

Deutsch has made explicit, therefore, the need for a cross-level interaction, by stating what might be called the **i-1 Theorem**. *This states that any restructuring has to be built around the largest well-functioning subsystems—that is, at the i-1 level—by fitting them into the larger integrative needs of the i+1 supersystem within which the conflict has to be resolved.*

At first, this idea seems rather surprising, but it is hard to think of any other way in which the existing large and well-functioning components of the organization could be kept operating through the change, or could play their full and needed role in the reorganization and the new structure. And indeed, this idea fits out common observation that, when a division of a business organization is in trouble, the secretaries and junior executives (**level i-1**) begin to “go over the boss’s head” (**level i**) to the central office (**level i+1**) because the actions of their own boss are part of the trouble. Conversely, the last complaint that their boss makes before he resigns is that the central office (**i+1**) is “not backing him up” (**i**) and is “undercutting his authority” (**i-1**).

This need for **i-1-i+1** interaction has many important implications. In the world system, for example, our efforts for a more stable structure may not be effective if they are directed either at armaments security, or at peace treaties between existing national governments at the **i** level of instability. What is needed, rather, is to help the subsystems at the **i-1** level—such as tourism, or aviation, or non-government organizations of science or communications, or businesses like IBM and Coca Cola—to build elements of world order at the **i+1** level, which will begin to reach more and more extensively across national boundaries. Note, for example, the effectiveness of the airline pilots’ (**i-1**) international organization (**i+1**) in persuading governments (**i**) to return hijacked planes. (It might even be claimed that world-wide armies have some **i+1** integrative effect of this kind, to the extent that their activities are non-combatant and constructive, as in building schools, hospitals, roads, and dams, and in stimulating world radio and educational networks and a world exchange of peoples.)

There are also interesting applications of Deutsch’s theorem in the field of psychology—for example, in the curious connection between things we regard as sub-rational and as super-rational. Thus in *The Ides of March*, Thornton Wilder has Caesar say that four things keep him from being sure there are no Gods. They are: love, mystical experiences connected with his epileptic seizures; creative acts such as poetry, and his sense of destiny. Today, most of us would likewise regard love or great music as uplifting experiences—and yet, viewed cynically, these would seem to be no more than sexual or rhythmic excitations of the lower nervous system.

These are all non-rational responses of some part of the brain at the **0-1** level which cannot be explained or justified by the logic of the higher brain at the **i** level. Why then the sense of enlargement, of Godhood, in intelligent and active men?—for I believe that we, as well as Wilder and his Caesar, are not deceived in this leap of insight.

The answer is, I think, that these non-rational experiences differ from simple lower operations, like shivering or good digestion, because they refer to and help us integrate with an **i+1** system, a larger system than isolated man. Love, whether purely sexual or more sublimated, means biological continuity and an enlargement to include and respond to another person or a family or all mankind. Poetry or great music are creative acts that build up larger architectonic patterns for both the composer and the audience. Such acts of hierarchical growth are never rationally deducible from the smaller system-structures that precede them, as Arthur Koestler and Michael Polanyi have emphasized. Similarly, mystical experiences or a sense of destiny, as suggested for Caesar, can represent insights and identification with a larger ongoing universe in which the individual becomes a creative part.

Is this so unreasonable? When an individual’s “rational” conscious life is slipping out of harmony with deeper needs or with his relation to other people or to his environment, how else than by mobilizing these powerful sub-systems can the jump be made to a larger unity? Love and ecstatic experiences can suddenly transform lives. Sudden acts of intellectual creation and organization transform the world of words or patterns. And rather ordinary men have shaken continents when suddenly imbued with a sense of destiny or of God’s will which they communicate to millions of others. The simplification and references to a larger system, even when it is incomplete or false as with the Nazis and other fanatics, still gives such men a “power beyond themselves.”

We see that no structuring of a world system for all mankind will be satisfying or stable unless all the deep emotional orientations that direct our reason actually ratify and support this larger view of humankind at every moment and in ever personal relationship. Things will break apart, “the center will not hold,” unless all the subsystems are harmonious with and supportive of the supersystem, and vice versa. The failure of this rule is what is so dangerously wrong with our economic and political systems today.

Can Hierarchical Social Restructuring be Guided?

It is not at all clear whether self-structuring hierarchical jumps of this kind can be to any appreciable degree anticipated or guided. Either “anticipation” or “guidance” would be themselves creative acts which would be part of the self-structuring. Even a man driven by the “will of God” can hardly predict how another man driven by the will of God is going to interpret and execute that will or how effective he will be in his own responsive environment. This is why Bohm regards the jumps as fundamentally as unpredictable as the quantum jumps in physics.