No heartbreak at Hilbert's Hotel: a reply to Landon Hedrick

ANDREW LOKE

GETS Theological Seminary, 4424 Santa Anita Ave El Monte, CA 91731, USA
e-mail: qaddeen@yahoo.com

Abstract: In his article, 'Heartbreak at Hilbert's Hotel', Landon Hedrick argues that the 'Hilbert's Hotel Argument' (HHA) proposed by William Lane Craig is ineffective against proponents of presentism, who include Craig himself. I show that there is no heartbreak if the Hotel and persons are constructed and generated in a certain way: there exists a 'hotel room builder' and a 'customer generator', they have been building hotel rooms and generating customers at regular time intervals as long as time exists, and the hotel rooms and customers have continued existing after they have been built and generated respectively.

In his article, 'Heartbreak at Hilbert's Hotel', Landon Hedrick argues that the 'Hilbert's Hotel Argument' (HHA) is ineffective against proponents of presentism (Hedrick (2013)). Hedrick explains that HHA is one of the philosophical arguments William Lane Craig uses to establish that the universe began to exist, which is a premise of the *Kalam* cosmological argument for the existence of God. According to Hedrick, HHA is stated by Craig as follows:

(A1)   An actually infinite number of things cannot exist.
(A2)   A beginningless series of events in time entails an actually infinite number of things.
(A3)   Therefore, a beginningless series of events in time cannot exist.

Hedrick goes on to discuss HHA, explaining, among other things, Craig's own presentist views and then argues

> One could agree with Craig and Sinclair that, even on a presentist ontology, if the universe didn't begin to exist, then there have been an infinite number of events. But this does nothing to ease the worry… Even though, in such a scenario, the number of events that have occurred is actually infinite, the fact remains that on a presentist ontology none of those events exist. Recall that the entire argument was predicated on the notion that an actually infinite number of things cannot exist. (*ibid.*, 11)

Hedrick considers and rejects possible replies on Craig's behalf. One of the possible replies is a rough sketch of how Craig could reformulate HHA, as follows:

> (D1)   There cannot be a world in which an actually infinite number of things have been actualized.
>
> (D2)   If the actual world is one in which the universe is past-eternal, then there is a world in which an actually infinite number of things have been actualized.
>
> (D2)   Therefore, the actual world cannot be one in which the universe is past-eternal. (*ibid.*, 16–17)

After stating this argument, Hedrick writes: 'While this argument might be worth investigating, I'm not convinced that Hilbert's Hotel applies to the relevant premise (D1). I'll leave it to Craig to prove otherwise' (*ibid.*).

In this reply to Hedrick, I shall show that it is very easy to modify HHA such that it applies to the relevant premise (D1). I shall then address a number of other relevant concerns Hedrick raises in the article.

Modified HHA

This is how a modified HHA would go. Suppose this is how Hilbert's Hotel is constructed: there exists a 'hotel room builder' who has been building hotel rooms at regular time intervals as long as time exists. Suppose there also exists a 'customer generator' which has been generating customers who checked in the hotel at regular time intervals as long as time exists. Suppose that the hotel rooms and the customers continue existing after they have been built and generated respectively. Now if the actual world is one in which the universe is past-eternal, then there would have been an actual infinite number of time intervals, and an actual infinite number of hotel rooms and customers occupying the rooms. In other words, if the actual world were one in which the universe is past-eternal, then there would be a world in which an actually infinite number of things have been actualized (premise D2). The absurd situation which Craig describes would then happen if, for example,

> A new customer comes to the hotel asking for a place to stay when every room is already occupied. In such a hotel, we merely need to shift everybody down a room (so the person in room 1 moves to room 2, and the person in room 2 moves to room 3, etc.). Now room 1 is available for the new customer. This means that, even though every room in the hotel is full, new guests can always be accommodated … This, Craig says, is absurd. (*ibid.*, 3)

In the context of the modified HHA, this absurdity would apply to the premise that 'there cannot be a world in which an actually infinite number of things have been actualized' (D1).

In his article, Hedrick discusses the objection that HHA is not analogous to an actual infinite number of past intervals of time for the following three reasons:

(1) 'We're talking about different categories altogether when we use examples about hotel rooms and other physical objects and then apply that reasoning to intervals of time' (*ibid.*, 7).
(2) Unlike customers in hotel rooms, past events cannot be shuffled around (*ibid.*, 11).
(3) Unlike customers and hotels, past events do not presently exist on the presentist ontology.

My modified HHA is not vulnerable to this objection because it is obvious that in the modified scenario, if the actual world is one in which the universe is past-eternal, the absurdity will persist, but if the actual world is one in which the universe is not past-eternal, then no actual infinite number of hotel rooms and customers would have been built and generated and there would be no absurdity. Therefore, the absurdity can be shown to be due to a past-eternal universe.

With respect to Hedrick's worry that on the traditional HHA there would be a parallel argument that shows that the universe cannot be future-eternal from now (*ibid.*, 12), the modified HHA is free from this worry. For on the presentist ontology, events in the future have not yet been actualized, whereas events in the past have already happened and been actualized (Craig (2010), cf. Morriston (2010)). Thus, a universe that is past-eternal would entail the actualization of a hotel with an actual infinite number of rooms and customers, with the resultant absurdity. However, the number of rooms and customers built and generated in a universe that is moving from now into the not yet eternal future is always finite (i.e. the number would be increasing towards infinity as a limit but never gets there), hence there is no resultant absurdity.

Finally, a brief comment on Hedrick's objection concerning the relationship between HHA and (1) the view that there is an infinite number of abstract objects – e.g. numbers, propositions, properties, sets, possible worlds, etc.; (2) David Lewis's modal realism view of possible worlds, where there is an infinite number of concrete worlds; (3) the view that space is continuous, made up of an infinite number of points. With regard to (3), Hedrick writes:

> Craig considers this possibility, but he imagines that his opponent must be trying to use this as a clear counterexample to (A1). His response is to point out that the notion that space is continuous is unproven (Craig & Sinclair (2009), 112). Seemingly, Craig thinks that it's up to his opponent to prove it. But again, Craig's premise seems to entail that space is not like this, which is also an unproven claim. True, if one could prove that continuous space is possible, then we'd have a counterexample to (A1). But since Craig is claiming that it's not possible, it's reasonable to expect him to prove it. (Hedrick (2013), 4–5)

Hedrick seems to have misunderstood the burden of proof. In the context of Craig's opponent trying to use (3) or perhaps also (1) or (2) as a clear

counterexample to (A1) which Craig attempts to justify with HHA, the burden of proof is on the opponent to justify (3), (1) or (2) as a genuine counterexample. In this context, Craig does not bear the burden of proof to show that all of these views are not possible; he only needs to show that there is no adequate reason to think that any of these views is metaphysically possible and relevant, hence no adequate reason to regard any of this as a genuine counterexample to his claim, which he justifies with HHA.

In conclusion, with respect to the arguments offered in Hedrick's article 'Heartbreak at Hilbert's Hotel', there is no heartbreak if the Hotel and persons are constructed and generated in the way that I suggest.

References

CRAIG, WILLIAM LANE (2010) 'Taking tense seriously in differentiating past and future: a response to Wes Morriston', *Faith and Philosophy*, **27**, 451–456.

CRAIG, WILLIAM LANE & JAMES D. SINCLAIR (2009) 'The kalam cosmological argument', in William Lane Craig & J. P. Moreland (eds) *The Blackwell Companion to Natural Theology* (Oxford: Wiley-Blackwell), 101–201.

HEDRICK, LANDON (2013) 'Heartbreak at Hilbert's Hotel', *Religious Studies*, published online doi:10.1017/S0034412513000140.

MORRISTON, WES (2010) 'Beginningless past, endless future, and the actual infinite', *Faith and Philosophy*, **27**, 439–450.