Is consciousness logically supervenient on the physical?

In the Oxford Living Dictionary defines consciousness as "The state of being aware of and responsive to one's surroundings and "The fact of awareness by the mind of itself and the world." However, from a psychological point of view, consciousness is mysterious. The mystery of consciousness set a hard barrier to exploring the universe and science. It is believed that consciousness comes from the brain, but how does consciousness generate? Does it generate from the grey matter of our brain? Why does consciousness exits? The theory is not clear. In this books, ‘The Conscious Mind David Chalmers’ and ‘Facing Up to the Problem of Consciousness’, Dr. David Chalmers defined the consciousness from the supervenience point of view. He believes almost everything can be given an original explanation but consciousness.

The template for the definition of supervenience is the following: B-properties supervene on A-properties if no two possible situations are identical with respect to their A-properties while differing in their B-properties. For instance, biological properties supervene on physical properties insofar as any two possible situations that are physically identical are biologically identical.

The dualism of the consciousness is the core of Chalmers’ position, which also determines the relationship between consciousness and the physical. The position of Chalmers is different from that of Descartes. Because modern science tell us the real world is causal closure. Every physical event has a reason in science. Take the ‘water’ for example. If the actual world had XYZ in the oceans and lakes, the ‘water’ would be referred to XYZ. But it turned out to have H2O in the oceans and lakes, then the ‘water’ would refer to H2O instead of XYZ. The primary intention of water is ‘watery stuff’. The second intention refer to consciousness. In a world with H2O in the oceans and lakes, water is H2O.

*Consciousness is not logically supervenient on the physical*. The book first explains why consciousness is not globally supervenient on the physical. Local supervenience means B-properties supervene locally on A-properties if the A-properties of an individual determines the B-properties of that individual. And globally supervenience means B-properties supervene globally on A-properties, by contrast, if the A-facts about the entire world determine the B-facts.

In principle, Chalmers discussed in the book that it is needed to show that consciousness does not supervene globally—that is, that all the microphysical facts in the world do not have the facts about consciousness in detail. In practice, it is easier to run the argument locally, arguing that in an individual, micro-physical facts do not entail the facts about consciousness. When it comes to consciousness, local and global supervenience plausibly stand and fall together, so it does not matter much which way we run the argument: if consciousness supervenes at all, it almost certainly supervenes locally. If this is disputed, however, all the arguments can be run at the global level with straightforward alterations.