

## Erratum to: Causality as a theoretical concept: explanatory warrant and empirical content of the theory of causal nets

Gerhard Schurz<sup>1</sup> · Alexander Gebharter<sup>1</sup>

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### Erratum to: Synthese DOI 10.1007/s11229-014-0630-z

In Sect. 2.2, “Explaining linking up”, we write “In order to explain  $\text{DEP}(X, Y|Z)$  it suffices to assume ... [the] condition of dependence overlap (DO)<sup>9</sup>:  $\exists x, z, y: \text{DEP}(x, z) \wedge \text{DEP}(z, y)$ .” This is an error. The stronger condition (DT), introduced three paragraphs before, is needed. The corrected sentence must say: “In order to explain  $\text{DEP}(X, Y|Z)$  we must assume condition (DT) introduced above.<sup>9</sup>” Footnote 9 has to be changed as follows: “*Proof*: As shown in the proof in fn. 8, (DT) and  $\sum_z P(y|x, z) \cdot P(z|x) = \sum_z P(y|z) \cdot P(z|x)$  entail by probability theory  $P(y|x) \neq P(y)$ . Thus (by contraposition) (DT) and (\*)  $P(x|y) = P(y)$  entail (\*\*)  $\sum_z P(y|x, z) \cdot P(z|x) \neq \sum_z P(y|z) \cdot P(z|x)$ . (\*) follows from (C) and the fact that  $X$  is not d-connected with  $Y$  in  $X \rightarrow Z \leftarrow Y$ . This gives us (\*\*), which implies  $\exists z: P(y|x, z) \neq P(y|z)$ , i.e.,  $\text{DEP}(Y, X|Z)$ . Q.E.D.”

The following changes are consequences of this correction: (i) The first two sentences of footnote 10 have to be replaced by “Weaker than (DT) is the condition (DO) of “dependence overlap”:  $\exists x, y, z: \text{Dep}(y, z) \wedge \text{Dep}(z, x)$ . (DO) is not a sufficient but a necessary condition for screening off (we are indebted to an anonymous reviewer for pointing this out to us).” (ii) In the paragraph of Sect. 3.2 headed “(3) Intransitivity

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✉ Gerhard Schurz  
schurz@phil.uni-duesseldorf.de  
  
Alexander Gebharter  
gebharter@phil.uni-duesseldorf.de

<sup>1</sup> Düsseldorf Center for Logic and Philosophy of Science (DCLPS), Department of Philosophy, Heinrich Heine University Düsseldorf, 40225 Düsseldorf, Germany

unfaithfulness”, the words “Sect. 2.2” must be replaced by “fn. 10” and “ $\neg\exists x,z,y: \text{DEP}(x,z)\wedge\text{DEP}(z,y)$  implies  $\text{INDEP}(X,Y|Z)$  (see the proof in fn. 10)” by “ $\neg\exists x,z,y: \text{DEP}(x,z|y)\wedge\text{DEP}(z,y|x)$  implies  $\text{INDEP}(X,Y|Z)$ ”.