all goes well, these are
3659 experiences through which we come to apprehend objects as having certain
3660 values. Deonna and Teroni describe these experiences in terms of the form
3661 of readiness to act involved in each emotion (cf. Frijda 2007). Here are two
3662 helpful illustrations:

3663 Fear of a dog is an experience of the dog as dangerous insofar as
3664 it is an experience of one's body being prepared to forestall its
3665 impact (flight, preventive attack, immobility, etc.), an attitude it
3666 is correct to have if, and only if, the dog is dangerous. In the same
3667 way, anger at a person is an experience of offensiveness insofar
3668 as it consists in an experience of one's body being prepared to
3669 retaliate, an attitude that is correct if, and only if, the person is
3670 offensive. (Deonna and Teroni 2015, 303; see also Deonna and
3671 Teroni 2012, 81)

3672 Since Deonna and Teroni's theory explains the sense in which emotions are
3673 evaluative experiences by appealing to such action tendencies, I refer to this
3674 as *action tendency attitudinalism*.⁹ By maintaining that emotions are ways of
3675 experiencing value, one might suppose that action tendency attitudinalists can
3676 thereby secure many of the advantages (or at least ambitions) of perceptualism
3677 in value epistemology and action theory. I briefly address these matters in the
3678 [penultimate section](#).

3679 It is important to note that while Deonna and Teroni's action tendency
3680 attitudinalism is often treated as the representative version of attitudinalism
3681 (e.g., Rossi and Tappolet 2019; Ballard 2021a), the theory can take different
3682 forms. Attitudinalism as such merely claims that emotions are evaluative at
3683 the level of attitude rather than content. Thus an attitudinalist might agree
3684 with Deonna and Teroni that emotions are evaluative experiences but resist the
3685 idea that this has to do with experiences of action readiness (cf. Kriegel 2019b,
3686 13). I consider below (section 6) why an attitudinalist might favor such an

8 Müller (2017) similarly describes Deonna and Teroni as maintaining with perceptualists that emotions *apprehend* value, or at least apparently apprehend value. The term "experience" here is intended to be non-factive, covering both genuine experiences of value and mere experiences as of value.

9 One may further qualify that Deonna and Teroni's theory as *bodily action tendency attitudinalism*. For as noted above, one may also attempt to capture the phenomenology of preparedness to act in non-bodily, representational terms (see [footnote 5](#) and [Mitchell 2021](#)). For ease of presentation, though, I don't add this qualification throughout.

3687 alternative characterization of emotions as evaluative attitudes. Furthermore,
 3688 it is also consistent with attitudinalism to maintain that emotions aren't ways
 3689 of experiencing value at all. For example, Müller (2017) argues that emotions
 3690 are responses to pre-emotional experiences of value rather than experiences of
 3691 value themselves; and these responses are such as to be correct in the presence
 3692 of the relevant value.¹⁰ So attitudinalism is *highly* flexible. To keep things
 3693 manageable, however, I limit my discussion to versions of attitudinalism that
 3694 take emotions to be evaluative experiences and likewise focus the ensuing
 3695 discussion primarily on *action tendency attitudinalism*.

3696 **3 The First Attitudinalist Objection: Perceptualism as a Bad** 3697 **Start**

3698 The first Attitudinalist Objection is simple, at least in outline. It emerges
 3699 from similarities between how we pretheoretically conceptualize different

10 Müller offers multiple arguments against the view that emotions apprehend value. For example, one key argument starts with the thought that we often ask people *why* they are angry, sad, etc. in order to probe their motivating reasons for being angry, sad, etc. But Müller maintains that it doesn't make sense to ask similar questions about why someone apprehends something, and this therefore indicates emotions aren't apprehensions (Müller 2017, 286; see also Dietz 2018; and Mulligan 2010, 485). From a perceptualist perspective, this argument is structurally similar to the familiar argument that emotions admit of justificatory reasons while perceptual experiences don't (Deonna and Teroni 2012; Brady 2013). In both cases, the perceptualist's most straightforward response is to resist the view that emotions admit of either kind of reason. So, for example, while someone might say in some instance that they are angry for no reason (Dietz 2018, 1689), the perceptualist may say that, strictly speaking, one is *always* angry for no reason. We just tend to say what isn't quite true. But conformity to all pretheoretical ways of talking isn't decisive, as others who press a challenge similar to Müller's observe (Dietz 2018, 1690). Perceptualists, furthermore, have resources to explain our tendency to talk about motivating (or justificatory) reasons for emotions. For example, emotions are highly sensitive to choices and attitudes (e.g., beliefs) that *do* admit of such reasons. And so we can be motivated to bring it about that we experience certain emotions, or we can be (ir)rational in bringing about certain emotions (cf. Milona 2016, 903; Tappolet 2016, 37–38). Thus while there may be *a* cost for perceptualism here, it arguably isn't severe. (See Milona (forthcoming), for an extended, and less concessive, response to these worries about motivating and justificatory reasons.) Action tendency attitudinalists could follow a similar path. A complication, however, is that advocates of this view have objected to perceptualism precisely on the grounds that it fails to accommodate justificatory reasons for emotion (Deonna and Teroni 2012). And it isn't clear that justificatory reasons for apprehensions make any more sense than justificatory reasons for perceptions. So as Müller points out, Deonna and Teroni's own proposal "can be attacked on the same grounds on which they attack the Perceptual View" (Müller 2017, 286).

3700 emotions as compared to attitudes such as belief, desire, perception, etc. Here
 3701 is how Deonna and Teroni put it:

3702 [R]egarding the different types of emotions as different attitudes
 3703 and not as one and the same attitude—for example the attitude of
 3704 judging or that of perceiving—towards different contents is the
 3705 default position [...] Isn't it natural to understand the contrast
 3706 between, say, fear, anger and joy as one between different ways the
 3707 mind is concerned with objects and events? Shouldn't this contrast
 3708 be located at the same level as that between desiring, believing
 3709 and conjecturing and be clearly distinguished from the contrast
 3710 between believing a given proposition and believing another?
 3711 (Deonna and Teroni 2015, 296)

3712 The argument can be summed up as follows. The first premise is that when we
 3713 talk about believing, desiring, perceiving, etc., we are talking about different
 3714 attitudes. The second premise is that if the foregoing premise is true, then
 3715 by analogy, when we talk about emotions, including fear, envy, and so on, it
 3716 is natural to assume that we are also talking about different attitudes. But,
 3717 the argument continues, perceptualism denies that emotions are distinct
 3718 attitudes. For according to perceptualism, all emotions are constituted by the
 3719 same affective attitude. Call this the *Perceptualism as a Bad Start Objection*. It
 3720 is easy to see why Deonna and Teroni, building on this objection, maintain
 3721 that attitudinalism, rather than perceptualism, should be our starting point
 3722 for theorizing the sense in which emotions are evaluations.

3723 Before considering how the perceptualist might reply, we should consider
 3724 what it is for something to be an attitude. There are different ways in which
 3725 one might define such a technical (or quasi-technical) term. But as the passage
 3726 from Deonna and Teroni above illustrates, they intend for the purposes of this
 3727 objection a sense of “attitude” inclusive of perceiving (Deonna and Teroni
 3728 2015, 296; see also Kriegel 2019a). This makes sense given the present dialectic.
 3729 The objection isn't that perceptualists fail to treat emotions as attitudes; it's
 3730 that they treat all of them as the *same* attitude, distinguished only by their con-
 3731 tents.¹¹ Furthermore, defenders of perceptualism have recently been explicit

11 A referee rightly points out that other approaches to defining “attitude” may create trouble for perceptualism. But it's important to notice that these issues are distinct from the objection being considered here. For example, one might define “attitude” in terms of “taking a position” on something. Deonna and Teroni elsewhere gesture towards such a proposal in developing their version of attitudinalism (though not in pressing the *Perceptualism as a Bad Start Objection*).

3732 that they don't mean to deny that emotions are attitudes (Rossi and Tappolet
 3733 2019, 553). I thus suspect that Deonna and Teroni have in mind a capacious
 3734 view of attitudes whereby an attitude is "a way of having content" (Siegel
 3735 2021). A perceptualist would certainly grant that emotions are attitudes in
 3736 this sense.

3737 In addressing the *Perceptualism as a Bad Start Objection*, I focus in partic-
 3738 ular on *experiential* ways of having content. By this I mean to refer to ways
 3739 of having content such that there is *something it is like* to represent in that
 3740 way.¹² By focusing on experiential ways of having content, perceptualists can
 3741 ensure that their response hews close to the surface of our emotional life and
 3742 so doesn't lose sight of the intuition driving the objection. I therefore won't
 3743 be concerned with sub-personal ways of representing, or with sub-personal
 3744 processes that give rise to experiences with certain content (cf. Siegel 2021;
 3745 Kriegel 2019a). To illustrate, suppose that a perceptualist attempts to address
 3746 the challenge by appealing to distinct neural machinery underlying differ-
 3747 ent emotions (see Tracy and Randles 2011). The various processes by which
 3748 different emotions arise may lead a perceptualist to say that there are many
 3749 different emotional attitudes insofar as they involve the functioning of distinct

For example, they say "we should conceive of emotions as distinctive types of bodily awareness, where the subject experiences her body holistically as taking an attitude towards a certain object [...]" (Deonna and Teroni 2012, 79). Insofar as it is just the body, and not the agent, that is experienced as taking a stance, this proposal may not conflict with the idea that perceptual experience qualifies as an attitude. But Deonna and Teroni seem to also have in mind that the agent moreover experiences *themselves* as taking a stance (2012, 79–81). Perceptual experiences don't seem to qualify as attitudes in *this* sense. But perceptualists would (or at least in my view, should) resist that emotions are this sort of attitude. Here I think that they are on solid footing phenomenologically: emotions (passions) seem to be passive in a way that is difficult to describe in terms of the (emoting) agent's taking a stand on the world (but see Müller 2019). Yet the idea that emotions are attitudes in this sense may persist in light of the fact that emotions seem to admit of reasons (motivating and normative). See footnote 10 and citations therein for details about how perceptualists might answer these concerns about emotions and reasons.

- 12 A perceptualist might argue that there is no distinctive attitudinal phenomenology, maintaining instead that the phenomenology of emotion is tied *entirely* to content. This would mirror a familiar approach to sensory experience (see Tye 1995). But on the basis of considerations outlined below (section 4), I think of the phenomenology of perceptual experience as corresponding to both attitude and content. Of course, such phenomenological considerations are contestable. But here it's worth noticing two additional points. First, we've already seen (section 2) a reason to think *belief* admits of an attitude/content distinction; and this gives defeasible reason to think other attitudes work similarly (see also section 5 below). Second, the present version of perceptualism shares attitudinalism's commitment to the thesis that an emotion's correctness conditions are a function of attitude and content, and so it helps to focus our attention on the real points of disagreement between the two approaches to theorizing emotion.

3750 biological capacities. But it seems to me that Deonna and Teroni's objection
3751 doesn't hinge on the underlying neural architecture of emotion but is rather
3752 focused on the surface of how we pretheoretically talk and think about emo-
3753 tions.¹³ By focusing on attitudes as experiential ways of having content, then,
3754 we mitigate the risk of missing the point.

3755 How, then, should a perceptualist respond to the objection? The most
3756 straightforward reply is already suggested by the core of perceptualism,
3757 namely its analogy with sensory experiences. To see why, recall that the objec-
3758 tion invites us to have the intuition that just as perception, belief, and desire
3759 are all distinct attitudes, so too are the various emotions, including joy, anger,
3760 sadness, etc. But there are alternative comparisons that, from a pretheoretical
3761 perspective, we might just as easily have made. More specifically, we might
3762 have compared emotional experiences and experiences in different sensory
3763 modalities, including visual, auditory, tactile, etc. experiences. Here again, the
3764 focus is on the sensory experiences themselves, rather than the underlying
3765 sub-personal processes.¹⁴ And here too we can ask what makes an experience
3766 in one modality experientially, or phenomenologically, distinct from an
3767 experience in another modality. One salient difference, of course, concerns
3768 the contents of experiences in different modalities. For example, a visual
3769 experience has colors as part of its content while an auditory experience has
3770 sounds (even if some of the content of an auditory and visual experience
3771 overlap). Indeed, perhaps *all* of the experiential differences between visual,
3772 auditory, etc. experiences are a function of content (Speaks 2015, ch. 24–26;
3773 see also Chalmers 2004). But if it were reasonable to maintain that talk of
3774 visual, auditory, etc. experiences refers to a single experiential way of having
3775 content that is uniform across different sensory experiences, then presumably
3776 it is likewise reasonable, for all we've seen, for perceptualists to maintain that
3777 talk of anger, sadness, etc. refers to a single attitude that is uniform across
3778 different emotions. If this were correct, then the [Perceptualism as a Bad Start](#)
3779 [Objection](#) would fail to gain independent leverage insofar as it stacks the
3780 deck by inviting a tendentious comparison between emotions (emotional
3781 experiences) and perception, belief, desire, etc. rather than visual, auditory,
3782 tactile, etc. experiences.

13 Thanks to a referee for helpful feedback on this issue.

14 See Grice (1962) on different ways of talking about sensory modalities.

3783 But is it plausible that different sensory modalities involve a single exper-
 3784 iential way of having content?¹⁵ One important argument for an affirma-
 3785 tive answer builds on the phenomenon of *perceptual binding*.¹⁶ To illustrate,
 3786 suppose a person sees a basketball as orange and spherical. They don't just
 3787 simultaneously see something orange and something spherical but rather expe-
 3788 rience a single entity as orange and spherical. This is *intramodal* perceptual
 3789 binding. Such binding can also occur *intermodally*. For example, one may
 3790 perceptually experience a brown dog as barking (Speaks 2015, 180). This isn't
 3791 merely the co-occurrence of a visual experience as of a brown dog at a certain
 3792 location and an auditory experience as of barking nearby. The brown and the
 3793 barking are experienced as having a common source. But since the sound
 3794 (barking) isn't seen and the color (brown) isn't heard, this experience seems
 3795 to be intermodal in character. Following Speaks, let's call this intermodal
 3796 experience a *C-representation* (2015, 183–184).

3797 Consider now the question of whether in C-representing the dog as brown
 3798 and barking one likewise C-represents the dog as brown and C-represents
 3799 the dog as barking. There is pressure to say yes. To see this, consider how
 3800 other attitudes work. For example, if one believes that the dog is brown
 3801 and barking, then one believes that the dog is brown and believes that it is
 3802 barking. Or returning to the example of intramodal binding, in seeing the
 3803 basketball as orange and spherical, one sees the basketball as orange and
 3804 sees it as spherical. Barring a persuasive argument to the contrary, we should
 3805 likewise say that C-representations distribute over conjunction in just the same
 3806 ways as believing and seeing. But now it looks like C-representations are, as
 3807 Speaks puts it, “swallowing up the other species of perceptual representation”
 3808 (2015, 184). Rather than insisting C-representations occur alongside visual,
 3809 auditory, etc. experiences with the same content, Speaks suggests that there is
 3810 a single experiential way of having content common to each.¹⁷ In other words,

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- 15 One might think that experiences in different sensory modalities *must* be different ways of representing. After all, a visual and auditory experience might be about the same thing even while their phenomenology differs (see Block 1996). This difference in phenomenology, one might think, must be explained by a difference in the way that visual and auditory experiences represent. This parallels one of the Attitudinalist Objections against perceptualism and is addressed below (see section 4).
- 16 The argumentation in the next two paragraphs follows Speaks (2015, 177–185). For related arguments, see Tye (2007) and Bourget (2017). For an overview of the phenomenon of perceptual binding, see O'Callaghan (2015).
- 17 According to Speaks, this way of having content isn't limited to the five senses (2015, 186–188). He thinks that it also applies to bodily sensations.

3811 visual, auditory, etc. experiences aren't each distinctive attitudes in their own
3812 right; they rather qualify a singular perceptual attitude. While I cannot fully
3813 investigate the prospects for this view here (though section 4 addresses an
3814 important objection that parallels another of the Attitudinalist Objections), it
3815 offers an attractive framework in which to develop perceptualism.

3816 Faced with the [Perceptualism as a Bad Start Objection](#), then, perceptualists
3817 should say that just as different sensory experiences involve the same under-
3818 lying attitude, so too do emotions. Moreover, on a straightforward version of
3819 perceptualism, the experiential way of having content implicated in emotions
3820 is the same as that involved in sensory perceptual experience. Such a view
3821 pairs naturally with the standard perceptualist idea that describing *what it*
3822 *is like* to have an emotional experience requires reference to value just as de-
3823 scribing what it is like to have a sensory experience requires reference to what
3824 the sensory experience is about. I referred to this perceptualist idea above as
3825 the *inseparability* of emotional phenomenology and value.¹⁸ According to the
3826 present proposal, this similarity between emotional and sensory experience is
3827 explained by the fact that the experiential way of having content is the same
3828 in each case.¹⁹ Of course, this doesn't mean that there won't be differences.

18 This idea is commonly endorsed by perceptualists. Indeed, for some perceptualists (including myself), this thought is part of what makes perceptualism so attractive in the first place. (See [Döring 2007](#), 374; [Roberts 2013](#), 71–72; [Tappolet 2016](#), 27–28; [Milona 2016](#); [Poellner 2016](#), 270.) But others may think that this proposal is phenomenologically implausible. For example, Demian Whiting maintains that emotional experiences/feelings “do *not* manifest phenomenally a representational character or content” ([Whiting 2012](#), 97). According to him, while (say) nervousness involves a “‘restless’ or ‘nervous’ sensation” and fear an “unpleasant edgy sensation”, it is important to notice that “these feelings—the *only* feelings manifest in the emotions—do not have the representational properties that the perceptual value theorist is after” ([Whiting 2012](#), 101). But while I can't respond to Whiting in full, it seems to me that he hasn't offered a compelling case. Talk of restlessness, edginess, etc. strikes me as referring to a combination of bodily and evaluative representations. On this proposal, the “edginess” in fear might be understood as the combination of an evaluative experience of danger with a bodily experience of readiness to flee (or fight) in light of that danger. One attraction of this approach is that it can explain (what seems to me possible) why fear sometimes lacks edginess. Imagine a person who, while afraid of losing their job, recognizes that there is nothing they can do right now and so lacks fear's bodily manifestations and thereby any “edgy” phenomenology.

19 Given this account of the phenomenology of emotions, one can further buttress the thesis that emotions and sensory experiences involve the same attitude by appealing to cases of intermodal binding similar to the ones [Speaks](#) invokes in his argument. For example, a person who fears a snarling dog, according to the perceptualist, experiences the snarling dog as dangerous. This isn't merely the copresence of a visual experience of a snarling dog and an affective experience of danger. Rather, the snarling dog is experienced as the *source* of danger (much as the brown dog is experienced as the source of the barking in the example above). But one doesn't affectively

3829 For just as experiencing an odor is very different from experiencing a sound,
3830 so too is experiencing value very different from experiencing either. But the
3831 perceptualist position is that these are differences in content rather than dif-
3832 ferences in experiential ways of having content. In sections 4 and 5 below
3833 I'll have more to say on how perceptualists can theorize about these ways of
3834 having content.

3835 Before moving on, it's worth noticing that perceptualism's fate isn't neces-
3836 sarily beholden to the view that emotions involve the same way of representing
3837 as ordinary sensory experience. Nevertheless, if a perceptualist doesn't fol-
3838 low this path, it raises concerns about whether they will ultimately have
3839 an adequate response to the [Perceptualism as a Bad Start Objection](#). Such
3840 a perceptualist has two options. On the one hand, they may say that talk of
3841 different emotions refers to a single attitude of "emoting." But then perceptual-
3842 ists would face the burden of saying what such emoting consists in, including
3843 how it is distinct from the attitude implicated in ordinary sensory-perceptual
3844 experience ([Deonna and Teroni 2012, 78](#)). On the other hand, a perceptualist
3845 could observe that perceptualism is compatible with taking different types
3846 of emotions to be distinct attitudes. That is, a perceptualist may argue that
3847 fear is a *fearful* representation of something as dangerous, anger an *angry*
3848 representation of something as offensive, and so on. The difficulty here is that
3849 it isn't clear what an angry or fearful way of having content is. Analyzing them
3850 in terms of their corresponding values may seem objectionably redundant,
3851 given that those values are already in the content. And taking them to be
3852 primitive ways of representing strikes me as theoretically disappointing, best
3853 reserved as a last resort. Taking seriously the [Perceptualism as a Bad Start](#)
3854 [Objection](#) thus pressures perceptualists to maintain that emotions and sensory
3855 experiences involve the same experiential way of representing.

represent the snarling dog or visually experience the danger. So to avoid the problems of invoking an additional intermodal attitude (similar to Speaks's C-representation hypothesis), it is better to understand "affective" and "visual" to qualify the contents of a singular perceptual way of representing.

3854 **The Second and Third Attitudinalist Objections: Portable** 3857 **Contents and Fading Emotions**

4381 *Unpacking the Objections*

3859 I turn now to the second dimension of the [Attitudinalist Challenge](#), which
3860 consists of two related arguments. Answering these objections reveals hith-
3861 erto underappreciated points of disagreement between attitudinalism and
3862 perceptualism. This will take some work to see, however, since Deonna and
3863 Teroni's arguments may initially appear question-begging.

3864 To begin, Deonna and Teroni (2015, 297) observe that we often talk as
3865 if distinct emotions are about the same thing. For example, we might say
3866 that one person is angry about something that another finds amusing. But
3867 perceptualism denies this insofar as it ascribes different content to anger than
3868 it does to amusement. Put generally, the objection is as follows. The first
3869 premise is that different types of emotion can be about the same thing. The
3870 second premise is that if instances of different emotion types can be about
3871 the same thing, then emotions as such do not contribute anything to what is
3872 represented. But then this is a problem for perceptualism, since perceptualism
3873 says that each emotion is tied to a corresponding value that it represents.
3874 In other words, perceptualism is committed to the following claim that the
3875 attitudinalist rejects: the full content of one emotion type (anger) is *never*
3876 entirely portable to another emotion type (e.g., amusement). Call this the
3877 *Portable Contents Objection*.

3878 Deonna and Teroni offer what they take to be a similar argument using an
3879 example involving a single emotion. Here is what they say:

3880 Maurice is not amused anymore by Barbara's excellent joke for
3881 he heard it a hundred times. This is because his attitude towards
3882 the joke has changed, not because of a change in the content of
3883 the joke. We expect Maurice to insist that the joke is very funny
3884 while stressing the fact that at that point he heard it too many
3885 times (Herzberg 2012, 81). We have no apparent reason to think
3886 that these everyday situations imply a difference in *what* the
3887 subject's mind is concerned with as opposed to the *way* his mind
3888 is concerned with it. (Deonna and Teroni 2015, 297)

3889 This example involving a single emotion is meant to illustrate that emotions
3890 can come and go without changing what one represents. Maurice continues

3891 to represent the joke as funny—presumably by way of a belief—even as his
 3892 amusement fades. Although Deonna and Teroni group this objection with
 3893 the [Portable Contents Objection](#), it will, for reasons that become clear below,
 3894 be worth keeping separate. I call this the *Fading Emotions Objection*.

3895 These objections may appear question-begging. As Mauro Rossi and Chris-
 3896 tine Tappolet point out in their defense of perceptualism, we must not conflate
 3897 what they call the *intentional object* of an emotion with its *entire content* ([Rossi
 3898 and Tappolet 2019, 552](#)). The intentional object of, say, Maurice’s amusement
 3899 at Barbara’s joke is the joke itself. But then the perceptualist adds to this a
 3900 story about what amusement is, namely an experience of its object as amus-
 3901 ing. So for Deonna and Teroni to insist that different emotions can have the
 3902 same content is to beg the question. And Rossi and Tappolet could add that
 3903 in cases where amusement fades (though they don’t address cases of this sort
 3904 directly), we must not simply assume that nothing changes about what the
 3905 agent represents. The perceptualist will say that even if the agent continues to
 3906 believe that the joke is funny once the amusement has faded, they no longer
 3907 *emotionally experience* it as such. In other words, what they once represented
 3908 in two ways, namely through judgment and emotion, they subsequently only
 3909 represent in one.

3910 It turns out, however, that the [Portable Contents Objection](#) (and similarly
 3911 the [Fading Emotions Objection](#)) can be further developed in a way that isn’t
 3912 question-begging. One possibility, suggested by Rossi and Tappolet ([2019](#)), is
 3913 that the objection may proceed from general commitments about the nature
 3914 of *formal objects*, and the formal objects of emotions in particular (see also [De-
 3915 onna and Teroni 2012, 76](#)). Formal objects are distinguished from *intentional
 3916 objects*, or *particular objects* (see [Kenny 1963; Teroni 2007, 396](#)). In general,
 3917 formal objects “are supposed to shed light on specific categories of mental
 3918 states” ([Teroni 2007, 396](#)). For example, the intentional object of a belief that
 3919 *P* is *P*, but the formal object, at least according to one common view, is truth.
 3920 Whereas *P* can figure in the content of many different mental states (e.g., one
 3921 can suppose that *P*), the formal object, truth, seems to tell us something im-
 3922 portant about the nature of belief itself. Similarly, according to a familiar story
 3923 about emotions, the formal objects of emotions are the values corresponding
 3924 to each emotion. Fear of a bear, say, has two objects: the intentional object is
 3925 the bear and the formal object is danger. Such formal objects perform at least
 3926 two main tasks ([Rossi and Tappolet 2019, 549](#)). First, they help to determine
 3927 an emotion’s correctness conditions. Fearing that *P* is correct just in case *P*
 3928 is dangerous. Second, the formal object individuates the type of emotion in

3929 question. For example, anger is distinct from fear because these emotions have
3930 distinct formal objects.²⁰ Rossi and Tappolet then point out that, according to
3931 Deonna and Teroni, the formal object of an attitude is never part of its content
3932 (Deonna and Teroni 2012, 76). This picture of formal objects, then, denies the
3933 perceptualist any gap between the intentional object of emotions and the
3934 “entire” content of emotions. So when we say, for example, that one person is
3935 angry about what another person finds amusing, perceptualism can’t make
3936 sense of this. And so, the thought goes, attitudinalism is a better starting point
3937 for emotion theory.

3938 Rossi and Tappolet offer a reply on behalf of perceptualism. Their reply
3939 begins by conceding that the formal object of *many* mental states resides
3940 outside those states’ content. For example, a belief that *P* doesn’t represent
3941 that *P* is true. It’s rather that truth characterizes the correctness conditions
3942 for the attitude type rather than its content (Rossi and Tappolet 2019, 555).
3943 But according to them, the formal objects of *some* non-emotional attitudes
3944 *do* feature in those attitudes’ content. Here they point to chromatic percep-
3945 tual experiences. These include visual experiences of red, green, etc. Take a
3946 visual experience of an object as red. This experience has redness as part of
3947 its content. But if formal objects individuate attitudes and determine their
3948 correctness conditions, then redness is likewise the formal object. For as Rossi
3949 and Tappolet observe, “redness is that which, in conjunction with the inten-
3950 tional object of a perception of red, determines whether the perception is
3951 correct or not” (2019, 551). And “redness is the property that individuates
3952 the type of perception in question, namely, a perception of red” (Rossi and
3953 Tappolet 2019, 551).

3954 As it stands, advocates of the Portable Contents and Fading Emotions Ob-
3955 jections are unlikely to find Rossi and Tappolet’s defense of perceptualism
3956 persuasive, and reasonably enough. This is because the notion of formal

20 According to some, formal objects play a third role, namely that of serving as a constraint on an emotion’s intelligibility. As Müller puts it, “this intelligibility constraint specifies how the subject of an attitude must construe its intentional content in order for her to intelligibly hold that attitude” (Müller 2017, 287). This may not seem to be a problem for perceptualists, since they agree that experiencing an emotion of a given type requires a “construal” (perceptual experience) in terms of the formal object. But according to Müller, the best way to interpret this constraint requires us to invoke *pre-emotional* apprehensions of value. But then this suggests that emotions are responses to apprehensions of value (or experiences of value) rather than apprehensions of value themselves. If Müller is right, then this is a problem not only for perceptualism but also Deonna and Teroni’s brand of perceptualism. For the purposes of this paper, I set aside these broader concerns about whether emotions are experiences of value at all.

3957 objects has arguably been cheapened to the point that they are no longer
 3958 revelatory of the attitude or mental state in question (cf. Teroni 2007, 396;
 3959 Müller 2017, 284). To illustrate, suppose that chromatic perceptual experi-
 3960 ences, including “reddish” visual experiences, “bluish” visual experiences,
 3961 etc., mark distinctive attitudes with their own formal objects. One may worry
 3962 that, if this were the case, then there are as many distinctive attitudes and
 3963 formal objects as there are properties that can be perceived. This includes
 3964 not only colors such as red but specific shades of red, specific shapes, motion
 3965 properties, etc. And beyond perceptual experience, if groupings of similar
 3966 contents are viewed as sufficient grounds for invoking distinctive attitudes and
 3967 corresponding formal objects, it isn’t clear why this line of response wouldn’t
 3968 generate the result that, say, chromatic *beliefs* also have colors as their formal
 3969 objects (perhaps in addition to truth). So Deonna and Teroni can reasonably
 3970 deny that adding qualifications such as “chromatic” (or “shaped,” etc.) to “per-
 3971 ceptual experience” and “belief” marks a new attitude with its own formal
 3972 object.

3973 As we’ll see momentarily, Rossi and Tappolet’s reply gets something impor-
 3974 tantly right. Perceptualists should take the relation between emotions and
 3975 values to be analogous to the relation between chromatic perceptual experi-
 3976 ences and colors. But perceptualists need to be cautious about the language
 3977 of formal objects, perhaps even setting it aside (at least initially) as something
 3978 that tends to obfuscate the most natural ways of framing perceptualism. The
 3979 perceptualist reply that I offer to the [Portable Contents](#) and [Fading Emotions](#)
 3980 [Objections](#) emerges by attending in the right way to the core comparison
 3981 between emotions and sensory experiences that motivates perceptualism in
 3982 the first place.

4.2 *Answering the Portable Contents and Fading Emotions Objections*

3984 Perceptualists can still answer the [Portable Contents](#) and [Fading Emotions](#)
 3985 [Objections](#), but doing so requires being careful about the contemporary dogma
 3986 that the formal objects of emotions are corresponding values. A bit of extra
 3987 terminology will help to clarify the dialectic. This is the language of *representa-*
 3988 *tional guises*, a notion with roots as far back as Aquinas (see [Tenenbaum 2006](#)).
 3989 The intuitive idea is that a representational guise is a way of representing that
 3990 “casts” content in a certain light. Here is how Kriegel describes such castings:

3991 I propose that we capture this by saying that when a mental state
3992 represents p under the guise of the F , the state does not represent
3993 p as F , but rather *represents-as- F p* . Thus, a belief that p does
3994 not represent p as true, but *represents-as-true p* . That which it
3995 represents is simply p . Representing-as-true is a way, or mode, of
3996 representing the mode characteristic of belief. (Indeed, it would
3997 not be far-fetched to hold that believing *just is* representing-as-
3998 true.) What this means is that in representing p under the guise
3999 of the true, the belief that p represents p in a “truth-committal”
4000 manner. It takes a truth-y stance toward p . Similarly, a desire that
4001 p does not represent p as good, but *represents-as-good p* . (Kriegel
4002 2019b, 10)²¹

4003 These remarks indicate a close relationship between the role of representa-
4004 tional guises and those often assigned to formal objects. Whereas Deonna
4005 and Teroni invoke formal objects to distinguish the attitude of belief from
4006 that of desire, Kriegel invokes representational guises to make this distinction.
4007 Indeed, Kriegel is explicit that (at least for some attitudes) he recommends
4008 conceiving of the property typically cited as the formal object as the representa-
4009 tional guise (2019b, 16).

4010 Perceptualists, however, should distinguish between representational guises
4011 and formal objects. For the sake of sticking with the custom in emotion the-
4012 ory, they can continue to treat an emotion’s formal object as its correspond-
4013 ing value. But then what about the representational guise of emotions? The
4014 answer is almost irresistible. After all, the view is called *perceptualism*. As
4015 we have seen, the natural perceptualist response to the [Perceptualism as a](#)
4016 [Bad Start Objection](#) says that emotions involve the same experiential way
4017 of having content as paradigmatic perceptual experiences. The notion of a
4018 representational guise offers a more concrete understanding of this proposal.
4019 That is, perceptualism pairs naturally with the view that emotions have the
4020 same representational guise as ordinary perceptual experience. One natural
4021 candidate for the guise involved in perceptual experience is the following:
4022 *representing-as-present* (cf. Kriegel 2019a, 159–160).²² The idea here is to cap-
4023 ture an important feature of the phenomenology of perceiving, namely that

21 Kriegel further illustrates the proposal: “If you want to grasp the nature of the attitude of belief, say, think of truth-ascribing content and then rethink the “truthy” aspect of that content as pertaining rather to the psychological attitude taken toward that content” (Kriegel 2019b, 11).

22 Schafer (2013) says that both perceptual experience and belief represent their contents with a certain force, namely that of truth (see also Smithies 2018). Schafer uses “force” similarly to

4024 in perceiving one has an impression of certain objects and properties *as being*
 4025 *present*; and when a perceptual experience is veridical, one is acquainted with
 4026 those very properties.²³ So, on this proposal, in perceiving the brown dog one
 4027 stands in a relation to the dog such that one represents-as-present the brown
 4028 dog. Similarly, fearing the dog might consist in representing-as-present the
 4029 dangerous dog.

4030 One worry about this proposal stems from the temporal orientation of some
 4031 emotions.²⁴ To illustrate, it might seem as if sadness and fear can't represent-
 4032 as-present since sadness is about the past and fear about the future. But on
 4033 closer inspection, there's no immediate cause for concern here. For even if
 4034 such emotions include in their cognitive bases thoughts directed to the past
 4035 or future, it doesn't follow that the evaluative properties that they represent
 4036 would not be present.²⁵ Consider a person who is sad about having been
 4037 fired from work. This past event can explain things, most obviously certain
 4038 absences, that matter *now* (e.g., an absence of fulfilling work). Furthermore,
 4039 and in general, when a past event ceases to explain anything of negative value
 4040 in the present (e.g., one finds a better job), one is typically no longer sad, or at
 4041 least it seems fitting not to be; and so it strikes me as *prima facie* plausible that
 4042 sadness represents-as-present some negative value (typically grounded in an
 4043 apparent absence explained by a past event).²⁶ A similar point works for fear,

how I am using “representational guise”. But notice that if perceptual experience and belief have the same representational guise, then the phenomenological difference between belief and perceptual experience will not be (even partly) a function of their guises. On one possible view, the phenomenological difference between perceptual experience and belief is primitive (Kriegel 2019a). And while such primitivism is compatible with perceptualism, the view I sketch here aims to avoid this.

- 23 The idea that emotions/perceptions involve acquaintance with objects and properties is proposed in Ballard (2021b, 121), who is, in turn drawing on Roberts and Wood (2007). Ballard's aim is to argue that such acquaintance is central to the epistemic significance of emotions. In contrast, my aim here is to suggest that this idea can be used to defend a view about the representational guise distinctive of emotions. It should also be noted, however, that this proposal leads likewise to a distinction in the *content* of an emotion and corresponding belief (e.g., fearing something versus believing that that thing is dangerous). The latter relates to a proposition. Thus I think it is somewhat misleading when Roberts (2013, 132) says that emotions can involve “a perceptual acquaintance with moral truths”. Strictly speaking, the content of emotions isn't truth-evaluable, though they may be able to justify corresponding beliefs with true (or false) content.
- 24 Thanks to a referee for raising this issue.
- 25 I set aside the more familiar worry (independent of the specific proposal here) that emotions cannot be perceptual since they often include non-perceptual states (e.g., imaginings) in their cognitive base (Tappolet 2016, 24–31; Milona and Naar 2020).
- 26 See Farennikova (2013) on absence perception.

4044 as already indicated by the brown dog example above. In particular, while fear
 4045 can be driven by thoughts of a possible future outcome, it is the prospect of
 4046 that outcome *now* that makes something dangerous. In general, then, sadness
 4047 and fear aren't obviously exceptions to the proposal that emotions represent-
 4048 as-present. Of course, whether certain emotions are temporally oriented in
 4049 such a way that they can't be understood to represent-as-present value depends
 4050 on a detailed study of particular emotions. And while I'm optimistic such
 4051 explorations will vindicate the present proposal, this is beyond what I can
 4052 hope to accomplish here.²⁷

4053 Whatever one thinks about this specific proposal about the guise involved
 4054 in perceiving, however, the big picture perceptualist idea is just this: emotions
 4055 have that very same representational guise as perceptual experience. So insofar
 4056 as it seems as if formal objects are revelatory of the nature of *attitudes*, rather
 4057 than the *content* of attitudes, this is because we are overlooking a key point:
 4058 perceptualism naturally generates a key distinction between an emotion's
 4059 representational guise and its formal object.²⁸ The former is common to all
 4060 emotions while the latter is distinctive of the emotion type in question.

4061 We're now positioned to see how the perceptualist ought to respond to the
 4062 [Portable Contents](#) and [Fading Emotions](#) Objections. Let's start with the latter.
 4063 In presenting that objection, recall that Deonna and Teroni describe Maurice's
 4064 fading emotional response to Barbara's joke. Despite no longer being amused
 4065 by the joke, he still *believes* that it's funny. They say, "The fact that an evaluative

27 The worry about temporal orientation isn't the only possible concern in the vicinity. For example, one may object that my proposal doesn't extend to emotions in response to fictions (see [Teroni 2019](#)). Here people seem to experience emotions (e.g., fear on behalf of a fictional character), even though the relevant value (e.g., danger) isn't present. My favored view is that such emotions systematically misrepresent value, but in a way that can nevertheless be fitting (at least in a sense) insofar as the emotion arises from well-functioning emotional dispositions [see Milona, manuscript, on this sort of fittingness]. Such systematic misrepresentation is explained by the way in which more primitive emotional capacities interact with sophisticated forms of human cognition. By contrast, a more concessive response would allow that there are distinct classes of emotional attitudes, only some of which are strictly speaking subject to a perceptual analysis (cf. [Mitchell 2022](#)).

28 Tappolet ([2016, 15–16, n40](#)) mentions in passing that perceptualism distinguishes an emotion's formal object (a value) from its constitutive aim (truth or correctness). Constitutive aims are not obviously the same as representational guises. Depending on one's view, the former might indicate a normative standard (cf. [Wedgwood 2002](#)) whereas the latter seem to indicate a descriptive or phenomenal feature; but Tappolet confirms (in conversation) that her footnote is meant to gesture at a broadly similar thought to the one developed here (albeit not in the course of addressing the [Attitudinalist Challenge](#)). See also [footnote 23](#) above for why perceptualists should be hesitant about taking emotions to aim at truth.

4066 property features in the content of a mental state is hardly sufficient to make
 4067 it an emotion, let alone an emotion of a specific type” (Deonna and Teroni
 4068 2015, 297). But now consider an analogous argument centering on perceptual
 4069 experience. In particular, take the following, clearly misguided, objection to
 4070 the view that a perceptual experience as of a red car represents redness (which
 4071 parodies Deonna and Teroni’s statement of the [Fading Emotions Objection](#);
 4072 cf. Deonna and Teroni (2015), 297):

4073 Kunal sees Melinda’s new red car in his driveway. While they are
 4074 out riding bikes, he and Melinda chat about her new car. Despite
 4075 no longer seeing the car, he continues to represent it as red. This
 4076 indicates that Kunal’s color perceptions don’t tell us anything about
 4077 the properties he represents the car as having.

4078 But this objection doesn’t work. This is because visual experiences involve
 4079 a distinctively *perceptual* way of representing certain contents that is impor-
 4080 tantly different from the way contents are represented in belief. On one view,
 4081 the difference between perceptual and cognitive ways of representing is prim-
 4082 itive, at least on the phenomenal level we’re concerned with here (see Kriegel
 4083 (2019a)). But the notion of representational guises offers hope for (at least
 4084 partially) analyzing this difference. For example, following Kriegel’s sugges-
 4085 tion above, and in accord with those who take the formal object of belief to
 4086 be truth, we may say that believing that *P* is a matter of *representing-as-true*
 4087 *P* (Kriegel 2019b, 10; see also Deonna and Teroni 2015, 308).²⁹ By contrast,
 4088 perceptual experiences are plausibly oriented to objects and properties, which
 4089 are more aptly described as present rather than true.

4090 Turn now to the [Portable Contents Objection](#). Recall that, according to
 4091 this objection, everyday discourse about emotions suggests that different
 4092 emotions can be *about* the same thing. For example, we might say that one
 4093 person is angry about what was amusing to another. But if different types of
 4094 emotions are about the same thing, then, contrary to perceptualism, emotions
 4095 don’t contribute anything to what is represented. To see why this objection
 4096 shouldn’t persuade us, turn once again to ordinary sensory experience. We
 4097 might say that while Cassandra *heard* the ambulance approaching, Benny *saw*

29 Here I am assuming that beliefs, or at least some occurrent beliefs, have a phenomenal character. If they don’t, then perceptualists have an easier response to the [Fading Emotions Objection](#). In that case, they would be able to say that emotions are a phenomenal way of having content while beliefs aren’t.

4098 the ambulance approaching. The presence of this common content paired
 4099 with the difference in the phenomenology of the two experiences, may tempt
 4100 one to conclude that vision and audition are different experiential ways of
 4101 having content. But this inference would be a mistake.³⁰ The reason is because
 4102 Cassandra’s auditory experience and Benny’s visual experience only have
 4103 overlapping content, not the same content. After all, Cassandra’s experience
 4104 included various sounds as part of its content while Benny’s included various
 4105 colors and shapes. And perceptual experiences with color content have a very
 4106 different phenomenology from perceptual experiences with sound content.
 4107 So when we transfer the reasoning behind the [Portable Contents Objection](#) to
 4108 the perceptual case, the argument fails to show that experiences in different
 4109 sensory modalities can share their entire content. The [Portable Contents](#)
 4110 [Objection](#), then, really only shows that emotions have overlapping contents,
 4111 and perceptualists agree with that.

4112 The perceptualist position being proposed here can be further illustrated
 4113 by way of comparison with the attitude of *disbelieving*.³¹ For example, one
 4114 might say that Obama disbelieves what Trump believes. Here the content of
 4115 the disbelief and the content of the belief are not exactly the same. This is
 4116 because “disbelieves” refers to both an attitude as well as a content, perhaps
 4117 among other things. In particular, it seems to be a shorthand way of referring
 4118 to a belief that something is not the case (see [Price 1989, 120–121](#)). The
 4119 perceptualist thinks that talk of emotions functions similarly. That is, talk of
 4120 sadness, anger, joy, etc. refers both to an attitude as well as a content; and it’s
 4121 the content represented under a certain guise that makes a given emotion the
 4122 emotion that it is.³²

4125 **5 The Fourth Attitudinalist Objection: Standards of** 4124 **Correctness**

4125 If what I have argued so far is correct, then perceptualists can also answer
 4126 the fourth and final Attitudinalist Objection, what I call the *Standards of*

30 See Speaks (2015, 178–179). Speaks is drawing on Tye (1995, 156–157).

31 The reasoning in this paragraph draws on Gregory (2021, 10–17). Gregory’s aim is to defend the view that desire is a kind of belief. I adapt his reasoning here to support perceptualism.

32 Parallel arguments could be offered for other mental states, e.g., that of rejecting *P*. This likewise seems to refer to an attitude as well as part of its content (cf. [Mulligan 2007, 218](#)). Note that, while these proposals about disbelief and rejecting are in my view intuitive and useful for illustrating perceptualism, they aren’t unrivaled. See Mulligan (2013) for a detailed discussion.

4127 *Correctness Objection.* According to this objection, the attitudinal theory better
 4128 explains the correctness conditions for emotions. By way of comparison,
 4129 consider that a belief that *P* is correct just in case it is *true* that *P*. Similarly,
 4130 a desire that *P* is correct just in case it is *desirable* that *P* (or, alternatively,
 4131 *good* that *P*). The different correctness conditions for the belief and desire are,
 4132 according to many, explained by the nature of the respective attitudes rather
 4133 than their contents. After all, as Deonna and Teroni point out:

4134 [F]ew philosophers go along with Davidson in insisting that be-
 4135 lieving requires representing a proposition *as true*, or that desiring
 4136 requires representing a proposition [...] *as desirable* (Deonna and
 4137 Teroni 2015, 298)³³

4138 Given a rejection of the Davidsonian approach, they then draw the connection
 4139 to emotions:

4140 This encourages the thought that a distinction between the re-
 4141 spective contributions of content and attitude to the correctness
 4142 conditions akin to the one sketched above for belief and desire
 4143 also holds true for the emotions. To the question: “Why is fear or
 4144 anger correct if the object or situation to which these emotions are
 4145 directed is dangerous or offensive?”, the straightforward answer
 4146 is “Because one has the attitude of fear or anger towards it” and
 4147 not “Because it is represented as being dangerous or offensive.”
 4148 (Deonna and Teroni 2015, 299)

4149 The first point to notice is that Deonna and Teroni seem mistaken in an
 4150 assumption about perceptualism. They take it as a data point that fear is a
 4151 correct response to what is dangerous for the trivial reason that one has the
 4152 attitude of fear toward it (Deonna and Teroni 2015, 299). They also suggest
 4153 that perceptualists are barred from saying as much. But perceptualists *can*
 4154 say this. Of course, they also happen to think that what fear consists in is a
 4155 perceptual way of representing its object as dangerous, in a manner similar to
 4156 how a visual experience of redness involves a perceptual way of representing
 4157 its object as red. It is this feature of fear that helps us to understand more
 4158 deeply *why* fear is a correct response to what is dangerous.

33 The Davidsonian approach, at least with respect to desire, is more popular than this quote indicates. For recent defenses of the view that desires involve representations of the good, see Oddie (2005), Schroeder (2007), and Boswell (2018). See Milona and Schroeder (2019) for additional citations and discussion.

4159 The core of Deonna and Teroni's objection, however, is that attitudinalism
4160 does a better job of respecting the contributions of both attitude and content
4161 to the correctness of an emotion. For example, a belief that *P* is correct just
4162 in case it is true that *P*. The content identifies a certain proposition while
4163 the attitude (belief) requires that the proposition be true. Similarly, a desire
4164 might be thought correct just in case its content is good; and so on for other
4165 attitudes. If this is how it works for other attitudes, shouldn't it be the same
4166 for emotions? Fearing that *P* is correct if and only if *P* is the case and *P* is
4167 dangerous; anger that *P* is correct if and only if *P* is the case and *P* is offensive;
4168 and so on for other emotions.

4169 But if what I argued in the [previous section](#) is on track, then perceptualists
4170 needn't deny that attitude and content both contribute to the correctness
4171 conditions of emotions. Perceptualists should say that emotions share their
4172 representational guise with ordinary sensory experiences, and this guise con-
4173 tributes to the correctness conditions of different emotions. This is not to my
4174 knowledge a point that perceptualists have emphasized.³⁴ But it's hard to
4175 overstate how natural it is for a *perceptualist* about emotions to say this in
4176 response to the [Standards of Correctness Objection](#). Incidentally, this is also
4177 what perceptualists about *desire* should say. That is, philosophers who main-
4178 tain that desires are a perceptual representation of some normative property
4179 or relation can say that desires represent-as-present their contents (e.g., [Oddie](#)
4180 [2005](#)). This proposal on behalf of perceptualism about desire, as with emotion,
4181 concerns the *total* content of the desire. Perceptualists about emotion/desire
4182 think that talk of emotion/desire refers both to an attitude and its proprietary
4183 content, each of which make contributions to the correctness conditions of
4184 the attitude. And as we saw in the [last section](#), there is nothing obviously *ad*
4185 *hoc* about taking talk of emotions, or desires for that matter, to refer both to
4186 attitudes and contents.

4187 Over the course of the last two sections, I have argued that perceptualists
4188 should draw a perhaps surprising distinction between an emotion's repre-
4189 sentational guise—treating it as identical to perceptual experience—and its
4190 formal object—taking it to be a value proprietary to the type of emotion in
4191 question. I close this section by raising a question about whether attitudinal-
4192 ists may have reason to adopt their own distinction between representational

34 But cf. Tappolet's (2016, 15–16, n40) brief remark on the constitutive aim of emotions as well as footnote 28 above.

4193 guises and formal objects.³⁵ Whether they do may depend on whether they
 4194 agree with perceptualists about a key dimension of how perceptualists charac-
 4195 terize emotional phenomenology. On the view sketched here, perceptualists
 4196 maintain that emotions share a representational guise with sensory experi-
 4197 ence, namely that certain content is represented-as-present. This is a way of
 4198 unpacking Döring's thought that emotions and perceptions put forth certain
 4199 contents as *actually there* (Döring 2007, 377). Emotional experience is thus
 4200 unlike (voluntary) imaginative experiences, or suppositions, which do not put
 4201 forth their contents in this way, and therefore imagination and supposition do
 4202 not have correctness conditions mirroring that of perceptual experience and
 4203 emotion. A question thus arises for attitudinalists about whether they would
 4204 agree with those perceptualists who take emotions to put forth their contents
 4205 as present. And if so, then there is reason for the attitudinalists to complexify
 4206 what they take the formal objects of emotions to be, or alternatively to draw
 4207 their own distinction between representational guises and formal objects.³⁶
 4208 The aim here is not to present an objection to attitudinalism but rather to raise
 4209 a question that helps us to better frame the possible points of (dis)agreement
 4210 between perceptualism and various versions of attitudinalism.

4216 6 The Choice between Perceptualism and Attitudinalism

4212 This paper has taken for granted the popular position that emotions are evalu-
 4213 ative experiences. The aim has been to show that the interlocking objections
 4214 comprising the *Attitudinalist Challenge* do not establish attitudinalism as a
 4215 better starting point for this position. In this final section, I explain why we
 4216 might ultimately favor perceptualism over Deonna and Teroni's version of
 4217 attitudinalism (i.e. *action tendency attitudinalism*).

4218 As we've seen, action tendency attitudinalists maintain that emotional
 4219 attitudes consist in feelings of readiness to act, and these feelings explain why
 4220 emotions count as *evaluative* experiences. Here is how Deonna and Teroni
 4221 describe their position:

-
- 35 Since writing this paper, I came across an argument in Gregory (2021, 14, n10) that makes similar points to the ones in this paragraph, though in the context of the literature on desire rather than emotion.
- 36 The question raised here is principally for those attitudinalists who maintain that emotions are evaluative experiences. But as noted in section 2, attitudinalism comes in different forms. Some attitudinalists deny that emotions are experiences of value (e.g., Müller 2017). Attitudinalists of this form may argue that perceptualists have confused the phenomenology of emotion with evaluative feelings that precede emotions.

4222 Fear of a dog is an experience of the dog as dangerous insofar as
4223 it is an experience of one's body being prepared to forestall its
4224 impact (flight, preventive attack, immobility, etc.), an attitude it
4225 is correct to have if, and only if, the dog is dangerous. (Deonna
4226 and Teroni 2015, 303; see also Deonna and Teroni 2012, 81)

4227 Deonna and Teroni also maintain that there is a *non-contingent* connection
4228 between the experiential dimension of an emotion and its correctness condi-
4229 tions:

4230 The body is felt in the form of a gestalt of bodily sensations, which
4231 consists in being ready to respond in a given way to the object. If
4232 experiencing such an attitude is all there is to experiencing some-
4233 thing in evaluative terms, then of course the relation between
4234 the attitude and the fact that the evaluative property enters into
4235 the correctness conditions of the mental state is anything but
4236 contingent. (Deonna and Teroni 2012, 87)

4237 The bodily sensations in fear, for example, are such that they necessarily
4238 count as experiences of their object as dangerous; and this is why fear has
4239 the correctness conditions that it does. To motivate this thought, they point
4240 out that it isn't intelligible that amusement could be a way of making danger
4241 manifest. Given the nature of fear, it seems as if that is the only emotion that
4242 could be an experience of danger (Deonna and Teroni 2012, 86).

4243 A major challenge for *action tendency attitudinalism* is to demystify how
4244 emotional experiences count as *evaluative* experiences. Such evaluative expe-
4245 riences aren't simply a matter of covariation:

4246 [T]he connection between the emotional experience and the eval-
4247 uative property cannot be modeled on that between smoke and
4248 fire, namely as one of natural co-variation. Experiencing the eval-
4249 uative property of an object is not taking the way one's body feels
4250 as an indication, a sign, or a symptom of the fact that this object
4251 has this property. (Deonna and Teroni 2012, 87).

4252 Deonna and Teroni argue that a covariational conception of the link between
4253 emotion and value fails to capture the thought that emotional experiences
4254 involve a presentation or manifestation of value.³⁷ My concern, however, is

37 Deonna and Teroni remark, "[W]e cannot conceive of the connection between, for instance, the phenomenology of fear and danger as arbitrary. Intuitively, no other emotional experience

4255 that [action tendency attitudinalism](#) may ultimately turn out to be, in an im-
 4256 portant sense, a version of the covariation model (perhaps a kind of necessary
 4257 covariation), ultimately failing to deliver anything like a presentation of value.

4258 Notice first what the action tendency attitudinalist *isn't* saying. First, and
 4259 most obviously, they aren't saying what perceptualists say. A perceptualist,
 4260 as we've seen, says that danger features in experiences of fear similar to how
 4261 empirical properties feature in sensory experience (e.g., Roberts (2013, 72–73);
 4262 Tappolet (2016, 26–28); *inter alia*). Such a view thus well-suited to make sense
 4263 of the idea that values are manifest in emotional experiences. But Deonna
 4264 and Teroni deny that emotions make value manifest *in this way* (2012, 68–69).

4265 There is another important view in the vicinity of perceptualism that like-
 4266 wise isn't the action tendency attitudinalist's. This view can be understood
 4267 as adapting the proposal sketched above about the representational guise
 4268 of perceptual experience. According to that proposal, a full description of a
 4269 perceptual experience requires reference to an attitudinal phenomenology of
 4270 *representing-as-present* (a being-present-y mode of representation; cf. Kriegel
 4271 (2019b, 10)). Building on this thought, an attitudinalist might then take emo-
 4272 tions to have evaluative representational guises in the manner that perceptual
 4273 experiences have a representing-as-present guise. Fear, for instance, might
 4274 be thought to have an attitudinal phenomenology that must be described as
 4275 representing-as-dangerous.³⁸ But action tendency attitudinalists don't have
 4276 in mind representational guises *of this sort*, either (see Kriegel 2019b, 13).³⁹
 4277 Instead, the action tendency attitudinalist maintains that the phenomenology
 4278 of emotional attitudes is properly described in terms of one's body being acti-

than that of fear is a suitable candidate for presenting the world in terms of a danger" (Deonna and Teroni 2012, 86). Of course, Deonna and Teroni deny that emotional phenomenology is *exclusively* a matter of value becoming manifest (2015, 308).

- 38 Kriegel describes such a view with respect to moods. He says the following about the mood of euphoria in particular: "As before, expressions such as 'represents-as-wonderful' function as winks of sorts, with the wink's message being: To grasp the nature of euphoria's distinctive character, think of a wonderfulness-ascribing content and then rethink its 'wonderfulness' dimension as pertaining actually to the subject's attitude toward the content" (Kriegel 2019b, 12). The suggestion here is that an attitudinalist might extend Kriegel's view of moods to emotions.
- 39 I believe that this is the position attitudinalists *should* adopt, at least insofar as they want to take seriously the view that emotions make value manifest. Such a view also provides a tempting response to Dokic and Lemaire's (2015) argument that attitudinalism collapses into perceptualism (or at least a view that faces as many problems as perceptualism) insofar as it claims that emotions make us aware of value. Unfortunately, however, I haven't space to develop this view and canvass its advantages and disadvantages with respect to perceptualism.

4279 vated in a particular way rather than in evaluative terms. Deonna and Teroni
4280 point to the following passage from Nico Frijda to unpack their view:

4281 In self-focus, analytic attention reduces felt bodily engagement to
4282 just that. Felt impulse to shrink back from a threat is transformed
4283 into felt muscle tension, just as the feeling of pointing can be
4284 transformed into feeling one's finger stretched. (Frijda 2005, 382;
4285 quoted in Deonna and Teroni 2015, 308, n19)

4286 Contrast this with the view of perceptual experience offered in section 4:
4287 whereas attending to a perceptual experience, according to that proposal,
4288 involves attending to the property of *being present* as a dimension of attitudinal
4289 phenomenology, the action tendency attitudinalist doesn't think that
4290 attending to emotional experience involves attending to value as a dimension
4291 of attitudinal phenomenology.

4292 So how exactly does the action tendency attitudinalist understand emotions
4293 as evaluative experiences? As we've seen, Deonna and Teroni say that emotions
4294 are "a gestalt of bodily sensations, which consists in being ready to
4295 respond in a given way to the object" (2012, 87). For example, a person who
4296 fears a snarling dog may have an experience of their body shrinking away
4297 from the snarling dog. But it's not clear that this makes sense of emotions
4298 as *evaluative* experiences, or as manifesting value. Even if we add that the
4299 action tendencies associated with different emotions are (necessarily) correct
4300 responses to the relevant value, it wouldn't thereby follow that emotions
4301 are evaluative experiences. But consider the following: might it be that emotional
4302 experiences are evaluative but don't seem evaluative when we *attend* to
4303 them?⁴⁰ We can see the difficulty with this proposal by returning to Frijda's
4304 example of pointing quoted above (2005, 382). Following Frijda, Deonna and
4305 Teroni appear to think that in attending to what it feels like to point, the
4306 experience seems to just be that of one's finger being stretched. But notice
4307 that attending to the entirety of the experience isn't describable simply in
4308 terms of the experience of a stretching finger. And even if we attend to the
4309 experience in abstraction from what is being pointed to, we aren't left with
4310 merely an experience of a stretching finger. This is because a crucial part of
4311 the experience of pointing is an experience of indicating, and we *can* attend to
4312 this dimension—either in isolation or in conjunction with an object. So if the
4313 pointing case provides a model for emotions, then, contrary to what Deonna

40 Thanks to a referee for pushing me to consider this possibility.

and Teroni suggest, a description of what we're attending to in emotional experience—even in isolation from the emotion's object—should require reference to an experience of value. But if the action tendency attitudinalist says this, then they have drifted in the direction of the sort of perceptualist-adjacent phenomenology they want to resist, namely one that retains a representational mode phenomenology even in higher-order attention on the experience itself. So unless the action tendency attitudinalist can somehow make sense of emotional experiences as evaluative experiences that don't seem evaluative when we attend to them, there is pressure to give up the view that emotions are evaluative experiences.

But how much does it matter whether [action tendency attitudinalism](#) can make sense of emotions as evaluative experiences? The answer depends on what one hopes to accomplish with a theory of emotions. For example, one may be tempted by the view that evaluative knowledge is ultimately rooted in evaluative experiences. Or, more modestly, one may think that evaluative experiences are *an* important route to evaluative knowledge. And mental states like emotions provide a tempting non-mysterious source for what such value experiences might be (Roberts (2013); Tappolet (2016); Milona (2016); *inter alia*).⁴¹ Furthermore, perceptualists are often attracted to the idea that emotions are able to rationalize action and maintain, moreover, that perceptualism can explain how this is possible. We might appeal to fear, for instance, to explain a person's fleeing a bear. If fear is an experience of its object as dangerous, then this renders the action intelligible (Döring 2007). Yet, again, if emotions aren't evaluative experiences, if they are mere felt tendencies to act, then it is not clear that they can rationalize action (as opposed to merely cause it).

43407 Conclusion

4341 This paper has explored the [Attitudinalist Challenge](#) to perceptualism. The
4342 objections comprising the challenge are meant to illustrate that much of our

41 Of course, one might assign other (more modest) roles for emotions in value epistemology that don't require emotions to be evaluative experiences. For example, emotions might tend to fix our attention on objects of potential significance, helping us to notice things we otherwise might have missed (see Brady 2013). Furthermore, it's not clear to what extent the roles that Deonna and Teroni assign to emotions require their thesis that emotions are evaluative experiences (2012, 118–125; see also Müller 2017, 304–305). Indeed, as a referee points out to me, some opponents of perceptualism might think that perceptualist's epistemological ambitions lead them to implausible accounts of the nature of emotions.

4343 pretheoretical discourse about emotions conflicts with the perceptualist theses
 4344 that emotions have, and are individuated by, evaluative content. However,
 4345 the **Attitudinalist Challenge** is unpersuasive. Still, adequately addressing the
 4346 objections requires perceptualists to present their view with greater clarity.
 4347 In particular, the version of perceptualism presented here draws a crucial
 4348 and perhaps surprising distinction between an emotion's representational
 4349 guise, which is uniform across emotions and other perceptual experiences,
 4350 and its formal object, which is specific to that emotion type. This version of
 4351 perceptualism emerged in large part by comparing emotions and sensory
 4352 perceptual experiences, and to this extent marks a natural development of
 4353 the theory.*

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