

180.00 Design Science and Human-Tolerance Limits

181.00 Humans are often spoken of as behaving like animals. Vast experimental study of animal reflexes and proclivities has disclosed reliable benign behaviors to be predictable when the creatures' vital necessities are both habitually and readily available well within critical limits of safe, healthy input periodicities of the chromosomically and DNA-RNA programmed optimum metabolic processing of the subject species creatures.

182.00 Such scientifically conducted zoological behavior studies use the words *reward* and *punishment*. By the word *reward* they do not refer to a gold medal. And their word *punishment* does not refer to whipping. The animal behavior scientist's word *reward* means that the creature is acquiring the vital life-support chemistries of air, food, and water well within the critical metabolic timing tolerance. Punishment, to these scientists, means that the creature's subconsciously generated hunger, thirst, and respiratory instincts are not met within comfortably tolerable time limits, whereafter the creature panics. Its original subconscious, spontaneous, innate trust that its environment will always provide what it wants and needs exactly when it is needed having been violated, the creature panics, and forever after its behavior pattern is unpredictable.

183.00 It is clear that with the pushing of the panic button a secondary act of subconscious behavior controls has been activated. It is one of the self-disciplined responsibilities of comprehensive, anticipatory design science always to include fail-safe, automatically switched-in, alternate circuitry for mechanical functioning whenever a prime-function facility is found wanting. When a series of failures has blown out all the alternate circuits' fuses, then a sense of lethal frustration sets in that is identified as panic. Once panicked, the individuals—creatures or humans—tend to trust nothing, and their behavior then becomes utterly unpredictable. They become spontaneously suspicious of their environment in general and prone to be spontaneously hostile and aggressive.

184.00 When they are aggressive—or even worse, when they panic—both humans and animals demonstrate a subconscious drive only for self-survival. For instance, when a great theater fire disaster occurs and the flames quickly exhaust all the oxygen, people suffocate within two minutes. When the fire is over and many of the human dead are found inside unscorched, their deaths having been caused by suffocation, we discover that the otherwise loving fathers lost personal consciousness and stampeded over their own children and crushed them to death—the children for whom the conscious fathers would gladly have given their lives a hundred times over.

185.00 This frustratedly insecure or panicked animal survival drive is not a primary human behavior; it is only a secondary, subordinate, "fail-safe" behavior that occurs only when the very broad limits of physical tolerance are exceeded. When supplies are available, humans daily consume about two dry pounds of food as well as five pounds of water and seven pounds of oxygen, which their blood extracts from the 50 pounds of atmosphere that they inhale every day. Humans can go 30 days without food, seven days without water, but only two minutes without air. With 30 days' tolerance, humans have plenty of time to decide how to cope with vital food problems; with a week's waterless tolerance, they have to think and act with some expedition; with only one-and-a-half minutes' oxygenless tolerance, they rarely have time to think and cope successfully. Because the substances that humans require the least can be gone without for 30 days, nature has for millions of years used humans' hunger and the fertility potentials to force them to learn by trial and error how most competently to solve problems. But because the absence for more than a minute or so of oxygen (the substance humans use the most) could not be tolerated, nature provided the air everywhere around the world—in effect, "socialized" it.

186.00 As long as the 30-day, seven-day, two-minute tolerances, respectively, for lack of food, water, and air are not exceeded, humans' minds tend to remain in ascendance over their brain-reflexive sensing, and people are considerate of their fellow humans. When the human is stressed beyond these tolerable limits, the preconditioned-reflexing brain function takes over from the thoughtful, loving, orderly reasoning of mind. Then the secondary utterly thoughtless behavior occurs.

187.00 It is at least scientifically plausible, and possibly even scientifically validated, to say that not only all humans but all creatures are designed to behave spontaneously in a benign manner and that all creatures have toleration limits within which they continue to function with subconsciously spontaneous amiability, but that many have been stressed and distressed beyond those limits early in their lives and consequently have developed aggressive, belligerent, or outright mad proclivities. This is not to say that this switch by both creatures and humans from dominance by their primary proclivities to dominance by their secondary proclivities is an irreparable condition of life on Earth. Though Humans as yet know little about complete repair of their innate propensities, there are promising signs that such cures are not beyond attainment by the human mind.

[Next Chapter: 200 Synergetics](#)

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