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| Quantum Theory |
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| Developed in the early twentieth century, quantum theory is a branch of theoretical physics that concerns the unpredictable quality of particles at the quantum, or subatomic, level. In 1900, Max Planck (1859-1947) inaugurated inquiry into quantum mechanics when he challenged the classical theory that light behaves as a wave, proposing instead that it is emitted in quanta, or discrete units. This ground-breaking theory was more clearly articulated by 1927, in Niels Bohr’s (1885-1962) ‘Principle of Complementarity’ and Werner Heisenberg’s (1901-1976) ‘Uncertainty Principle’. Heisenberg proposed that all physical phenomena that can be observed are subject to a degree of indeterminacy and suggested that the act of scientific observation of a quantum system would change that system. These new proposals of quantum theory unseated the authority of classical deterministic physics and challenged the perceived objectivity of science. Attracted by quantum theory’s revolutionary ideas, various modernist critics adapted its principles of uncertainty and indeterminacy to studies in the humanities. For instance, I. A. Richards (1893-1970) and William Empson (1906-1984) employed Bohr’s concepts in their work on irony, ambiguity and paradox. Heisenberg suggested, however, that both modern artistic innovations and quantum theory were the products of ‘profound transformations in the fundamentals of our existence’ (95). |
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| Further reading:  (Kern)  (Heisenberg)  (Strehle)  (Waugh) |