

Errata to *Philosophy and Model Theory*

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Chapter 3

p.72, immediately prior to Proposition 3.10.

SA should be defined as comprising axioms (Q1)–(Q3) from Definition 1.9.¹

Chapter 4

p.88, proof of Proposition 4.16.

The entire paragraph starting ‘For reductio’ can be replaced with the following: ‘And in fact $v(\eta^{\frac{1}{n}}) > v(\frac{1}{\ln \eta})$, since as we observed earlier $v(\eta^{\frac{1}{n}})$ strictly decreases as n increases.’²

p.105, immediately before the last displayed equation.

The word ‘not’ should be ‘note’.

Chapter 5

p.118. Proof sketch.

The sentence ‘But neither faithfully interprets the other, since these theories have different Σ_1 -consequences, and faithful interpretation requires sameness of Σ_1 -consequences’ should read ‘But $\text{PA} + \neg\text{Con}(\text{PA})$ does not faithfully interpret PA, since faithful interpretation requires that the interpreted theory prove all the Σ_1 -consequences of the interpreting theory’.

Chapter 7

p.153, last sentence of first full paragraph

The sentence should read ‘In short, it seems like the modelist can answer the Doxological Challenge if she can find a categorical theory.’

¹ The theory (Q1)–(Q2) has a model which comprises multiple copies of \mathbb{N} . It is therefore incomplete, since e.g. it does not decide the sentence ‘there are at least two elements which are not in the range of the successor function.’

² The replaced paragraph does, though, illustrate how one can use the value field to mimic Euler’s application of l’Hôpital’s rule. So we will likely retain it in the text somewhere.

Chapter 10

p.227, the manifesto statement

The text ‘logical framework of very theories’ should read ‘logical framework of the very theories.’

p.230, middle of page

The text “0’ as canonical’ should read “0’ as a canonical.’

Chapter 11

p.265. Proof of clause (qp:5).

Replace the text from ‘so there is some $y' E_2 y \subseteq_2 \text{ord}_2(y)$ ’ to the end of the proof of (qp:5) with the following: ‘so there is some $y' E_2 y$ such that $R(v', y')$. Instantiating the induction hypothesis with $\text{ord}_1(v')$, v' , y' , and x' , there is some $z' \subseteq_2 \text{ord}_2(y')$ such that $R(x', z')$. Moreover, $z' E_2 \text{ord}_2(y)$; this holds since $y' E_2 y$, so that $z' \subseteq_2 \text{ord}_2(y') E_2 \text{ord}_2(y)$ by Proposition 8.25(3). Now, using Levelling₂, let $z = \{z' E_2 \text{ord}_2(y) : (\exists x' E_1 x)R(x', z')\}_2$; by what we just showed, $(\forall x' E_1 x)(\exists z' E_2 z)R(x', z')$. Equally, $(\forall z' E_2 z)(\exists x' E_1 x)R(x', z')$ by (qp:2)–(qp:3). So $\Lambda(R, x, z)$ and hence $R(x, z)$ by (11.1). This completes the proof by induction.’

Chapter 12

p.285, first sentence of §12.A

The text ‘we show how define’ should read ‘we show how to define.’

Chapter 16

p.387, near the end of the introduction

The text ‘It was provided Sher’ should read ‘It was provided by Sher.’

Chapter 17

p.426, second sentence of the subsection ‘Rethinking categoricity’

The text ‘treating categoricity a desirable’ should read ‘treating categoricity as a desirable.’