
The generation of natural shapes from a simple set of rules with built-in randomness, repeated as much as one likes—or from randomness focusing itself by means of a few simple rules—has been for the metaphysically inclined the most intriguing aspect of the new science. All depends, of course, on what one sees. If one sees a universe grounded in fundamental chaos—randomness, unpredictability, indeterminacy—then the new science charts the “spontaneous emergence of self-organization.” If one sees a universe grounded in fundamental order—causality, predictability, uniformity—then the new science shows “deterministic systems generating randomness.” But perhaps one does not have to choose; randomness and recurrence give rise to rule, and rule, reflexively, organizes randomness.

Cosmos, in human experience, is what can be carved out of chaos and grasped, by modeling, by sorting and assorting, by explaining origins, by learning what to expect. Characteristically, the new science of chaos addresses transitions and boundary states: between regular flow and turbulence, between periodicity and unpredictability. It opens a whole new world, heretofore “invisible,” of symmetries and homologies in nature. It offers a set of ideas and equations, and even a mathematical constant, that bring into a single conceptual space an extraordinary diversity of phenomena and disciplines.

In other words, the new science of chaos is a science because it makes inroads on real chaos and gives us a handle on the spoils. But as Satan discovered in Milton's *Paradise Lost*, Chaos, “a dark/limitable Ocean without bound,” still remains, even after the subtraction of Heaven, Earth, and Hell. It remains illimitable and properly speaking unimaginable, a challenge stretching between the intrepid explorer and absolute Light.

—Martin Meisel

**THE ELEMENTARY
STRUCTURES OF
POLITICAL LIFE:
Rural Development in
Pahlavi Iran**

by Grace E. Goodell
Oxford, 1986
362 pp. \$45

Beginning in 1972, Grace Goodell, an anthropologist now at Johns Hopkins University, spent some 20 months in the southwestern Iranian province of Khuzestan studying the impact on rural folk of one of Mohammad Reza Shah Pahlavi's most ambitious programs. The goal of the Shah's Khuzestan project was nothing less than large-scale, integrated agricultural and industrial development of an entire region.

Goodell carried out her study by living in two places, selected for the contrasts they offered. One, Rahmat Abad, was a village whose ways had been little disturbed. The other, Bizhan (both names were changed), was

the creation of the Shah's central government. It was one of several model townships established primarily to house peasants whose land had been expropriated in order to create huge agribusinesses and farm corporations.

In a book that is both highly intelligent and flawed, Goodell comes to three main conclusions. She finds, first of all, that a traditional Muslim village like Rahmat Abad functions very much like a corporate group. In Rahmat Abad, the inhabitants reach decisions affecting the community through consultation and consensus; together, they determine the crops they will plant, bargain collectively in the sale of produce, and agree on how much to tax themselves to pay for such needs as local bridge repairs. Kinship ties are strong, but there is sufficient flexibility to allow villagers to enter into quasi-contractual arrangements or partnerships with their own kin or with people of other villages.

Goodell's second point is that such traditional ways enhance, rather than retard, the villagers' capacity for change and innovation. The people of Rahmat Abad inhabit a world in which behavior is predictable, information flows freely, decisions are made publicly, and personal relationships are reliable. Both individuals and groups take responsibility for their actions. Thus, when land reform freed the inhabitants of Rahmat Abad from landlord control and gave them security of tenure, the villagers, individually or in partnerships, experimented with new crops and pesticides and invested in tractors, motorcycles, and a truck.

All this, concludes Goodell, "shows the primacy of social organization—far more important than education or government assistance—as a foundation for spontaneous 'modernization.'"

Goodell's conclusions were re-enforced by what she found in Bizhan. A model town with all the arid features of such, Bizhan had no history, no tradition, no sense of corporate identity. Its citizens were incapable of acting collectively. It was, in essence, a company town, except that the company was the State. And, according to Goodell, it was to the State and the Shah that the inhabitants, robbed of all initiative, looked for the solutions to all their problems.

Dependence on the royal father even affected Bizhan's collective unconscious: "While the villagers in Rahmat Abad had practically never mentioned the Shah," Goodell writes, "the model town's subconscious endlessly circled around this one necessity—to reach the King, to tell the King. I never heard a single dream reported in Rahmat Abad, but in the new workers' town people had the most fantastic ones about Our Father with the Crown, each of which circulated immediately and widely."

These observations lead Goodell to her third point, which is that a regime like the Shah's, with its immense and arbitrary power, its technocrats' penchant for social engineering, and its blueprints derived from foreign models, often destroys the very social structures that promote modernization. The Shah's top-down approach, she argues, killed private initiative in Bizhan and destroyed the sense of community that is crucial to any socioeconomic advance.

Goodell is highly persuasive, but she mars her case by oversimplification and overgeneralization. Her argument rests on the assumption that Rahmat Abad typified the "traditional" Iranian village and, more importantly, that Bizhan represented the *typical* product of the Shah's controversial attempts to bring Iran's hinterland into the 20th century.

The evidence simply does not sustain this argument. The Khuzestan development project was not the model for all of Iran; no other part of the country provided the same combination of water, arable land, and possibilities for dam construction and large-scale agriculture. Of Iran's 50,000 villages, even as late as 1979 (when the Shah was overthrown), very few—certainly fewer than 50—were "artificial" model towns of the Bizhan type. The more typical meeting place between tradition and government-directed programs was neither the idyllic Rahmat Abad nor the arid Bizhan, but something in between; and therein lies the challenge of analyzing the impact of efforts like those of the Shah.

The agribusinesses and state farm corporations that Goodell criticizes were foolishly conceived. They proved to be unprofitable enterprises. But by 1975 this blunder was widely recognized in Tehran. Moreover, while the Shah's bureaucracy was often officious and insensitive, it was not always so. Goodell's Iranian officials, in Tehran and in the provinces, are invariably blundering bores, ignorant of their country and heedless of the damage they do. She sees no irony in criticizing these officials for seeking to apply in Iran development concepts derived from foreign models even as she applies to Iranian peasants the tools of social analysis derived from the writings of M. G. Smith, Conrad Arensberg, Tocqueville, Burke, Durkheim, and Nisbet.

Underlying Goodell's analysis is a nostalgia for the imagined simplicity and goodness of traditional village life. She assumes that the city makes uprooted, spineless men and women of us all. But Iran's urban centers were not as lacking in corporate structures (in the bazaar, in the village communities transposed and recreated in the city) as Goodell supposes. In the Rahmat Abad that Goodell describes, there are both greater differences of social class and more limits to the villagers' capacity for self-organization than Goodell is prepared to admit.

These flaws do not invalidate Goodell's central and important argument, that traditional forms of community organization can contribute powerfully to the drive for Third World modernization. She makes her case with insight and with considerable passion.

—*Shaul Bakhash*