Quantum mechanics and the puzzle of subjectivity

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Despite their huge success, the natural sciences have a problem: they don't seem to leave much room for the human subject. Edmund Husserl thought this was reason enough to declare science was in 'crisis'! But an influential, though widely misunderstood, interpretation of quantum mechanics by physicists Fritz London and Edmund Bauer, places the subject at the heart of our most successful mathematical physics theory yet, writes Steven French.

Husserl's *The Crisis of European Sciences and Transcendental Phenomenology* is widely regarded as both his most accessible and most influential work, written under the shadow of fascist ideology looming over Europe. Based on lectures given in 1935 at Charles University and the German University in Prague, Husserl opens

by addressing the ‘Crisis? What crisis?’ question that many in the audience must have been asking themselves:

‘I expect that at this place, dedicated as it is to the sciences, the very title of these lectures … will incite controversy.’

SUGGESTED READING Quantum mechanics makes no sense without the mind By Shan Gao

Husserl was alluding to the fact that the German University had been the academic home of such notable scientists as Ernst Mach and Albert Einstein and that science was then enjoying a period of obvious and wide-ranging success. How, then, could he talk of the sciences undergoing a ‘crisis’? Husserl makes it clear that he is not referring to the ‘victorious struggle against the ideal of classical physics’ as represented by the rise of the theory of relativity and quantum physics. Neither is he concerned about the successive rise and fall of one theory after another that historians of science have long pointed to in the face of

philosophers' insistence that science is progressing steadily towards the Truth:

'Physics, whether represented by a Newton, or a Planck or an Einstein, or whomever else in the future, was always and remains exact science.'