CONTRARIETY

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  This paper is an attempt to make philosophical capital out of an important difference between the Aristotelian logic of terms and the Stoic, or 'modern', logic of propositions. This difference is, that although both logics include and give formal recognition to the relation of contradiction, only the former, and not the latter, takes account of the relation of contrariety. Here I do not refer to the relation of contrariety as extending between terms (thus for example the terms 'pleasure' and 'pain', 'black' and 'white' denote contraries), but as extending between propositions.

  The most common definition of *contrariety* is as follows: two propositions are contraries if they cannot both be true. For comparison, the definition of *contradiction* states that two propositions are contradictories if they can neither both be true nor both be false, and that of *sub-contrariety*, that they cannot both be false. As examples from the Aristotelian square of opposition, 'All A is B' and 'No A is B' are contraries, while 'All A is B' and 'Some A is not B' are contradictories, and 'Some A is B' and 'Some A is not B' are sub-contraries. In the modernized Stoic logic, p and Np[1] are contradictories, but there is no formal analogue for, nor logical role played by, the contrary of p. The fact that there is not seems *prima facie* to be a consequence of Stoic logic's being a logic of unanalysed propositions, while Aristotelian logic is not. Notwithstanding this seemingly irreconcilable difference between the two logics, there may still be ways of introducing the notion of contrariety into propositional logic. For example we might, analogously with Np, write Rp for the contrary of p. This device is adopted by L. Goddard[2] in order to give a satisfactory analysis of exclusive disjunction: he points out that what makes disjunctions exclusive is not use of the exclusive 'or', but an internal opposition between the disjuncts which we can express by saying that they are contraries. The aim of this paper will be to investigate the

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1. The logical notation of Łukasiewicz will be used throughout.

2. 'The Exclusive "Or"', *Analysis* 1960.