

Redundancy Anxiety

William R. Catton, Jr.
Professor Emeritus-Sociology
Washington State University

Abstract

*If Earth's human load is too large to be sustainable there is reason for people to be apprehensive. Anxiety, often seen as a response to **imagined or unrealistically appraised** danger, can also be an **adaptive response** to omens of real danger beyond time's horizon. The world's human carrying capacity is not infinitely expandable. Neither "fight" nor "flight" can answer problems arising from that fact. Redundancy anxiety, the dread of not having a niche for oneself in an overloaded world, leads to "appeals for help" which may take the form of declaring one's own nonredundancy by asserting others' redundancy. Redundancy anxiety is a concept that may help explain contemporary news reports of militant, combative, uncivil, self-indulgent, or escapist behavior.*

Redundancy Anxiety

Ecologically, Earth's human load has now exceeded the level of sustainability (see, for example, Ehrlich, Holdren, and Holm 1971, 41; Postel 1994; Earle 1995, 219; Brown 1996). Under the influence of a carrying capacity deficit, human actions must be expected to differ from patterns that prevailed when there was a carrying capacity surplus. Since 1492, access to a "New World" afforded Western civilization a vast carrying capacity increment that fundamentally shaped our institutions, and expectations. The "sea change" occurring in our time threatens those institutions, and our traditional "onward and upward" expectations are being shattered. Half a century after the Second World War, with the long Cold War also ended at last, the world is electronically joined closer than ever (Kurtzman 1993, 167) but is perceived by many of its inhabitants as being adrift, "with no clear sense of where to go and how to get there" (Brown and Kane 1994, 221).

Just after World War II had ended and as the Cold War was beginning, psychiatrist (and former clergyman) Rollo May wrote that we were already living in an "age of anxiety." Anxiety, he said, was no mere "phenomenon of maladjustment." It lay not far beneath the surface in all our major institutions—political, economic, religious, literary, and familial. "The ordinary stresses and strains of life in the changing world of today," said May (1977, ix), "are such that few if any escape the need to confront anxiety and to deal with it in some manner."

In 1990, a Time/CNN poll found 18- to 29-year-olds beset with anxiety. They see the world as completely impermanent; to them, the future is vague and undefined (Kurtzman 1993, 167-168). In a recent appraisal of the human condition today, two Worldwatch Institute writers expressed concern that "the

loss of hope ... can be destructive," and insisted that "The measure of individuals or nations is whether they respond to the great issues of their time" (Brown and Kane 1994, 223).

Among the great issues of our time is surely the question of what consequences flow from the fact that world population has more than doubled during the Cold War period, and what can be done to cope with those consequences when population growth seems unstoppable. The consequences may be those foreseen by the ecologically sophisticated neurobiologist William H. Calvin (1989, 331):

Between overpopulation and overpollution, the Earth may soon become a failing enterprise, with the barriers to innovation that are often constructed by bureaucracies attempting to stretch strained resources.

And it isn't merely potential failures of ecosystems and economics: Just consider the history of civilizations and how often they decline from their vigorous peak into mere ornamentation or into Dark Ages.

The aim of this paper is to consider the pervasiveness of anxiety in our time, its connection to population pressure upon a finite global ecosystem, and some of the asocial and antisocial responses it appears to induce.

Defining Redundancy

One widespread consequence of ecosystem-straining population pressure is what I call redundancy anxiety, a term to be explained. Both words in that phrase require definition. Consider first the word redundancy, which, generally speaking, denotes duplication, something extra, additional, even superfluous. Linguistically, it can refer to extra sounds in speech, or extra letters in the spelling of written words, beyond the minimum needed to encode information.

In architecture and engineering, redundancy can refer to use of additional components to strengthen a structure and provide a margin of safety, to afford a back-up mechanism and make some device "fail-safe." By analogy, the production of "extra" offspring can enable a population to surmount risks of high mortality.

But the hazards to be offset by redundancy can change over time. In the Oxford English Dictionary (1989, 13:438) we find a definition of redundancy especially applicable to the topic of this paper: "The condition of having more staff in an organization than is necessary. Hence, the state or fact of losing a job because there is no further work to be done; a case of unemployment due to reorganization, mechanization, loss of orders, etc."² Although this paper is not addressed to the staffing of an "organization" in the ordinary sense of, say, a

business firm, it requires no great stretch of meaning to consider as an organization the global ecosystem in which humankind is ever more intricately involved. Its various niches are “staffed” by assorted species (Catton 1992, 75-78), including many niches that are occupied by culturally differentiated humans, equipped and trained for particular roles (specializations). In that framework, then, *redundancy anxiety refers to a dread of not having a place for oneself in an over-staffed world*. It denotes response to overpopulation as a really Great Depression. It suggests there is much that could be learned from contemplation of attitudes and expectations of people confronted with a severe economic depression, such as occurred in the 1930s (see, for example, Zawadski and Lazarsfeld 1935; Harrington 1962, 1984; Jahoda, Lazarsfeld, and Zeisel 1971; McElvaine 1993).

Defining Anxiety

When searching the database in a major university library with “anxiety” as the key word, most sources that turned up were in the literature of psychopathology and psychotherapy. It thus seems appropriate to consider what has been meant by the term in such psychiatric usage, and what has been learned about the causes and consequences of anxiety by psychiatric research, even though I have found no reference in such literature that specifically links anxiety to overpopulation.

Despite an understandable preoccupation with “disorder” and “neurotic anxiety,” there has begun to appear in the psychiatric literature some recognition that anxiety can be “normal.” Neurotic anxiety is commonly attributed to “intrapsychic conflict assumed not to be readily available to awareness because of the operation of ego-defense mechanisms” (Lazarus 1966, 65; see also Klein 1981, 235). Anxiety need not be considered pathological in all instances, however. It can be “experienced by healthy individuals who are confronting an objective external threat” (Lazarus 1966, 66; see also Goodwin 1986, 3-4). According to Barlow et al. (1986, 44), a generalized anxiety disorder has, as its cardinal feature, “apprehensive expectation.” It can scarcely be argued that apprehensive expectation is an emotion never justified by objective circumstances.

Although a psychiatrist may not mean exactly what an ecologist would mean by “an ecological perspective,” the phrase was used by Lazarus (1966, 411) to suggest a way of understanding how people living in different cultures and exposed to different conditions might differ in their responses to stress. People of different historic times or different strata within a society, too, may respond differently to stress (see, for example, Harrington 1984; Hollingshead and Redlich 1953, 1954).

Very recently, looking at anxiety in evolutionary terms, Hofer (1995, 35) pointed out that it represents “a stage in the process by which an individual adapts to the presence of threats to its survival.” It is a stage organisms omit when they make rapid response to imminent injury. When animals evolved multiple and alternative ways of responding to danger,

and had developed receptors capable of detecting cues portending injury, there was advantage in interposing between stimulus and response a stage in which information could be assessed. With evolution of the cerebral cortex, the abilities of animals to learn and remember increased, enabling anxiety and information processing to refer to past as well as present experience (Hofer 1995, 36). In the primate brain, this advanced to the level of self-awareness and consciousness, and in humans the advent of language and communication by symbols made *collective* creation or alleviation of anxiety possible, together with creation or avoidance of new types of danger. Little wonder that human anxiety tends to involve ambiguity, uncertainty, and a sense of being overwhelmed or having lost control.

From this evolutionary perspective, then, anxiety is to be seen as a behavioral state occurring in response to danger signals. Avoidance of similar dangers during the individual organism’s past experience, or in the evolution of the species, will result in response tendencies that constitute this anxiety state.

Response to Impending Danger

Among mammals, evolution of prolonged immaturity of offspring, requiring an extended period of close parental nurturance, produced a new form of anxiety—the isolation distress state (Hofer 1995, 25-28). Infants of several species, including rats and humans, form attachments to conspecifics and to familiar inanimate surroundings, and can experience anxiety when separated therefrom. In the modern world, rapid changes to our surroundings often “separate” us from an environment’s former condition. Population increase is one important factor bringing about such changes.

At one time, psychiatrists regarded “fight or flight,” two forms of avoidant behavior, as the typical responses to an emergency confronting any animal. As Klein (1981, 240) pointed out, however, anyone who had observed a crying infant should have realized a third alternative was also common—appeal for help. Among social primates, in fact, this response occurs earlier in life than either fight or flight. The evolutionary explanation is obvious. A helplessly dependent infant separated from its mother could fall victim to predators; but even in their absence, if the mother could not find the infant for lack of any distress signal, the infant could become dehydrated and weakened. “If the infant organism actually waited for hunger pain before emitting distress cries, many infants would be lost or impaired. Evolutionarily, a built-in (unlearned) early warning alarm system for the recall of the parent makes good sense. Pain does the job, but one does better to cry before one is actually hurt” (Klein 1981, 247).

According to learning theory, anxiety is a conditionable secondary drive. Pain and fear are unconditioned responses to a harmful stimulus. Fear serves as a primary drive leading to escape behavior. The traditional psychiatric distinction between fear and anxiety regarded fear as a response to objectively real and imminent danger, whereas anxiety was seen as

a tense emotional state in response to an unreal or nonimminent danger. With their focus on *neurotic* anxieties, psychiatrists naturally tended to see anxiety as a way of responding to imagined threats, or unrealistically appraised dangers. But some in the profession have come to recognize that anxiety can have adaptive significance. It can be a response to *impending* danger. It can be due to an enhancement of foresight.

Anxiety can occur from excessive or prolonged exposure to aversive stimuli. High population density may be such a stimulus; it can be detrimental to health. In the case of humans, depending upon the meanings attributed to it, it may erode socially desirable behavior (Cohen 1980, 171).⁵

Overpopulation, Anxiety, Panic

The consequences of overpopulation of the only planet accessible for human occupancy must certainly constitute today a set of real dangers. Their impact is still, perhaps, less than immediate, especially for those of us prosperous enough to have become sufficiently educated to discern them most clearly. Enhanced foresight is thus sidetracked for some people by their privately favorable circumstances. But our world's carrying capacity is not infinitely expandable and our numbers have increased so phenomenally within the lifetimes of many now present that carrying capacity is being diminished, and I submit that the spreading knowledge of this has become a basis for widespread anxiety. Neither fight nor flight can answer the problem.

Combining what is known about aversion to crowding with what is known about that "appeal for help" response, we can see why a condition of overpopulation would cause a special sort of anticipatory apprehension deserving the name redundancy anxiety. If there are too many people, and Ego is at least vaguely aware of the fact, even if Ego is not immediately faced with mortal danger, it is possible for Ego to anticipate a threat to his or her well-being and identity. If there are too many people for the niches available, some must be redundant. Ego might be one of the redundant ones, rather than one for whom there is a niche. By *declaring* nonredundancy, Ego "appeals for help."

In recent decades, publications ranging from scholarly books to popular magazines have alluded sufficiently often to increasing population, to massive resource consumption, and to environmental impact problems, so that fewer and fewer members of our species can remain insulated from, or oblivious to, the potential realization that any of us may be redundant. Thus there has to be intensified dread of being cast in a plight like that of the abandoned child. Even people who seldom or never say the world is overpopulated are increasingly likely to encounter the thought expressed by others. And this must give rise to a quest for reassurance—a need to be reassured somehow that the status of redundancy applies to others, not to oneself.

These insights from human ecology ought to be a major contribution to the social sciences. Many bewildering aspects

of contemporary human behavior deserve to be studied as, in part, expressions of increasingly widespread and ever more urgent efforts to attain reassurance of nonredundancy.

Redundancy anxiety can be at least part of the motivation for militant social activism. Sometimes such activism is combined with antisocial self-indulgence, and the combination can only "make sense" if seen as an expression of redundancy anxiety. From the 1960s onward, fist-clenching crowds variously demonstrating for or against various things, shouting various slogans, carrying various placards and banners, were all implicitly saying, "We are not superfluous!" Sometimes they said it by implicitly declaring someone else redundant. Particular insinuations of redundancy shouted in particular instances of hostile action—"you male chauvinists!"..."you fascist pigs!"..."you Honkies!"..."you black bastards!" etc.—obscured the general equivalence in the process. People, whatever their own identity, threatened by redundancy, were engaged in forms of panic behavior.

Panic happens when the confidence of a society's members in each other breaks down. Mutual deference, orderly taking of turns, and cooperative accommodation all come to seem fruitless; Ego fears losing the chance of attaining life goals by being out-scrambled by competitors (Fritz and Williams 1957, 44; Lang and Lang 1961, 83-108; Turner 1964, 409-413).

The "everyone for himself" (or, every subgroup for itself) attitude can arise from (1) general perception of severe and immediate danger, coupled with (2) belief that the opportunities for escape are limited, (3) belief that these opportunities are diminishing, and (4) an absence of adequate communication with others about the danger. Just as dread of being "laid off" becomes pervasive among employees of a firm undergoing "downsizing," these panic-inducing perceptions and beliefs seem almost certain to be prevalent on the eve of, and during, a society's collapse. Today there are reasons (that seem compelling to some) for supposing global ecological collapse is the grim experience awaiting human generations now living.⁶

As worldwide antisocial reactions became more common in response to premonitions of crash as the eventual sequel to irruptive population growth, social scientists seemed as reluctant as anyone else to recognize a deeper meaning underlying the specific instances. In the 1960s and 1970s, many groups had come to feel their goals would become unattainable if not sought immediately. Time was seen as running out. There might be no "eventually." In many slogans there was a common theme, even if preoccupation with particulars tended to blind us to it: "End Apartheid now!" "Halt pollution now!" "Stop the bombing [in Vietnam] now!" "Stop nuclear testing now!" "Reunite [Ireland, Germany, the two Chinas, the two Koreas] now!" The National Organization for Women chose a name for itself whose initials spelled out the immediacy of feminist demands, disguising the fact that the constraints, pressures, and frustrations from which they sought liberation were not altogether gender-specific. All decent, even admirable goals, but....

All around the world, very many groups have pursued goals in a manner that suggests a widely shared fear that compromise and forbearance are no longer reciprocity-maintaining virtues because delay would convert them into the vice of permanently lost opportunity. Demands became “non-negotiable.” What could account for this widespread attitude unless there was a deepening anxiety about the world approaching a point of no return? If the world’s human load has already surpassed global carrying capacity and we are living in unsustainable ways, sooner or later this had to lead to concern that this dire condition could become irreversible (see Earle 1995, 237, 271, 305)

Thus, as worsening ecological conditions (and spreading knowledge about them) intensified redundancy anxiety, it could account for various groups and movements “stepping over the line,” adopting destructive, even terrorist, tactics. “Ethnic cleansing” in the fragments of Yugoslavia repeated an earlier mode of declaring the in-group nonredundant and imputing redundancy solely to an out-group. Such had been the Nazi Holocaust. It can recur again.

Our once strong expectation that the future should and would be brighter than the past has broken down. The erosion of that expectation makes people receptive to accusations that some out-group is causing their grief. If in fact we are living in (and moving ever deeper into) a global carrying capacity deficit, then all 5.6 billion of us are causing woes for all of us. When most people are taught to desire (or badgered by advertisers into desiring) to live as ravenously as modern technology has made possible for some, the passage of that point of no return seems inescapable. Ecologically, the future **is** not what it used to be.

The concept of redundancy anxiety may be the only idea that can explain the crescendo of militancy, combativeness, incivility, and escapism (by rationalization; by ideological condemnation of past societal achievements in which our predecessors took pride; or by substance abuse; or by random acts of violence) that characterize so much of today’s news.

The Ultimate Scramble

If we need a metaphor to see this, consider the party game many of us played as youngsters, the game called “musical chairs.” With N children seated on a row of N chairs, music began and the children all got up and marched around the row as one chair was removed. When the music stopped, the children scrambled to be seated again, but one child found no place and was eliminated. The music resumed, the marching resumed, another chair was removed, the music stopped, the scramble recurred, another player was eliminated. And so on.⁸

That was a game. The global scramble for too few niches is not a game. It is deadly serious.

Endnotes

1. That kind of redundancy can be useful; it can enhance the signal-to-noise ratio, enabling communication to sur-

mount imperfect conditions of transmission. But in literary and oratorical criticism, redundancy tends to be a pejorative term, implying the speaker or writer has failed to achieve desirable brevity.

2. Americans are rather unaccustomed to this usage even though it is familiar in British English. This paper **is**, of course, not concerned with annoyances arising from repetitive verbalizing, nor with worries about inadequate engineering safety margins. Even though a computer search of a university library’s database, using the key word “redundancy,” led to hundreds of recent articles having to do with engineering margins of safety or with spoken or written or artistic excess, only a few turned up that represented topics involving redundant people. They were mostly in the field of labor economics. For example:

The Europeanization of the U.S. Labor Market (Henderson 1993)

Job Changing after Displacement: A Contribution to the Advance Notice Debate (Addison and Fox 1993)

Money for Nothing (Jones 1993; re United Kingdom coal industry redundancy payments)

OE Potential Benefit to Thousands (Nash 1993; redundancy counseling)

Women Lose Out in Redundancy System (Kirkman 1995).

3. The psychiatric literature clearly indicates that “anxiety disorders” have become abundant in our time, making “heavy demands on health care resources in both industrialized and developing countries throughout the world” (Marks 1986, 167). Epidemiological findings are said to have important implications, including the revelation that anxiety disorders are not confined to Western industrial societies, and that they have more impressive cross-cultural similarities than differences (Marks 1986, 170).
4. Highly specific information-processing capabilities occurred very early in evolution, in the form of bacterial membrane receptors. Marine invertebrates evolved somewhat more advanced patterns of selective enhancement or inhibition of behavioral responses. In Hofer’s view, whatever the nature of the intervening stage, it does for lower organisms what an “anxiety state” does for higher forms. Qualitatively different “anxieties” became possible as evolution of the limbic system in the brain expanded the kinds of intervening emotional states.
5. It is important to distinguish between density and crowding. Density is a physical condition, measured by a ratio with population in the numerator and space (or some other resource) as the denominator. Crowding **is** a psychological condition wherein spatial confinement **is** salient and aversive. The distinction between the two concepts does **not** mean, however, that crowding is independent of density. The physical properties of a stimulus configuration may influence even if they do not determine its perception as threatening or benign. As Cohen (1980, 172) says, “the

greater the density, the greater the probability of others being defined as threatening." Even fairly "roomy" opportunities for interaction may be perceived as crowded if the interaction in them is unwanted. According to Cohen (1980, 174), "people do not want to hear their neighbors nor do they want their neighbors to hear them. This is especially true if the sounds one is exposed to contain meanings that one would rather not hear." Cohen illustrates this point by describing a survey of patients' reactions to noise conditions in a hospital. Overhearing staff conversations in the corridor was particularly unwelcome. Regardless of loudness, these sounds were objectionable to patients because of the information conveyed—e.g., descriptions of other patients' symptoms or conditions. Similarly, having to hear actual sounds of distress in other patients, such as calling for a nurse, or moaning, etc., constituted unwanted "interaction," producing a sense of helplessness. These objections are not unlike the wish of people outside hospitals to avoid encountering homeless people inhabiting downtown doorways, or the wish to segregate in ghettos people unlike one's own group.

6. Considerable literature on societal collapse (and its relation to ecological adversity) is available. (See, for example, Weiss et al. 1993; Meggers 1995). A number of publications provide evidence and theoretical argument to counteract the comforting assumption that modern societies, and the United States specifically, are immune to any such collapse. (See, e.g., Nisbet 1988; Luttwak 1993; Phillips 1994; Elshtain 1995; Ruhin 1995.) Assorted sources offer diverse explanations of what ails us. (See, e.g., Mead 1987, 326, 333, et passim.; Kurtzman 1993; Black 1994.) By no means does all this literature depict the present human condition as a carrying capacity deficit, but these sources deserve scrutiny by anyone who is inclined to think in such terms. For an impressive *prediction* of the collapse of the Soviet Union—and indication that similar forces affect the United States—see Collins (1986, 203-204).
7. Any supposition of gender-specificity should be reconsidered by reading Kimbrell (1995).
8. If the metaphor seems inaccurate, imagine a slight variant of the game, using a fixed number of chairs but infiltrating one or more new players into the march at each round. Or, imagine adding one new player each round and subtracting a chair.

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