Context and Chisholm's Paradox

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1 Principles

1. ***Possibility Preservation***. What *could be* possible is possible *simpliciter*.
2. ***The In View of Principle*** (IVP). Possiblity *in view of* a world is *possible possibility*.

Existing discussions locate the source of Chisholm's Paradox in *Possibility Preservation*. But the IVP is equally central in generating the puzzle. And the IVP is false.

2 Structure

1. Standardly: a puzzle for *tolerant compositional essentialism* (Chisholm 1973; Chandler 1976)

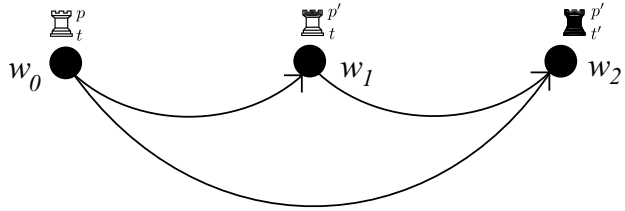

Figure 1. Chisholm's Paradox. In w_0, it is impossible that Castle be composed of $t'+p'$. But Castle is so-composed in w_2, which is possible relative to w_0.

2. Assumptions:

   Tolerance. In w_0, it is possible that Castle is composed of $t + p'$.

   Essentialism. In w_0, it is impossible that Castle is composed of $t' + p'$.

   Generality. In w_1, Castle is possibly composed of t' and p'.

   IVP. In w_0, it is *possibly possible* that Castle is composed of t' and p'.

   Preservation. In w_0, it is *possible* that Castle is composed of t' and p'.

3. We can preserve simple modal metaphysics by rejecting IVP. (And we should, anyways, because IVP is independently false).

3 The simple view

1. Roughly, possible-worlds modal semantics as developed by Carnap (1946, 1947)
2. *Models*: structures $\langle W, D, w_@, V\rangle$; W a set of worlds, D a set of individuals, $w_@$ *actuality*, V (valuation) defined such that $V(\tau) \in D$ and $V(\Gamma^n) : W \to D^n$
3. Denotation at a world (in a model): $\delta^w_{\mathfrak{M}}(\tau) = V(\tau)$
4. Truth at a world in a model:
   (a) $\vDash^w_{\mathfrak{M}} \Gamma^n(\tau^1, \ldots, \tau^n)$ just if $\langle \delta^w_{\mathfrak{M}}(\tau^1), \ldots, \delta^w_{\mathfrak{M}}(\tau^n)\rangle \subseteq V(\Gamma^n)(w)$
   (b) $\vDash^w_{\mathfrak{M}} \tau^j = \tau^k$ just if $\delta^w_{\mathfrak{M}}(\tau^j) = \delta^w_{\mathfrak{M}}(\tau^k)$
   (c) $\vDash^w_{\mathfrak{M}} \Box\varphi$ just if, for all $w' \in W$, $\vDash^{w'}_{\mathfrak{M}} \varphi$
   (d) $\vDash^w_{\mathfrak{M}} \Diamond\varphi$ just if, for some $w' \in W$, $\vDash^{w'}_{\mathfrak{M}} \varphi$

4 Complicated views

1. *Accessibility semantics* (Chandler 1976; Salmon 1984, 1989). Modals as restricted quantifiers over 'local' possibilities, related under an accessibility relation R.

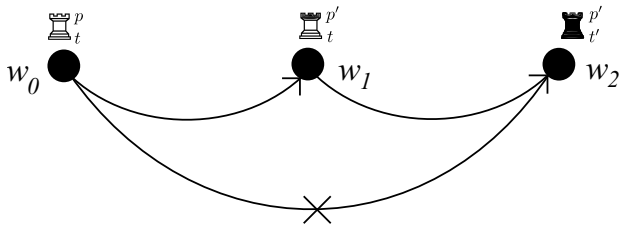

Figure 2. The accessibility solution to Chisholm's Paradox. $\langle w_0, w_1\rangle \in R$ and $\langle w_1, w_2\rangle \in R$, but $\langle w_0, w_2\rangle \notin R$.

2. *Counterparts* (Forbes 1984; Lewis 1986). A counterpart assignment $\mathsf{S} \subseteq D^{W\times D\times W}$ maps an individual d in w to its counterpart d' in w'. Where $\delta^w_{\mathfrak{M}}(\tau) = d \in D$, $\delta^{w'}_{\mathfrak{M}} = \mathsf{S}(w, d, w')$.

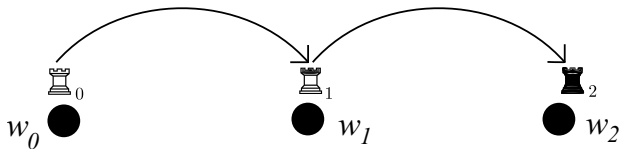

Figure 3. The counterpart-theoretic solution to Chisholm's Paradox. Castle_2 is a counterpart of Castle_1, but Castle_2 is not a counterpart of Castle_0.

3. *Modal continuants* (Yagisawa 2017). $\delta^w_{\mathfrak{M}}(\tau)$ is the *salient modal part* of $V(\tau)$ at w.

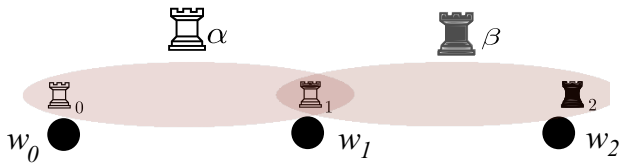

Figure 4. The 'five-dimensionalist' solution to Chisholm's Paradox. In w_0, 'Castle' denotes Castle-α; in w_1, 'Castle' denotes Castle-β. Castle$_1$ at w_1 is a modal part of both Castle-α and Castle-β.

5 Context-relativity

1. Context and index.
   - *Contexts*: roughly, as understood by Kaplan (1977) and Lewis (1980) ('centered' possible worlds).
   - Significantly: contextual-parameters *unshiftable* by sentential operators (including metaphysical modals). Falsity of IVP.
   - Nevertheless, perhaps the *world* of context is 'imaginatively' or 'hypothetically' shiftable (consideration of other possibilities 'as actual').
2. If so, Chisholm's Paradox has a simple solution. Implementations of the idea:
   (a) Inter-world identities relativized to context (Murray and Wilson 2012; Murray 2017).

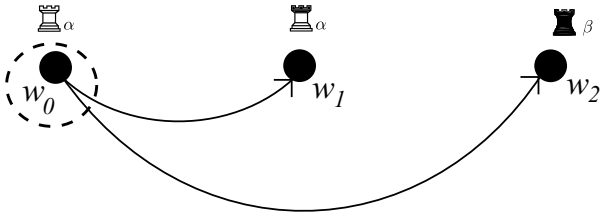

Figure 5. Possibility as from $w_0 = w_c$. As from w_0, Castle is composed of $t + p'$ in w_1. At no world is Castle composed of $t' + p'$.

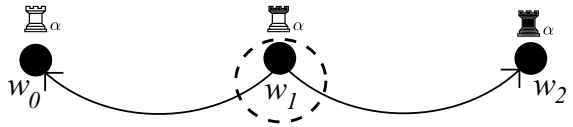

Figure 6. 'Possibility' as from $w_1 = w_c$. As from w_1, Castle is composed of $t + p$ in w_0, and from $t' + p'$ in w_2.

(b) Possibility-space relative to a context.

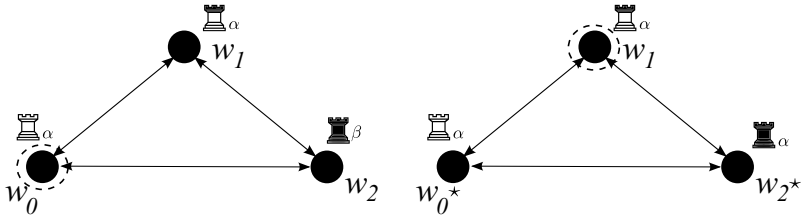

Figure 7. Left: modal space as from $w_0 = w_c$. Right: 'modal space' as from $w_1 = w_c$. Haecceitistic difference between w_2 and $w_2^\star$.

6 Relativist modal semantics

1. *Models*: structures $\langle W, D, V\rangle$; W a set of worlds, D a set of individuals, $w_@$ *actuality*, V (valuation) defined such that $V(\tau) \in D$ and $V(\Gamma^n) : W \times W \to D^n$
2. Denotation relative to a context and a world (in a model): $\delta^{c,w}_{\mathfrak{M}}(\tau) = V(\tau)$
3. Truth at a world, from a context:
   (a) $\vDash^{c,w}_{\mathfrak{M}} \Gamma^n(\tau^1, \ldots, \tau^n)$ just if $\langle \delta^{c,w}_{\mathfrak{M}}(\tau^1), \ldots, \delta^{c,w}_{\mathfrak{M}}(\tau^n)\rangle \subseteq V(\Gamma^n)(c, w)$
   (b) $\vDash^{c,w}_{\mathfrak{M}} \tau^j = \tau^k$ just if $\delta^{c,w}_{\mathfrak{M}}(\tau^j) = \delta^{c,w}_{\mathfrak{M}}(\tau^k)$
   (c) $\vDash^{c,w}_{\mathfrak{M}} \Box\varphi$ just if, for all $w' \in W$, $\vDash^{c,w'}_{\mathfrak{M}} \varphi$
   (d) $\vDash^{c,w}_{\mathfrak{M}} \Diamond\varphi$ just if, for some $w' \in W$, $\vDash^{c,w'}_{\mathfrak{M}} \varphi$

7 IVP and Modal Metaphysics

1. Perhaps, not *merely* a puzzle for compositional essentialists:
   (a) Haecceitism and anti-haecceitism: Adam and Noah (Chisholm 1967)
   (b) Higher-order ontology: propositional dependence and propositional necessitism (Stalnaker 2011; Williamson 2013)
   (c) Laws of nature: moderate nomological necessitarianism (Fine 2002; Hellie et al. forthcoming)
   (d) Laws of metaphysics: Descartes on the eternal truths.
2. IVP lies at the core of each puzzle. Its rejection affords a unified solution.

8 References

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