Dissonant Qualia - Jackson Kernion

0. Background

Central Question: Are phenomenal concepts *functional* concepts?

Immodest Conceptual Functionalism: Every phenomenal property P can be given a functional analysis such that: some functional property F entails P, and vice versa. You can always read off phenomenal facts from functional facts, and vice versa.

Conceptual dualism: The phenomenal is conceptually independent of the functional. You can't read off phenomenal facts from functional facts, and vice versa.

Modest Conceptual Functionalism (my view): phenomenal concepts aren't *merely* functional concepts, but they still have functional content. You can't read off phenomenal facts from functional facts, but you *can* read off functional facts from phenomenal facts.

I see two ways to look for phenomenal-to-functional entailments:

- *Route #1*, via the structure of phenomenal subjects: Look for an entailment from "x is phenomenally conscious for S" to "x functional property F".
- *Route #2*, via the quality space structure of phenomenal kinds: Look for entailments from "x is a K-type experience" to "x has functional property F".

This talk develops route #2...

1. Inverted Qualia

Question: Is it conceivable to vary phenomenal character without a corresponding variation in functional structure? If so, for which kinds of variations in phenomenal character?

Basic Case: Red/Green Inversion

Can you conceive of a subject that duplicates your functional structure, but with red/green experiences flipped?

Weakest Result: There exists at least one set of functional facts that are compatible with different, conflicting phenomenal facts.

Generalizations...

- *...to other dimensions of color experience:* That it was red/green inversion wasn't particularly important. Rather, what mattered is that swapping red and green was a *structure-preserving* swap. And there are other kind of structure-preserving swaps available for vision, involving saturation and brightness.
- *...to other phenomenal kinds:* That it was hue/saturation/brightness inversion wasn't important. What was important was that there were dimensions of the quality space structure for color that allowed for structure preserving transformations. And this possibility exists for other phenomenal kinds. (e.g. pitch inversion, octave shifting)

Strongest result: structure-preserving phenomenal quality transformations will always be consistent with the same underlying functional facts.

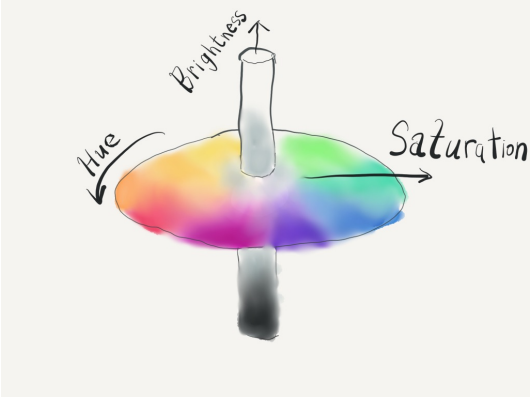

Figure 1: Color Quality Space

Lessons

1. *Rules out Immodest Conceptual Functionalism.* Shows that not all phenomenal variations are conceptually linked to functional variations.
2. *Leaves untouched Modest Conceptual Functionalism.* Does not show that phenomenal variation is conceptually independent of functional structure. Indeed, that these cases are specifically designed to exploit symmetries in phenomenal quality structure suggests that structure-distorting transformations are, plausibly, inconceivable. . .

2. Quality Spaces

The structure of a quality space can be specified with:

- Dimensions of variation (e.g. hue/saturation/brightness)
- Structure of potential variation along each dimension. (e.g. continuous vs. discrete, fineness of grain, possibility for null values, etc)

Analogy to data structures: In CS/software engineering, data structures are pre-built containers for variables, providing slots for storing particular kinds of information, and packaging them all together into a single portable unit.

3. Dissonant qualia

Question: Is it conceivable to vary functional structure without varying phenomenal character? If so, for which kinds of variations in functional structure?

Cases involving visual experience

My strategy: consider increasingly glaring mismatches between phenomenal structure and functional structure.

Say you're having the visual experience of watching a rocket launch. You see a billowing ploom of smoke; the stark white fuselage pops out against the deep blue summer sky; etc...

Keeping this phenomenology fixed, consider the following functional transformations:

1. Swap out your visual cortex (and any corresponding visual states/information sent to central cognition) with the visual cortex of rat who's watching the same rocket launch.
2. Same as (1), except the activity in the substitute rat visual cortex corresponds to activity normally be produced when a rat was is scurrying along a sewer pipe.
3. Swap your vision hardware with your audition hardware. (Could you experience the output of auditory processing *as* the visual experience of the rocket launch?)
4. Swap out your visual cortex for the sonar-sensing mechanisms of a bat.
5. Swap out all your physical hardware for the physical hardware of an amoeba.
6. Swap out all you physical hardware for the physical hardware of a single particle, suspended in an otherwise empty universe.

Remember: you were supposed to try to keep your visual experience of the rocket launch, in all its richness, fixed across all these cases.

If any of these cases are *in*conceivable, we've discovered an a priori functional constraint on visual experience.

Theoretical Upshot

The shape of this sort of phenomenal-to-functional entailment:

> For all x, if x is a K-experience, then there is some functional property F such that it is a priori necessary that x is F.

The tension in these cases stems from the unpalatable mismatch between phenomenological structure and functional structure. Behind this is a *Structural Isomorphism Intuition:* the quality space structure of K-experiences must be mirrored in their functional structure.

Potential sources of motivation:

1. *Grounding structure:* phenomenal differences are *real* differences. And there can be no possibility for a real difference, without the possibility of that difference being written into the structure of the world.
2. *Content syntax:* K-experiences necessarily carry X-type content, and to carry X-type content, the underlying content-carrying vehicles must satisfy certain syntax/structural conditions. (c.f. Formal languages can be used to represent certain concepts only if their syntax allows for enough/the right kind of expressivity.)
3. *Causal Powers:* K-type experience necessarily have certain causal powers (e.g. pain necessarily has the power to cause avoidance behavior, etc.), and you can't have such causal powers without meeting certain functional constraints.

Room for Disagreement

Modest conceptual functionalists who endorse these sorts of phenomenal-to-functional entailments can still disagree over:

- Which phenomenal kinds have such a priori functional constraints. (e.g. "Visual experiences have a distinctive quality space structure that needs to be matched by the

underlying functional structure, but itches don't have that kind of distinctive quality space structure. . . ")
- The precise characterization of the functional constraints in question, for or a given phenomenal type.

4. Objections + Further Questions

Fuzzy Phenomenal Kinds

"If you decreased the 'resolution' of someone's vision, we'd still count them as having visual experiences. And red/green colorblind people, arguably, have a different hue variability structure–but they too should count as having visual experiences. But if these structural differences are allowed within the same phenomenal kind of 'visual experience', why think you can reach clear verdicts about what structure is/isn't required a priori?"

Reply 1: Differences in 'resolution' *do* show up in experience. And the thought is just that: degrading resolution is incompatible with keep the non-degraded phenomenal qualities fixed.

Reply 2: Even so, we need not have sharp boundaries to yield meaningful functional constraints. ('Degraded' visual experience can still be understood as sharing quite a bit of structural similarity with normies, which allows us to class them together.)

Insofar as we have any phenomenal concept at all, we have to have some grip on the basic structural constraints that those experience-types have to satisfy.

A Role for Cognitive Science?

"Is it really an a priori finding that color experience has the quality space properties you're talking about? Would you have been able to figure that out without vision scientists? There are plenty of examples from cognitive science where we came to seriously revise the folk conception of the structure/function of a conscious content type. Put differently, your argument would trivialize lots of meaningful, active disputes in cognitive science, turning them into issues for the armchair reflection."

Yes, I want to trivialize some of cog sci. but the minimal constraints I'm after leave a lot left to do. . .

Shared variability structure?

"Could there be two different phenomenal types that share the same variability structure?"

In short: no. Because of Chalmers' Dancing Qualia.