What is a truth-value gap?

James R. Shaw

Abstract   Truth-value gaps have received little attention from a foundational perspective, a fact which has rightfully opened up gap theories to charges of vacuousness. This paper develops an account of the foundations of gap-like behavior which has some hope of avoiding such charges. I begin by reviewing and sharpening a powerful argument of Dummett’s to constrain the options that gap theorists have to make sense of their views. I then show that within these strictures, we can give an account of gaps by drawing on elements of a broadly Stalnakerian framework for assertion and using gaps to track an amalgamation of assertoric effects. The discussion reveals that we may need special resources in our theories of assertion to posit gaps, that gaps may be unusable in characterizing the structure of mental states, and that gaps may have heterogeneous linguistic sources that result in equally heterogeneous projective and inferential behavior.

Keywords   Truth-value gaps · Semantic defect · Truth

Truth-value gaps are generally taken to be a well-understood phenomenon. From a formal perspective this is correct: gaps are by stipulation truth-values that block inferences like falsehood while having more infectious projection behavior. But from a foundational perspective gaps are poorly understood. What is the point of distinguishing among ways of being untrue? How do gaps fit into, or arise out of, our theories of assertion or the nature of content? Difficulties in supplying answers to such questions have given rise to powerful challenges that the very notion of a truth-value gap is conceptually confused.

My goal in this paper, after strengthening a challenge of this kind, is to offer one account of truth-value gaps that begins to address some of the more pressing founda-
tional questions about them. The discussion reveals that we may need special resources in our theories of assertion to posit gaps, that gaps may be unusable in characterizing the structure of mental states, and that gaps may have heterogeneous linguistic sources that result in equally heterogeneous projective and inferential behavior.

1 The foundational challenge

Frameworks incorporating truth-value gaps have been applied to indicative conditionals with false antecedents, semantic anomaly, non-referring definites and strong presupposition failures more generally, non-referring names, vague expressions, and liar-like semantic paradox. In these contexts gaps are supposed to explain utterance infelicities, consultants’ hesitant truth-value judgments (or strong judgments of no conventional truth-value), aberrant compositional behavior, or inferential abnormalities.

One might wonder if there is really one phenomenon recurring in the constructions just mentioned, and whether one technical notion can fulfill the very different compositional, inferential, and assertoric roles set for it. But let’s set these worries aside for now because there is a prior, deeper foundational worry about truth-value gaps which has gone more or less unanswered since it was forcefully pressed in Dummett (1978).

Dummett elaborates his foundational worry using an analogy with competitive games. If a theorist of such games merely divided final states of play under three headings—win, lose, and draw—the utility of that classification would presuppose concepts integral to competitive play like winning and losing, and the classification on its own would be unhelpful in explicating them. Relabeling the states of play the A, B, and C-states, makes clearer what important information is missing: prototypically players aim at the A-states. If instead the B or C-states played that role, we would have a very different class of competitive games on our hands. And if no states served that function, we wouldn’t have a classification pertinent to competitive games at all. Likewise a classification of statements into the true and false contributes too little to

1 Broadly trivalent theories of indicative conditionals are explored in de Finetti (1935), Belnap (1970), and discussed in von Fintel (2007) and Rothschild (2014). For discussions of the defects of anomaly, see Ryle (1949), Routley (1966, 1969), Thomason (1972), Lappin (1981), and Shaw (forthcoming). The question of how to treat non-referring definites, and empty names, goes back to Frege (1892) and Strawson (1950, 1952, 1954). For gappy treatments of vagueness see, e.g., Fine (1975) or Soames (1999, 2003). And for a classic gappy treatment of liar-like paradox see Kripke (1975). In many of these cases, the authors cited favor treatments using very strong forms of defect such as meaninglessness, or failure to express a proposition in context. In other cases, treatments allow for successful, or partially successful, assertions that exhibit defective behavior only in some circumstances, or at some possible worlds. Sometimes these forms of defect are conflated. The existence of the former, strongest forms of defect is in some ways easier to defend. As will become clearer through discussion, I mean to defend the existence of very weak forms of semantic aberration which are present ‘world-by-world’, since these are the hardest to defend from foundational challenges, and yet are arguably best suited to treat all the cases just alluded to. Cf. the discussion of ‘substantial gaps’ in Glanzberg (2003).

2 I’ll follow one strand of Dummett’s exposition here relatively closely, provisionally adopting Dummett’s use of “statement” to pick out bearers of truth. Dummett’s argument against the intelligibility of gaps has met with some approval, and relatively little direct resistance. See, for example, Glanzberg (2003) and Priest (2006) both of whom refine and endorse Dummett’s attack. See also Suszko (1977), which capitalizes on what is essentially Dummett’s point to formalize a strategy for obviating gaps.