Notes on Holes

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These notes borrow heavily from Casati and Varzi (2009).

1 Introducing Holes

1.1 Terminology and Taxonomy

A hole is in a *host* and filled by a *guest*. There are at least three kinds of holes:

Cavities no entrance from outside
Hollows one entrance from outside
Tunnels two or more entrances from outside

Examples:

- the cream-filled hole inside a Twinkie
- the hole in a bead
- the hole inside a tennis ball
- the holes in a Wiffle Ball

1.2 Some Apparent Features of Holes

- holes are located in space and time
- holes can move
- holes are always in something else and cannot exist in isolation
- holes can be filled without being destroyed

2 An Argument for Dualism

1. There are holes.
2. Holes are immaterial objects.
3. So, there are immaterial objects.

3 Arguments for the Existence of Holes

3.1 The Swiss Cheese Argument

1. There is swiss cheese.
2. Swiss cheese has holes.
3. There are holes.

3.2 The Argument from Perception

1. People see holes.
2. You can't see something that doesn't exist.
3. So, holes exist.

3.3 The Argument from Causation

> *Yea! My bucket's got a hole in it,*
> *Yea! My bucket's got a hole in it,*
> *Yea! My bucket's got a hole in it,*
> *I can't buy no beer.*

4 Views About Holes

4.1 Realist Views

Realism There are holes.
Naive Realism Holes are sui generis spatiotemporally-located immaterial movable fillable objects.
Holes as Regions of Spacetime There are holes. Holes are regions of spacetime.
Holes as Material Objects There are holes. Holes are material objects.
Holes as Extraordinary Material Objects Holes are made of matter that fills space differently than ordinary matter.
Holes as Their Guests A hole is identical to its guest.
Holes as Parts of Their Hosts A hole is identical to a part of its host, e.g., the hole-surround.

4.2 Anti-Realist Views

Anti-Realism There are no holes.

But what about our apparent talk about holes? We could just reject it as confused. Or we could argue that hole-talk can be replaced by talk that does not commit us to holes:

The Holy Paraphrase 'There is a hole in *x*' is a loose way of saying '*x* is holy'. '*x* is holy' describes the *shape* of *x*, not its relation to some other entity.

Further Reading

Casati, Roberto, and Achille Varzi. 2009. "Holes." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Spring 2009. `http://plato.stanford.edu/archives/spr2009/entries/holes/`.

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