

## 9. VALUES.

This book began with the observation that the claims of science about what you are and how you are connected to 'the other' can affect your values. Our focus so far has been upon the advances in science. They are important. But we can return now to the question of the impact of those advances upon values.

I have already mentioned the matter of personal responsibility for one's acts. This concept has been greatly corroded by the notion that we are simply the product of our genes and our environment, and hence are not responsible for anything we do: that our actions are just automatic consequences of blind mechanical processes of one kind or another. The notion of conscious control is being increasingly dismissed as some weird illusion, disproved by "modern science," which supposedly reveals us to be mechanical robots deluded by the absurd belief that such insubstantial and immaterial phantasms as our thoughts could affect the implacable march of the atoms.

There can be no doubt that this notion of the ineffectualness of our minds to control our actions has gained great standing and credibility in our legal, social, intellectual, institutional, and philosophical systems, and that this idea has drawn immense support from the authority of science. But the picture of the human agent that flows most naturally from quantum theory, in its most rational form that tries to go beyond mere pragmatic rules, namely the formulation by von Neumann, is very different, and in good agreement with both intuition and the empirical facts. The corrected physics provides an actual mechanism whereby mental effort can control physical actions, while leaving open, so far, exactly what the origin of this feeling of effort is. This mental effort controls an effect that is capable in principle of overriding the strongest forces arising from the mechanical side of nature. This development in physics undercuts the verdict of nineteenth century science, and rescues intuition and moral values based on that intuition.

A second effect pertains to non-locality. I mentioned in connection with Process I the possibility of including within physics the further process, Process III. In order to focus on Process I, I left open the issue of whether the "collapse" Process III, really occurs as an objective physical process, or is merely some sort of subjective illusion. Having deflated the claim that the causal efficacy of our thoughts is an illusion, we are led naturally to question also the claim that Process III is a mere subjective illusion. But if Process III is accepted as an objectively real physical process then one is led inexorably to the conclusion that real Process-I events are related by causal connections that are instantaneous in some frame of reference. These causal connections relate the Process-I events that create you as a thinking entity to ontologically similar events all over the universe. This gives you an image of yourself that is far different from the conception of yourself as a pile of dirt, or a vehicle constructed by mindless genes for a purpose they do not know. That latter picture generates low self esteem, compared to the idea of yourself as a creative mental force enacting high-level judgments, and charged with giving form to the universe, in coordination with a vast array of similar creative centers with which you are instantaneously but non-physically connected.

Level of self-esteem is a primary determinant of quality of endeavor, and the replacement of the classical image of yourself by its quantum update cannot have no effect on the value you place on yourself and your efforts on behalf of the reality of which you are such an integrally connected and significant part.