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The Measurement Problem, "Big" and "Small"

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Bub's Bananaworld can be seen as the sequel to Bub and Pitowsky's "Two dogmas about quantum mechanics." Bub and Pitowsky introduced the notion of a "truthmaker" to characterize the difference between phase space in classical mechanics and Hilbert space in quantum mechanics. Points in phase space are truthmakers in the sense that they fix the values of all observables, represented by functions on phase space. State vectors in Hilbert space fail to do so in two ways. First, the state vector does not tell us which observables, represented by operators in Hilbert space, will be assigned definite values. Second, even when these observables are specified, the state vector only gives us probabilities for finding particular values. This then raises two questions. First, how is one (set of) observable(s) rather than another selected to be assigned definite values? Second, why does an observable, once selected, take on one value rather than another? These two questions correspond to what Bub and Pitowsky, with irony, call the "small" and the "big" measurement problem, respectively. They claim that abandoning the two dogmas they identify in their paper solves both. I will argue that they are right about the "big" but wrong about the "small" measurement problem.