Errata
for *A Logic of Finite Syntactic Epistemic States* (submitted version)

Thomas Ågotnes
agotnes@ii.uib.no

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The following are the most significant corrections made in the final print version. The corrections are either of misprints or, in one case, relocation of a definition which was used before introduced. In addition, the text is slightly some places in order to make it clearer and/or gramatically correct.

The only *addition* is two figures on p. 132, representing the systems S and S' described in the text. There is no information in the figures compared to the text.

Of course, the content of the thesis has not changed.

Legend: tn (bn) means line number n from the top (bottom). "A $\mapsto$ B" means that A should be replaced with B.

Chapter 1

p. 8 b14: ..model from Part III $\mapsto$ ..model from Part II

Chapter 2

p. 10 **PC**: ..is a valid propositional formula $\mapsto$ ..is a substitution instance of a propositional tautology

p. 13 b13: most general $\mapsto$ strongest condition

p. 20 t14: $d_a(q) \leq 1 \mapsto d_a(q) \geq 1$

p. 21 b13: $\pi(q) \mapsto \pi'(q)$

Chapter 3

p. 28 After ".. finite states.", insert the sentence: "The resulting logic is called *Static Syntactic Epistemic Logic (*SSEL*)*.".

p. 36 b15,b16: $\mathcal{M}^{\mathbf{T_i}} \mapsto mod(\mathbf{T_i})$

p. 37 b3: $\mathcal{M}^{\mathbf{T_i}} \mapsto mod(\mathbf{T_i})$

Chapter 4

p. 39 t9: $\rightarrow \mapsto \Rightarrow$

p. 47 t6: *Lemma*4.1.2 $\mapsto$ *Corollary*4.1.2

p. 48 Proof of Th. 4.1: The case for E5 is missing. It is trivial.

p. 49 t5–t9: $\bigtriangledown_i S[T]$ and $\bigtriangledown_i S[U] \mapsto \bigtriangledown_i S[U]$ and $\bigtriangledown_i S[T]$

p. 49 t1: $\phi \in \Gamma' \mapsto \Gamma' \vdash \phi$

p. 49 t1: $\neg\phi \in \Gamma' \mapsto \Gamma' \vdash \neg\phi$

Chapter 5

p. 54 b12: Insert the sentence "The model class of $\Gamma \subseteq EL$, w.r.t. $\mathcal{M}_{fin}$, is $mod^f(\Gamma) = \{M \in \mathcal{M}_{fin} : M \models_f \Gamma\}$."

p. 54 b20: $\wp^{fin}(OL) \mapsto \mathcal{S}^f = \wp^{fin}(OL)$

p. 57 b15,b18: $\mathcal{M}^{\Phi} \mapsto mod(\Phi)$

p. 57 b13,b17: $\mathcal{M}^{\Phi,f} \mapsto mod^f(\Phi)$

Chapter 6

p. 61 End of Sec. 6.1: Replace the last sentence with: "Agents are still assumed to be finite, as described by KSSs $\mathcal{M}_{fin}$ with possible epistemic states $\mathcal{S}^f$ (Def 5.1). However, the more general semantics, GKSSs $\mathcal{M}$ with possible epistemic states $\mathcal{S}$ (Def. 3.8), will be very useful in this chapter. Henceforth the superscript f will be used to denote the finite restriction of a set $\mathcal{M}' \subseteq \mathcal{M}$ or a set $S \subseteq \mathcal{S}$: $\mathcal{M}'^f = \mathcal{M}' \cap \mathcal{M}_{fin}$ and $S^f = S \cap \mathcal{S}^f$.

p. 62 b2: $\mathcal{M}^{\Phi f}$: $\mathcal{M}^{\Phi f} = \mathcal{M} \cap \mathcal{M}_{fin} \mapsto mod^f(\Phi)$

p. 64 t2: Def. 6.3 $\mapsto$ Def. 6.1

p. 64 b1: $\wp(OL) \mapsto \mathcal{S}$

p. 69 t2: $\wp^{fin}(s \cup \{\alpha^{\phi,s}_{i,S}\}) \mapsto \wp^{fin}(\hat{s} \cup \{\alpha^{\phi,s}_{i,S}\})$

p. 69 t3: $AL \mapsto OL$

p. 72 b11: $s_i \mapsto s_i^{\Phi}$

p. 73 Proof of Lemma 6.9: The case for Def. 6.8.2c) is missing. It is trivial.

p. 73 b2: $\beta \mapsto \{\beta\}$

p. 73 b1: $S \cap \wp^{fin}(s) \mapsto \bigcup(S \cap \wp^{fin}(s))$

p. 74 t2: $\beta \mapsto \{\beta\}$

p. 74 t3,t8: $S \cap \wp^{fin}(s \cup \{\alpha\}) \mapsto \bigcup(S \cap \wp^{fin}(s \cup \{\alpha\}))$

p. 74 b4: $\wp^{fin}(s) \mapsto \bigcup \wp^{fin}(s)$

p. 76 b12,b6: $AL \mapsto OL$

p. 77 t1: **K** $\mapsto$ **D**

p. 77 t8,t14: $AL \mapsto OL$

Chapter 7

p. 89 b10: $\pi \mapsto \pi'$

p. 93 t12: $\phi \in \pi \mapsto \pi(p) =$ **true**

p. 96 t21: $R_i \mapsto R_j$

p. 98 b21: $[\![T^R]\!] \mapsto [\![T^R_j]\!]$

p.99/100 Example 7.3: the validity proof contains some confusing notation and has been cleaned up a bit.

p. 101 t6: $pFin \mapsto \wp^{fin}(OL)$

p. 102 b23: the whole line $\mapsto$ then $s \subseteq r$ and $s' \in [\![T^R]\!](s)$ implies that there is a $r' \in [\![T^R]\!](r)$ such that $s' \subseteq r'$

p. 104 t8: $\overset{\rightsquigarrow}{\triangle}_{ij} \mapsto \overset{\rightsquigarrow}{\triangledown}_{ii}$

p. 107 b9: **Prop2** $\mapsto$ **Prop3**

Chapter 9

p. 129 t4: Part III $\mapsto$ Part II

p. 129 t6: $\triangle_i X \mapsto \triangledown_i X$

p. 129 b7: $\delta(q, a) \mapsto \delta(q_k, a)$

p. 131 eq. (9.9): $q \mapsto q_1$

p. 132 t4: $q_4 \mapsto \pi(q_4)$

p. 132 eq. (9.12): $S \mapsto S'$

p. 134 t8: $\overset{\rightsquigarrow}{\triangle}_{ij} \mapsto \overset{\rightsquigarrow}{\triangle}_{ii}$