Maegan Fairchild's "Symmetry and Hybrid Contingentism"

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> *"The dismissal of hybrid contingentism on 'symmetry' grounds can't get any further than the limits of the hybrid contingentist's own positive account; further complaints must await further progress." (section 4)*

1 Symmetry in Modal Metaphysics

First-Order Necessitism (N_1): $\Box\forall x\Box\exists y(y = x)$

First-Order Contingentism (C_1): $\neg\Box\forall x\Box\exists y(y = x)$

Higher (Second)-Order Necessitism (N_2): $\Box\forall X\Box\exists Y(Y \equiv X)$, where $Y \equiv X$ is defined as $\Box\forall x(Yx \leftrightarrow Xx)$[1]

Higher (Second)-Order Contingentism (C_2): $\neg\Box\forall X\Box\exists Y(Y \equiv X)$

Uniform Necessitism: $N_1 + N_2$

Hybrid Contingentism: $C_1 + N_2$

The idea is that N_1 and N_2 are downstream consequences of more basic and fundamental principles[2], so the superficial asymmetry in Hybrid Contingentism might be dissolved away if we focus on those basic principles.

Although proponents of N_1 might either reject

Universal Instantiation (UI): $\forall x\phi \to \phi[t/x]$,

or reject

Necessitation: if $\vdash \phi$, then $\vdash \Box\phi$,

we are only considering those who choose to reject UI and replace UI with a weaker principle governing the logical behavior of the universal quantifier:

Free Universal Instantiation (FUI): $\forall x\phi \to (\exists y(y = t) \to \phi[t/x])$.

[1] We presuppose **Being Constraint**: $\Box\forall x\Box(F(x) \to \exists y(y = x))$.

[2] N_1 is a logical consequence of Simple Quantified Modal Logic (SQML), which combines classical first-order logic and the system S5 of propositional modal logic. N_2 can be derived from Comprehension (Comp): $\exists X\Box\forall x(Xx \leftrightarrow \phi)$, where X does not occur free in ϕ.

If we want symmetry across levels, hybrid contingentists are thus expected to have a second-order analogue of FUI as well:

Second-Order Free Universal Instantiation (FUI_2): $\forall X\phi \rightarrow (\exists Y(Y \equiv F) \rightarrow \phi[F/X])$

Therefore, hybrid contingentists can only rely on Comprehension to justify N_2:

Comprehension (Comp): $\exists X\Box\forall x(Xx \leftrightarrow \phi)$, where X does not occur free in ϕ.

However, FUI_2 together with Comp collapses into classical logic:

Second-Order Universal Instantiation (UI_2): $\forall X\phi \rightarrow \phi[F/X]$[3]

[3] Comp secures every instance of the inner antecedent in FUI_2, provided that necessary coextensiveness amounts to second-order identity.

Opponents of hybrid contingentism therefore argue that hybrid contingentism has an asymmetry in adopting free logic in the first level while adopting classical quantificational logic in the second level.

2 Quantificational Core and Generative Core

Fairchild points out that we should separate the quantificational core from the generative core when we analyze the logical behavior of the quantifier. UI should be regarded as a logical consequence of FUI and Being:

Being: $\exists x(x = t)$,

where FUI is the quantificational core and Being is the generative core.

Similarly, UI_2 has FUI_2 as its quantificational core and Comp as its generative core. Therefore, insofar as hybrid contingentism endorses free logic in both first-order and second-order, there is no asymmetry here, and UI_2 is only a downstream consequence if we also consider the generative core Comp.

3 Asymmetry in the generative core?

With respect to the generative core, unlike uniform necessitists, hybrid contingentists do not have a positive story for the "generation" of first-order entity. There is still a threat of asymmetry in the generative fragments of first-order and higher-order.

Fairchild briefly considers some options which she thinks can match Comprehension, the generative fragment of second-order. For example:

COINCIDENCE PLENITUDE: For any property F, there is an object x such that it is metaphysically necessary that for any object y, y coincides with x iff something is F and y coincides with everything F.

Regardless of whether Coincidence Plenitude can match Comprehension, there is still an asymmetry in the hybrid contingentist picture: with Coincidence Plenitude, the picture merely accomodates first-order contingentism, and cannot 'predict' first-order contingentism. On the other hand, second-order necessitism is 'predicted' by more basic axioms, namely FUI_2 and Comp.

Can we have a generative principle which can match Comprehension and predict first-order contingentism? Here is an option:

PLENITUDE: $\forall X(\neg(X \equiv \lambda x.\bot) \rightarrow \exists x \Diamond Xx)$

Since we have free logic in first-order, the property $\lambda x.\neg\exists y(y = x)$ is not identical with $\lambda x.\bot$. Therefore, $\exists x \Diamond \neg\exists y(y = x)$ is a logical consequence, if we substitute $\lambda x.\neg\exists y(y = x)$ for X. Moreover, insofar as Plenitude requires any modal profile is possibly instantiated by some object, Plenitude can somehow match Comprehension in having an abundant conception of reality.