## $7^{\text {th }}$ application of the Calculus of Qualia 2152023

in progress

It could be argued that
(1) red is not green
is contingently true, but
(2) $\square$ is not
is necessarily true.

## Notes

The contingency of (1) could result from, for example, epistemic mistakes, behavioral equivalences given materialism and illusionism, spectrum inversion, zombies, delusions and living in black and white rooms. (I'm not claiming that (1) is contingent, only that it could be argued to be contingent.)

At first it seems (2) could be contingent. A sufficiently color blind person would perceive the two terms in (2) both as a black squares, so (2) would be false. But if that person were to apprehend (2) as a human with normal color vision does, then the colorblind person would also affirm its truth. If a bat apprehended (2) how a human with normal color vision does, then the bat would affirm its truth too. In the calculus of qualia a statement similar to (2) except with two black squares would in fact be a different statement.

In fact (2) would seem to be a tautology. Understanding (2) ipso facto affirms its truth.
But couldn't I misunderstand (2) as a whole? In that case you would be wrong about a proposition about (2) and so you would not be in case (2) itself.

Whereas (1) can be understood only conceptually (using references to) (2) is an experience (3 or 4 experiences?).

The invariants of (1) and (2) are different. Going from English to German changes the terms of (1) but not (2), whereas going to a sufficiently colorblind appreciation changes the terms of (2) but not (1).

The name of the color red is the English word "red" and these are not equal. But in the calculus of qualia the name of $\square$ is " $\quad$ " and these are equal.

One consequence of this is that the method Godel used to prove his incompleteness theorems will not work in the calculus of qualia. The Godel sentence $G$ refers, but $\square$ does not refer;
"First Incompleteness Theorem: "Any consistent formal system F within which a certain amount of elementary arithmetic can be carried out is incomplete; i.e., there are statements of the language of F which can neither be proved nor disproved in F." (Raatikainen 2020)"
because of the construction of a sentence $G$ that asserts its own unprovability. But in CQ, $G$ refers, but does not refer.

## Section 2

(3) "grass has the color green" is True if grass has the color green
(4) "grass has the color " is True if grass has the color

Whatever the status of (3) may be, (4) is true in all possible worlds that are accessible to the reader.

