

Australian Psychosis Conference
Is psychosis a distinct global state of consciousness?

Slide One:

Imagine you're the second coming and your thoughts are being heard. The future of the planet depends on your thoughts remaining pure. If your pride wells up the world will be cast into Armageddon. You keep thinking "It's me!" but when that happens you hear a crowd booing in your head. Your thoughts are being heard, and you must remain humble.

Sounds in the environment are responses to your thoughts. If you have a 'bad' thought, you can hear a siren in the distance. Sometimes there is the sound of car horns beeping – this is a positive sign. It means that the 'elders' – the beings that are guiding you – are sending you a signal and are telling you they are with you – protecting you.

You know that you are the second coming. You know that the fate of humanity rests on your shoulders. It depends on you thinking small. Staying humble. It depends on you successfully completing this initiation test. Reaching the end – and finding the souls who are guiding you.

This describes my second psychotic episode. My work is motivated by a desire to understand this episode, and two others like it, that I had in my twenties.

I try to understand psychosis by looking at the ways that consciousness can vary. I also listen to first-person experiences of psychosis to see how our understanding of consciousness can shed light on these experiences.

Slide Two: The problem.

- Psychosis is a symptom of illnesses such as schizophrenia and bipolar disorder.
- There's no consensus about biological markers that account for these illnesses (Stanghellini et al., 2019).
- There's no 'asymptomatic' or 'presymptomatic' detection of these illnesses (Wilkinson, 2023).
- Instead, psychiatrists (using manuals such as the DSM-5) rely on lists of symptoms to diagnose people.
- This is why novel approaches are required to better understand these disorders.
- This is important because better treatment outcomes are needed.

Slide Three: Outline.

I'll begin by discussing what natural kinds are and why they are relevant to psychiatry. Then I'll discuss my research.

Slide Four: Natural kinds.

The term *natural kinds* refer to the categories used by science when it classifies objects. An example of a natural kind is copper. Knowing that one instance of copper conducts electricity, lets us infer that all instances of copper will do this. Natural kinds are important because they help us make inductive inferences and understand scientific laws and explanations (Zdenka).

Slide Five: Natural kinds and psychiatry.

Natural kinds are relevant for psychiatry. The DSM is a system of categorisation that aims to discover natural kinds of mental disorders (Cooper, 2013).

It's important to discover whether mental disorders are natural kinds because if a disorder is a natural kind, then we can generalise from one case to another. And this means that treatment that works for one case will work for other cases (Cooper, 2013).

Slide Six: Homeostatic Property Clusters (HPC)

There are different ways of understanding natural kinds. The dominant view in biology, and a view that can potentially account of psychiatric disorders, is known as 'homeostatic property clusters' (HPC). This was developed by Richard Boyd (1991) who was an American philosopher.

Boyd suggests that in nature we often find clusters of properties which are due to homeostasis, and these are caused by underlying causal mechanisms. When we call something a natural kind, we pick out these clusters. But members of a kind can vary, so they don't all have to have the same observable properties. And there can be multiple causal mechanisms involved (Werkhoven, 2021).

Boyd suggests that the reason we can make inferences with psychiatric kinds is because the members of a kind share properties that cluster together in law-like ways (Tsou, 2022).

Slide Seven: Essentialism

There are other ways of understanding natural kinds, for example, essentialism. This is where the members of a kind share a common essence. This works well in chemistry, for example, all instances of water are essentially H₂O. And in terms of diseases, this approach applies to Mendelian disorders which are caused by the mutation of a single gene.

In psychiatry, if you seek one biomarker that causes all cases of a diagnostic category, this would be following an essentialist model.

However, it's possible that the cluster view is a better way to understand psychiatric kinds.

Slide Eight: My research.

I try to understand psychosis by trying to understand how different dimensions of consciousness vary in distinct episodes of psychosis and to see how these dimensions cluster together.

Slide Nine: Research question.

One of my research questions is "Is psychosis a distinct global state of consciousness?" To understand this, I need to define a few terms.

Slide Ten: Consciousness.

When I refer to *consciousness*, I'm referring to what is known as *phenomenal consciousness*, or our subjective first-person experience. This consists of things like perceptions, sensations, and emotions.

Consciousness varies along multiple *dimensions*. These include: the level of *arousal*; how the *contents* of consciousness are experienced, such as their quality; the *structure* of consciousness - this includes how we experience attention, time, unity, and the self; and finally, various *functions* of consciousness (this refers to how accessible the contents are to systems in the brain such as working memory and decision making) (Bayne & Hohwy, 2016).

When a creature is conscious, they must be conscious in a particular way. These distinct ways are known as *global states*. Examples include:

- The normal waking state
- REM dreaming
- States of being under light anaesthetic
- And states caused by using psychedelics.

A global state is a natural grouping of dimensions. Asking if psychosis is a global state is like asking if psychosis is a natural kind. For example, if distinct instances of psychosis share a cluster of properties, this suggests that psychosis is a natural kind along the lines of Boyd's understanding. Establishing that psychosis is a distinct global state would allow us to make inductive inferences from one instance of psychosis to another. It would also suggest that treatment that works in one case would work in others.

Slide Eleven: Hypothesis.

The hypothesis I'm working with is: *If the quantitative and qualitative ratings regarding the various dimensions of consciousness remain constant during all cases of psychosis (that meet the DSM-5 criteria for psychosis), then psychosis is a distinct global state (or natural kind).*

Slide Twelve: Method.

I'm conducting an online survey where I'm collecting quantitative data regarding these various dimensions of consciousness. I haven't finished collecting this data yet.

I have also conducted 16 one-hour interviews with participants who have experienced psychosis and asked them to describe their experiences. I haven't finished analysing this data.

However, I asked participants if reality seemed different during psychosis because perception and sensation seemed heightened.

Slide Thirteen: Themes

Participants responded differently to this question. Importantly, they also highlighted other aspects of experience that were heightened during psychosis, such as manic thoughts, heightened mood, extreme pressure, disconnection, and heightened motivation.

This is a list of themes mentioned by the first eight participants. Of the first eight participants, only three mentioned experiencing heightened perceptions and sensations, while five mentioned heightened mood.

Slides Fourteen to Twenty-one: Radar Graphs

I have put these themes on the outside of this radar graph. And given a participant a score of three if they didn't mention the theme and a score of five if they did. The shapes on the radar graph illustrates how distinct these experiences can seem.

Slide Twenty-two: Discussion.

These findings are based on qualitative reports, and I can only rate whether a participant did or did not mention a specific experience. Additionally, I didn't ask all the participants about each of the themes that emerged so, while these experiences seem quite diverse, they could be more similar than my results suggest.

However, in terms of my hypothesis these findings suggest that consciousness varies during psychosis and doesn't remain constant across cases. This would suggest that psychosis is not one distinct global state or natural kind.

Slide Twenty-three: Conclusion.

These results are preliminary and are not meant to be conclusive. My goal in this talk is to motivate the claim that this is a fertile approach to understanding psychosis and is significant because it may suggest new approaches to creating taxonomies of mental illness and suggest new directions to look for biomarkers. This could have implications for treatment.

Slide Twenty-four: Thank you.

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