CONCLUSION

Sociogenesis

IT IS SOBERING, in retrospect, to consider the apparent ease with which the history of Balinese irrigation was rewritten into a story of feudal kingdoms. Water temples, the Goddess of the Lake, the *tika* calendar, the *soewinih*, and the opium monopoly—all were very nearly submerged beneath a manufactured history of *subak*s, sedahans, and reconstituted kings. For the colonial authorities, irrigation was inextricably tied to sensitive issues of sovereignty, taxation, and the legitimacy of colonial rule. The Dutch established bureaucratic systems to "control" the various aspects of irrigation. These bureaucracies collected taxes, built irrigation works, performed land surveys, and issued reports testifying to the success of colonial rule. Meanwhile, the water temples continued to function. Because the Dutch model of irrigation vastly underestimated the complexity of the sociobiophysical systems involved in rice production, water temples and bureaucracies coexisted without creating technical problems in irrigation control. Most Balinese rice terraces continued to produce two crops per year, as they had before the arrival of the Dutch. Because the two institutional systems were so unlike as to be unrecognizable to one another, coexistence was possible.

The advent of the Green Revolution in the 1970s altered this situation. By then, the Dutch were gone, but the institutional systems they had created persisted, now staffed by Western-educated Balinese and other Indonesians. For these officials, irrigation was understood to be controlled by bureaucracies: rational, anonymous instruments of the state. The failures of the Green Revolution revealed for the first time that this bureaucratic model of irrigation control was hopelessly oversimplified. The state's claims to control irrigation—or at any rate, to manage terrace ecology—were hollow. In reality, *subak*s were not autonomous units; terrace ecology could not be sustained by continuous rice cropping; and water temples played a major role in hydrological and biological management. But the managerial role of the water temples was not easily translated into the language of bureaucratic control.

To discover the kinds of controls exerted by water temples, we searched for the actual mechanisms at work in particular irrigation systems. In the case of the two rivers we studied, a major social response to the problem of sustaining the rice terraces as productive ecosystems is

summed up in the concept of "hydraulic solidarity." The physical facts of hydrological interconnectivity and the need to create coordinated fallow periods for pest control place a premium on cooperation. All farmers who share water from the same weir must cooperate in construction, maintenance, water allocation, and the management of disputes. They are also likely to face the necessity of coordinating cropping patterns with upstream, downstream, and lateral neighbors. In the absence of such coordination, there is the danger of "chaos in water distribution" and an "explosion of pest populations," as occurred in the aftermath of the Green Revolution. Hydraulic solidarity is sustained by the need for tight continuous cooperation from one block of terraces to the next.

With regard to the temples, the most basic question is the relationship between their instrumental role in managing the flow of waters and the symbolic systems that define their social and cosmological roles. I have argued that there is a consistent logic to the complex ritual practices involving water temples. Essentially, water temples establish symbolic connections between productive groups and the components of the natural landscape that they seek to control. The natural world surrounding each village is not a wilderness but an engineered landscape of rice terraces, gardens, and aqueducts created by the coordinated labor of generations of predecessors. Anthropomorphic deities evoke this residual human presence in an engineered landscape, which Marx has called a "humanized nature." Each weir is the origin of an irrigation system, which has both physical and social components. The concept of a "deity of the weir" evokes the collective social presence at the weir, where free-flowing river water becomes controlled irrigation water.

On a larger scale, chains of water temples articulate the hydro-logic of each irrigation system. All water temples are physically located at the upstream edge of whatever water system they purport to control. Temples link the physical features of the irrigation systems to social units according to a logic of production: the congregation of a water temple consists of the farmers who obtain water from the irrigation component "controlled" by the temple's god. Within each temple, along with the shrine to the temple's principal deity are additional shrines for other gods. Offerings to these gods provide a way for the temple congregation to acknowledge their relationships to other temples and the social and physical units they represent. Each temple creates its own unique holy water from "upstream" sources, which evokes the sacred origins of the collective and represents the blessing of the temple's god. Relationships between related water temples and their congregations are symbolized by the joining of holy waters. The "flow" of holy water from temple to temple establishes hierarchical relations between temples. Thus water temples define the institutional structure—the hierarchy of productive units—that manages the rice terraces as a productive system.

HUMANIZED NATURE

The water temples must, therefore, be understood, not only as a system of irrigation management but in terms of their role in the process of sociogenesis. It is tempting to see the rituals of the temples as part of the superstructure, in the Marxist sense; a religious commentary on the economic realities of managing rice production. But to do so is to mistake the relationship between society and the "humanized nature" of the rice terraces. In reality, the flow of holy water is as much a part of the irrigation system as the flow of rivers and springs. Farmers can count on the delivery of water to their fields for a particular span of time, just so long as they can rely on the system of social relationships that makes that flow possible. How are these social relations sustained?

We have already drawn upon Marx's argument, which explains the origins of the concept of society in light of the concept of "humanized nature." According to Marx, each succeeding generation acquires a concept of society through an awareness of historical process, by observing the physical evidence of the labors of their predecessors. Every society transforms the wilderness that surrounds it into a civilized landscape. "Humanized nature" is thus the countryside of a civilization at a given epoch. But Marx went on to argue that "humanized nature" ultimately confronts mankind as "an alien and hostile world standing over against him."[1] Marx did not pursue the question of how the particular characteristics of different man-made environments are related to specific social formations. Instead, he immediately turned his attention to the issue of alienation and the "object-bondage" of labor.[2]

Thus from a strict Marxist perspective, there is no distinction between a weir in a river and a bridge or a house: they are all evidence of society's historical presence. And indeed, a weir in a river is not necessarily a symbol of anything in particular. What is missing from Marx's concept of humanized nature is an appreciation of the constituting role of the symbolic system. My argument is that the ritual system of water temples defines the symbolic meaning of productive relationships. A weir is just a weir, but the concept of holy water from a weir shrine transforms the weir into the symbol of a specific social unit. It is through this symbolism that farmers acquire concepts for social units more abstract than the immediate face-to-face community of neighbors. The Bayad weir is merely a small dam in a stream, but a few drops of water from the Bayad weir shrine, poured into the entrance gate of the Manuaba weir downstream, defines a definite social relationship between the *subak*s of Bayad and Manuaba. This relationship is more abstract than the relationship between farmers in a *subak*, because its only concrete symbol is a vial of holy water, but it is no less vital to the productive system. The ritual sys-

tem is not merely a gloss on productive relationships, for in the long run it is the social relationships constructed by water temples, not the mechanics of water flow, that create and sustain the terrace ecosystem.

POWER

"Power," says Michel Foucault, "is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategical relationship in a particular society."[3] The Temple of the Crater Lake sits high on its crater rim, above the elevation where the rivers and streams have their headwaters, miles from any actual irrigation works. If a king or a modern bureaucrat were to seize control of the temple, he would not thereby gain control of a single irrigation system, for there are no engineering control points near the temple or the lake. The flow of water from the lake into the groundwater system is not under human control. Where does power lie in such a system?

We have seen that the water temple system is based on a hierarchy of productive relationships. Each social unit is defined by placing it in a structure of relationships that unfold in time and link it to the creation of a "humanized nature." But the entire system of water temples is only one component of Balinese society. There are other temple networks and other hierarchies that are not based on the logic of productive relationships. Indeed, most water temples contain shrines to deities that represent other social units, from villages to kings. These relationships ultimately define the boundaries of the powers of the water temples in the Balinese social universe.

An example of a ritual in which the water temples are defined as a component of a larger whole is the decennial ngusaba desa festival, in which the gods of village temples and water temples are mingled to express the complementarity of villages and rice terraces. At this level, the question of the rank of the temples does not arise, for the congregations of villages and local water temples are identical. But at higher levels in the temple hierarchy, the powers of water temples come into conflict with the imagery of power based on caste. The powers of water temples derive from the principle that the rank of a temple depends on the size of its congregation and its productive role. On the other hand, the religious cult of Balinese kingship places farmers, no matter how numerous, at the bottom rank of the social hierarchy. The affairs of village temples were no concern of kings, and one might imagine that the same would be true of all water temples. But the functions of important regional water temples, such as the larger Masceti temples, overlapped with those of kings be-

cause both were concerned with the prosperity of the realm. Indeed, so similar were their functions that princes sometimes competed with water temples for the right to collect *soewinih* offerings.

A common solution to this problem was for a prince to lay claim to the local Masceti temple as one of the state temples of his realm. Responsibility for the support of the temple would then be divided between the prince and the *subak*s. By this means, the prince could secure control not of the mechanics of irrigation, but of the flow of offerings. These offerings would be dedicated to the gods in the name of the prince and his realm as well as that of the local *subak*s. Thus the Masceti Er Jeruk was supported by both its local *subak* congregation and the royal house of Sukawati. Similar arrangements existed between the Masceti Payangan and the rajah of Tegallalang, and the Masceti Gunung Sari and the rajah of Ubud. In this way, the water temple cult (if so we may call it) was subsumed within the cult of kingship.

But at the summit of the water temple hierarchy, this solution was not possible. No single king was in a position to claim the Temple of the Crater Lake. Although the ritual system expressed a complementary relationship between the temple and the king of Bali (identified with the royal dynasty of Klungkung), in fact Klungkung was too weak to mount an effective claim to this title. The temple is located not in the kingdom of Klungkung but in the territory of the tiny mountain kingdom of Bangli, a frequent military rival of Klungkung.

In fact, one interpretation of the symbolism of temple shrines suggests the opposite relationship: an attempt to subsume the cult of kingship within the cult of water temples. Within the temple, the main shrine to the goddess is flanked by smaller shrines to several royal dynasties: Mengwi, the most powerful kingdom of the last century (fig. A.1, #18); Tejakula to the north (#17); Blahbatuh to the south (#23); Klungkung, which still lays claim to supremacy over other kings (#22); and the pavilion of the kingdom of Badung (#12). Thus we have the main shrine to the Goddess of the Lake surrounded by a constellation of royal dynastic shrines, suggesting an image of the temple as the symbolic center of a mandala of kingdoms descending from the lake. This image becomes actualized in rituals like Panca Wali Krama, when many kings and princes bring their offerings and prayers to the temple.

This image is further strengthened by two other complexes of shrines at the temple, which represent sources of power that are also not directly involved with rice production. One is the Chinese temple to the Great Lord Harbormaster (fig. A.1, #16/16A), which is tended by the Chinese community. In the precolonial era, each king had a harbormaster or trading master, usually Chinese, whose powers derived from his connections to the world of trade that lay outside the borders of Balinese kingdoms.

Another set of shrines is connected with the ancient lineage of metalsmiths and their special gods of iron and fire and sharp weapons (#38–#43). Although they seem unlikely candidates for shrines in a water temple, Chinese merchants and Balinese smiths share one significant characteristic: both wield formidable powers, whose sources lie outside the cults of kingship and water temples. Their inclusion within the temple incorporates additional sources of power into the mandala of forces that are gathered inside the Temple of the Crater Lake.

But this symbolism inevitably conflicts with the imaging of power in the royal cult. The conflict is most clearly evident in the position of the Jero Gde. Born into the commoner lineage of the Paseks of the Black Wood, the Jero Gde is magically identified with the lake mandala, the goddess and the Temple. As the representative of tens of thousands of farmers and dozens of regional water temples, the Jero Gde represents the *subaks*, sacrificing on their behalf to the supreme gods of the Balinese pantheon. As the earthly representative of the goddess, he is entitled to the highest rank, symbolized by his eleven-storied shrine. But from the perspective of the royal cult of kingship, eleven-storied rank is reserved for consecrated kings, and the Paseks of the Black Wood are merely one of many commoner lineages.

We do not know how this conflict was resolved in earlier periods of Balinese history. My point, however, is not to insist upon a particular interpretation of the relations between princes and the water temples, but only to note that a contradiction exists between the powers of the temple, based on the logic of *erga*, and the powers of kingship. This conflict has its origins in the contrasting logic of these two symbolic systems, not in any material constraints. For unlike the Masceti temples, the Temple of the Crater Lake has no control over a specific irrigation system; there is no question of a material logic of hydrology dictating the scope of its powers. Nor does it possess coercive powers like those of a sedahan or a Dutch officer. Yet it exercises the power to create new irrigation systems, to decide where irrigation water will flow, and to resolve disputes over water rights. The sources of this power lie in the logic of the symbolic system, in the concepts of holy water and productive cycles. Ultimately, it is the flow of holy water that generates the flow of water through the irrigation canals.

SOCIOGENESIS

"The greatness of Hegel's Phenomenology," according to Marx, is this, "that Hegel grasps the self-generation of man as a process." Marx hoped to retain this essential insight, while transposing Hegel's analysis from

idealist philosophy to history. The arguments developed in this book suggest the need to perform a similar critique of Marx himself, retaining his insights into the relationship between nature, society, and history, while transposing the level of analysis.

Marx described "humanized nature" as a mirror reflecting society's historical development. Like his contemporaries, what Marx saw in nature was evolution: a continuous linear process of growth. For Marx, the evolutionary progress of society was a scientific reality, which could be read from the social landscape just as Lyell could read geological history from the stratigraphy of Scotland.[4] But we are inclined today to see nineteenth-century concepts of social evolution as metaphysical, as ideas that are read into, not out of, the landscape.

The images of society that the Balinese see in their terraced landscape do not reflect the progressive linear order that Marx and Hegel understood as "history." Instead, for the Balinese nonlinear patterns of temporal order emerge from the regular progression of natural cycles, the seasons of growth and change. When Balinese society sees itself reflected in a humanized nature, a natural world transformed by the efforts of previous generations, it sees a pattern of interlocking cycles that mimic these cycles of nature. Whereas Marx regarded nature in terms of linear evolutionary progress, a Balinese farmer may be reminded instead of the intricate patterns of the *tika* calendar, or the interlocking cyclical melodies of the gamelan orchestras.