

# $n$ -Dimensionalism

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## 1 The illusion of contingency

*Kripke: mere epistemic possibility:* Given our evidence before the investigation of water, it could have turned out that water is not  $H_2O$ . Given our present evidence, it could not have. *Chalmers: systematic reinterpretation:* The secondary intension of “water is  $H_2O$ ” is the space of all worlds. But its primary intension is not.

## 2 Its role in the two-dimensionalist argument against physicalism

*The crucial step in Chalmers’ 2D-argument against type B materialism:*

- (1) There is a  $P$ -world considered as actual where  $Q$  is false.
- (2) There is a  $P$ -world where  $[Q]_1$  is false.

Kripke’s use of “watery stuff”: What we know of water before finding out that it is  $H_2O$ . Chalmers’ use of “watery stuff”: What captures the sense in which “water is  $H_2O$ ” ever will be a posteriori. “Water” and “watery stuff” are conceptually equivalent iff the following bridge principle is a priori:

- (3) Water is watery stuff.

## 3 A Dilemma for Chalmers

If primary intensions are to do their work, they have to be - at least in principle - expressible. But: There is no  $X$  such that “ $X$  is  $H_2O$ ” is a posteriori and “ $X$  is water” is a priori.

First horn: If (3) is of the form

- (4)  $\text{Dthat}(\text{watery stuff})$  is watery stuff.

then it is a priori in the same sense in which “Water is  $H_2O$ ” is a priori.

Second horn: If (3) is of the form

- (5)  $\ddagger(\text{watery stuff})$  is watery stuff.

then it is a posteriori in the same sense in which “Water is  $H_2O$ ” is a posteriori.

To convince ourselves that “water is watery stuff” is a priori we have to assume that it is true.

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## 4 The first horn

Consider

(6) Julius invented the zip.

How can we be sure that (6) is true? By “Let “Julius” denote the inventor of the zip, whoever he is”, either we exclude worlds  $w$  such that the inventor of the zip in  $w$  is not called “Julius” in  $w$  or we exclude worlds  $w$  such that the inventor of the zip in  $w$  would not be called “Julius” by us (by stipulating a two-dimensional intension or by ‘keeping the language fixed’). What is a priori, is not (6) but rather

(7) If “Julius” denotes the inventor of the zip, then Julius invented the zip.

## 5 The second horn

“ $\phi(\ddagger(\text{the } \phi))$ ” (“whatever is  $\phi$  is  $\phi$ ”) is a truth of logic. We have  $\text{water} = \ddagger(\text{water})$  and  $\text{watery stuff} = \ddagger(\text{water})$ .

But let us not rigidify “watery stuff”. If we assume that  $\text{XYZ} = \text{XYZ}_1$  and  $\text{ABC} = \text{ABC}_2$ , we still have  $\text{water} = \ddagger(\text{watery stuff})$ . But we loose  $\ddagger(\text{watery stuff}) = \text{watery stuff}$ . And we loose apriority:

(8)  $\mathcal{F}A(\text{Water is watery stuff})$

where  $\mathcal{F}A$  (“fixedly actual”) is defined as  $\mathcal{M} \models_y^x \mathcal{F}A\alpha :\Leftrightarrow \forall y \mathcal{M} \models_y^y \alpha$  and where “ $\models_y^x \alpha$ ” means “ $\alpha$ , as evaluated in  $y$ , is true of  $x$ ”. This becomes:

(9)  $\Box \ddagger(\text{water} = \ddagger(\text{water}))$

(10)  $\Box(\ddagger(\text{water}) = \ddagger \ddagger(\text{water}))$

Another argument: Suppose watery stuff in  $w$  is not  $\text{H}_2\text{O}$ , but  $\text{XYZ}$ , but the inhabitants of  $w$  use “water” to refer to  $\text{H}_2\text{O}$ . They consider a world  $v$  as actual where  $\text{H}_2\text{O}$  is not watery.  $v$  is a world, considered as actual by the inhabitants of  $w$ , where the substance they call “water” is not watery.  $v$  is not, however, a world where what we call “water” is not watery. Whether or not we can conceive of a world as actual where water is not watery depends on whether we can distinguish between us and them and so whether it is  $\text{XYZ}$  or  $\text{H}_2\text{O}$  that is watery. So it is not a priori that “water is watery stuff” is a priori.

## 6 Morals

We cannot but evaluate *what we believe are the primary intensions of our words*.

The “conditional knowledge argument”: “Given that we have the ability to know what our concepts refer to when we know how the actual world turns out, then we have the ability to know what our concepts would refer to *if* the actual world turned out in various ways.” (CM 59-60) But there is a disanalogy between:

(11) If  $p$  is true,  $p$  is necessarily true.

(12) If  $p$  is true,  $p$  is a priori.

## 7 $n$ -Dimensionalism

How to get as many dimensions as you like: Keep track of your commitments. Imagine having other concepts than you have. Do not rigidify automatically. Have a functor  $[\dots]_1$  mapping expressions to primary intensions in the object language. Apply the “conceivability implies possibility” thesis recursively. Let the monsters in. Avoid strong necessities. Generalize the dagger. Think about brains in a vat. Distinguish different grades of keeping the language fixed.