

Review Discussion

The Technocracy Thesis Revisited: On *The Critique of Power**

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I. Dialectics of Enlightenment

Adorno and Horkheimer's classic *Dialectic of Enlightenment* explored the intertwining of the domination of nature, psychological repression, and social power. The fruits of this approach are well known: new perspectives on the authority system of advanced societies, on the technologies that integrate it, and on the art forms that resist its hegemony.

However, the Frankfurt School was less successful in joining its concept of emancipation to a coherent notion of social struggle. As a result, its dialectic rigidified into a fatalistic philosophy of history in which the human species was enslaved by the very technical apparatus that gave it mastery of nature. Scientific and technical progress was indissolubly linked to progress in social domination.

Habermas's revision of the theory lost much of its critical edge while contributing a clearer understanding of its limitations. But even in Habermas technology appears as an oppressive force rather than as a medium of human self-expression. As a result he too ends up pessimistically decrying the rising tide of technocracy without providing a persuasive alternative.

This negative vision is contested by Axel Honneth in his important book, recently translated from German, *The Critique of Power: Reflective Stages in a Critical Social Theory*. In this essay, I review Honneth's discussion and extend it in the direction of a communications-theoretic approach to technology.

Although Adorno and Horkheimer thought of themselves as updating Marx's social theory, their emphasis on the critique of instrumental domination completely overshadowed the traditional Marxist problematic. Class struggle was interpreted on the model of the conquest of nature as the

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instrumentalization of a passive human raw material. Lost is what Honneth calls 'the social', i.e., collective, interhuman struggle over identity, meaning, and value. Not only does this model obscure the sources of resistance, Honneth points out the difficulties it places in the way of understanding structures of domination that are rooted in consensually agreed on norms rather than instrumental control.

Far from recognizing these limitations of his approach, Adorno radicalized them in his later works. He argued that conceptual thought is itself a form of domination; the task of philosophy became the critique of concepts in view of recovering a non-dominating relation to nature, which, Adorno believed, was also and indeed primarily the achievement of great art. Critical theory had come a long way from its Marxist origins.

This distance can also be measured in Adorno's conviction that advanced industrial society is perfectly capable of containing all those potentialities and oppositional forces on which Marxism had traditionally relied. Honneth attributes this pessimism to his rather simplistic identification of the sphere of individuation and social action with the traditional competitive market. On this assumption, bureaucratic capitalism and media manipulation signal the disappearance of individuality itself.

The theory thus effectively totalizes the social world as a smoothly oiled machine. But this is far too easy. As Honneth writes, Adorno

could not perceive the patterns of group-specific value orientations and everyday interpretations that, as horizons of meaning, guide the individual in working through the flood of media information. . . . Therefore, he could not believe that the suggestive influence of the culture industry could find its limits in the fact that the process of cooperative production of group-specific horizons of orientation was itself not subject to manipulation, (p. 80)

This interpretation of Horkheimer and Adorno forms the background to the second part of Honneth's book, in which Foucault and Habermas, the two leading contemporary social theorists, are contrasted with the earlier Frankfurt School and each other.

The problem of domination lies at the center of Foucault's later work, but for reasons different from Horkheimer and Adorno's. Foucault does not construct a theory of the alienation of the subject in instrumentality as such, but, on the contrary, attempts to show how the subject is first constituted in the course of social struggles in which it is instrumentalized as the object of a variety of specific practices. Despite this difference in starting-point, the end-result is similar: a theory of total social integration.

Since Foucault has defined the subject not as an irreducible foundation of social life but as a derivative result, he must now identify something more basic from which it can be derived. Neither theories of cultural values, nor ideology, nor psychodynamics can help him here since in his view they presuppose the subject rather than explain it. Instead, starting with

Discipline and Punish, the conditioning and training of the body by disciplinary techniques is shown to integrate society around a stable configuration of institutions and practices while simultaneously producing the human individual, the subject.

As in the Frankfurt School, science is associated with domination, but for different and more historically precise reasons. Science (at least social science) employs specific methods of control of the body, techniques that effectively expose the individual to representation in a discourse. At the same time, science contributes further techniques that intensify that control. Thus here the fundamentally instrumental character of knowing is related to social domination rather than to the domination of nature.

In Honneth's view, Foucault's picture of a society submitted to an ever more effective and totalitarian rationalization process contradicts the Nietzschean strand in his thought, his theory of the social as a network of shifting power struggles out of which temporary equilibria emerge. Once the social process is reduced to bodily training no locus of resistance to power remains to support the idea of social struggle from which he originally set out.

The action-theoretic starting-point is thus abandoned in a systems theory that treats modern power as a functional response to growing population and expanded economic reproduction. This shift takes place tacitly in *Discipline and Punish*, which also blurs the line between total institutions and civil society in such a way as further to obscure the autonomy of the social.

From Adorno's conception of totalitarian administration through introjected domination we have passed to an equally one-sided view in which social integration is achieved through bodily discipline. The domain of the social is lost in both because neither adequately conceptualizes the normative foundations of social life. Honneth therefore turns to Habermas, whose communication theory promises precisely to explain those foundations.

II. The Technocracy Thesis

Habermas argues that the original vice of both Marxism and the dialectic of enlightenment is the systematic reduction of communication to technical control. Instead of generalizing instrumental control to embrace integration or individualization, as do Adorno and Foucault, Habermas locates these functions in an independent communicative sphere.

Communicative understanding involves acceptance of the independent subjectivity of the other; it is regulated by norms of truthfulness and sincerity which, even though they suffer constant violations in practice,

form the horizon under which individuals engage each other. The goal of communication is not control but agreement, not prediction and mastery but a common world of norms and meanings, an identity. In this conception, stable accomplishments rest not on force or manipulation but on shared commitments. Honneth comments approvingly: 'For the first time in the history of Marxism, communicative understanding is treated systematically as the paradigm of the social' (p. 243). But there are unresolved problems here too.

Habermas's social theory was originally based on a sharp distinction between symbolic interaction and purposive-rational action. He later reformulated this distinction in terms of two 'principals of societal integration': communicative understanding achieved through discussion, and success-oriented action in 'media' such as money and power (Habermas [1984, pp. 342-3]). In each case, the first term concerns normative and cognitive consensus, while the second involves practical effectiveness.

Honneth does not so much deny the usefulness of Habermas's distinction as object to the identification of its terms with specific real institutions. For then the mutual exclusion of understanding and control tends to be transferred to the institutions with which they are identified. The result is an elaborate account of mere sociological 'fictions', purified ideal-types of family and state, public sphere and economy, stripped of the inherent ambiguity of the social in which understanding and control are inextricably intertwined (p. 298) (Habermas contests this critique in his contribution to Honneth and Joas [1991, pp. 250 ff.]).

Honneth blames Habermas's difficulties on his ambivalent critique of the 'technocracy thesis', which takes over some of the functions of the dialectic of enlightenment in his thought. This is the belief, widespread at a formative period for the development of Habermas's views, in 'an irresistible autonomization of technology and, hence, of a necessary subordination of social evolution to the causal constraints of technical operations' (p. 248).

For Habermas the technocracy thesis is something like a 'false consciousness of a correct praxis' (p. 218). Thus he does not reject the idea of a self-expanding technical sphere (eventually called the 'System'), but argues that it must be theorized in a conceptual framework that also includes a normatively regulated social 'Lifeworld'. Habermas accepts the claims to legitimacy of the System in its own sphere, its neutrality. Accordingly, he 'bid[s] a farewell to the notion of alienation' and abandons hope in a fundamental transformation of economy and state (Habermas [1992, p. 444]). He strives instead to maintain the boundaries between spheres not only conceptually but also practically. In fact this boundary work is what Habermasian critique offers in place of traditional radical goals.

In Honneth's view, this critique concedes too much to technocratic ideology and so ends up in a reified functionalism. Habermas's early theory (developed in *Knowledge and Human Interests*) suggested a different path, based not on the institutional correlates of the types of action, but on social struggle. In that alternative the distinction between symbolic and purposive-rational action is merely analytic, cross-cutting every type of institution whatever its function. The issue is not norms *or* power, but norms *and* power, as mutually complementary 'double aspects' shaping the forms of every institution (Feenberg [1992a, p. 311]). This approach shatters the framework of Habermas's later theory and justifies a partial return to the more radical formulations of earlier Critical Theory.

To be sure, Honneth continues to frame many problems in terms of Habermas's theory of communicative action. For example, he relies on the notion of distorted communication, distorted, that is, with respect to an ideal of uncoerced agreement. But he applies this concept to aspects of modern life that Habermas had regarded as governed in principle by neutral instrumental rules. Honneth thus reinstates social struggle over meaning and value at the heart of the System. The issue now is not merely the System's range of influence, as in Habermas, but its normative bias.

Among the consequences of Honneth's new position, two are of particular relevance to the question of technology. First, the social model threatens the neutrality of technology, an essential Habermasian assumption from his early essay on 'Technology and Science as Ideology' down to the present. Second, Honneth's argument raises doubts about whether anything like a technocratic evolution is actually taking place. It is not immediately clear how to apply his social approach to the dystopian logic of expanding technical subsystems. But is not technical control of human beings an important source of power in modern societies even if Habermas has failed to explain it adequately with the distinction between System and Lifeworld?

At this point, two alternatives emerge that are not necessarily mutually exclusive.

- (1) One might bracket the technocracy thesis and revive a more traditional account of class struggle, or substitute a theory of social struggle based on determinations such as ethnicity or gender.
- (2) Or, one might reformulate the idea of technocracy in social terms, showing how the dross of technical control is transmuted into the gold of hegemonic power in the course of social struggle.

This essay addresses the second alternative. I agree with Habermas that modern societies are dominated by ever-more powerful organizations legitimated by their technical effectiveness. But this outcome cannot be understood as the triumph of a disembodied 'technical rationality'; rather, it is a specific form of social domination in which some groups gain control

of the whole society through their leading role in technical organizations. The problem is thus to reconstruct the dialectic of enlightenment *inside* a theory of the social instead of substituting the one for the other.

III. From the System to the Organization

Habermas's notion of 'System', derived as it is largely from Luhmann, is peculiarly reified and depersonalized. As Honneth points out, this notion contradicts the findings of organizational sociology which highlights the normative understandings that underlie functional groups and enable them to unite in the pursuit of instrumental goals (cf. McCarthy, 1991, pp. 123 ff.). Neither mere command and obedience nor simple bureaucratic rule following are likely to be effective without background agreements on legitimate purposes, procedures, and human relations. Often informal networks based on these background agreements do the real work, supplementing official organizational forms which have become dysfunctional. Success-oriented action is thus never 'differentiated' and 'autonomous' to the extent Habermas appears to claim, but is always embedded in a normative Lifeworld even in the most thoroughly modernized society.

Habermas's categories are abstractions from this organizational complex. Thus, if something like the technocracy thesis is to survive Honneth's critique, the hypostasized ghosts of self-expanding categories like 'System' and 'Reason' must be swept from the theoretical stage. Then the rationalization of society can be treated as an effect of organizational expansion and control rather than vice versa.

Honneth argues that social theory needs to explain not just the alternative—domination or normative consensus—but the intertwining of both in real situations and institutional complexes.

The institutional forms in which social labor or political administration is organized must then be grasped as the embodiments of a moral consensus formation that the social groups, in their interaction, have (as always) attained through compromise. That is, the apparently purposive-rational organizations are also codetermined by moral practical viewpoints that must be conceived as results of communicative action. (p. 274)

This looks like a promising approach, but there are several ambiguities in Honneth's formulation that must be resolved before it can be applied to a revised account of technocracy. An initial question concerns where he intends to locate the normative aspects of organizational life: primarily in extra-technical beliefs, or in the technical sphere as well? In the former case, where, for example, the moral underpinnings of the organization lie in bourgeois notions of merit, religious faith or national loyalties, the result

is not technocracy but traditional ideological legitimation. The technocracy thesis requires that bias enter the process of consensus formation precisely through technical aspects of organizational life.

But here another ambiguity arises. A hermeneutic of suspicion would immediately seize on the rhetorical value of terms such as 'technical' and 'efficient'. Technocracy might lie in ideologically distorted claims and manipulations based on doubtful credentials, jargon and mystification, artificial monopolizing of information, and the like. While these are clearly effective strategies in the world we live in, it is hard to see how they add up to a catastrophe on the enormous scale claimed by the technocracy thesis.

No, for that, one needs to confront the possibility that the 'technical', the 'efficient' *really* are biased, *really* distort the formation of consensus. Here the 'double aspects' reappear in deepest tension: the technical, as it is embodied in particular machines and systems, is not merely a sphere of universal constraints on the interaction of human beings with nature but is intrinsically normative. This view diminishes the difference Habermas tries to maintain between an instrumental sphere responsive to a generic project of control of nature and a communicative sphere to which ideological distortions are confined. Technology would then have some of the characteristics of ideology, as Marcuse famously claimed. But doesn't this contradict our common-sense belief that some things *really* work and others don't?

Honneth suggests an answer, a technical equivalent of the underdetermination thesis familiar from philosophy of science.

Technical rules incompletely prescribe the respective form of their transposition into concrete actions. Possibilities for action are closed not by a repeated recourse to purposive-rational considerations but only through the additional application of normative or political viewpoints. (p. 254)

If this is so, technology is not governed by species interests but is just another social battlefield. Hence one cannot simply hand over decisions about technical matters to experts and their bosses without risking an outcome biased by their self-interested choice between alternatives that are mutually substitutable from a purely technical standpoint.

With this application of the concept of underdetermination, Honneth opens the way to a *technical turn* which Critical Theory has so far resisted in the wake of disappointment with Marcuse's Utopian proposals for a new science and technology. But Honneth does not himself take this turn. While enormously suggestive, his book shies away from technical issues as much as Habermas's communication theory. The reluctance to engage these issues is understandable but, I believe, misplaced. The last decade of research and political action has so undermined confidence in the autonomy

of technology and technical expertise as to enable us to reopen the old debate on new terms.

This is what I intend to do in the pages that follow. I will try to explain how technical choices can have normative consequences, how they function within groups, and how iterative group processes can take on qualities of self-expansion partially captured in Habermas's systems-theoretic *reprise* of the *Dialectic of Enlightenment*.

IV. Delegation and Consensus Formation

While the strategic role of technology in the modern power system is fairly clear, it is less obvious how that system is legitimated. This is where our approach must be validated by demonstrating the essential intertwining of understanding and control in the social, i.e. more concretely, in an organizational context. We must show how a kind of normative consensus emerges not only out of the sort of social struggles Honneth discusses, but also out of the technical roles and tasks of the different groups that coexist in modern organizations.

The question might be phrased as how mechanisms can be normatively compelling as well as technically effective. Bruno Latour's concept of 'delegation' suggests an answer. Latour argues that norms are routinely embodied in devices that serve to enforce obligations of one sort or another. He offers the humble example of the automatic door closer, which substitutes for the deficient sense of obligation of those who go in and out. The moral imperative 'Close the door' is effectively materialized in the mechanism, 'delegated' to it in Latour's sense of the term (Latour [1992]).

What is the evidence that technical devices embody some sort of normative consensus? Are their effects not better explained in purely instrumental terms? When we 'delegate' the privacy of property to a lock, we substitute an instrumental intervention for an ethical appeal. But that is not the whole story. At the same time, the lock also has a communicative content easily identified by those who see it: the affirmation of ownership, or perhaps of ownership asserted in all its seriousness rather than tacitly presumed.

The examples I have offered so far may seem trivial but more serious issues are raised where the definition of social roles is at stake. As Latour puts it:

I will call . . . the behavior imposed back onto the human by nonhuman delegates *prescription*. Prescription is the moral and ethical dimension of mechanisms. In spite of the constant weeping of moralists, no human is as relentlessly moral as a machine. . . . We have been able to delegate to nonhumans not only force as we

have known it for centuries but also values, duties, and ethics. It is because of this morality that we, humans, behave so ethically, no matter how weak and wicked we feel we are (Latour [1992, p. 232]).

It would be a mistake to dismiss this position as purely verbal. There is a substantive thesis here; namely, the idea that the social bond is mediated by technical objects as well as by intersubjective communication. That mediation supports a *sui generis* form of normativity. In fact, Latour argues, the cohesion of society would be incomprehensible without technical mediations since other normative forms, such as traditions, laws, and verbal agreements, simply could not do the whole job.

Delegation may not exercise the plenipotentiary powers in the moral domain Latour claims for it, but his explanation does suggest an interesting organizational application. The prescriptions contained in devices also define a division of labor and lay out many key organizational roles, such as white and blue collar, command and obedience, conception and execution. To the extent that a generalized consensus consecrates the roster of roles and especially the desirability of good performance in them, technical choices have an undeniable normative impact. And, since power and obedience go along with membership, these choices also legitimate the organizational hierarchy. The recognized value of the organization's products or activities is transferred downward to legitimate its structure and the individual's place within it.

Latour's point can be reformulated in terms of Habermas's version of Parsonian 'media theory'. It will be recalled that Habermas strips Parson's original proposal down to two 'delinguistified media of action coordination', money and power. These institutions simplify and integrate social life by replacing understandings arrived at through discourse with objectified mediations. If the account offered here is correct, technology would be another such medium. Then, in considering technology, one would have to look beyond the generalized orientation toward success characteristic of all purposive-rational action to take into account the more specific normative implications of technical decisions themselves.

With this modification, the theory of communicative action begins to bear a certain resemblance to Foucault's genealogy of power, and in fact suggests a way of correcting the latter's one-sided emphasis on bodily discipline which, as Honneth points out, has a suspiciously behaviorist aspect. If the normative function of devices were recognized along the lines sketched above, then one could make better sense of the texts in which Foucault attempts to define his own double aspect theory of power/knowledge, such as the following description of the Panopticon:

The exercise of power is not added on from the outside, like a rigid, heavy constraint, to the functions it invests, but is so subtly present in them as to increase their efficiency by itself increasing its own points of contact. The panoptic mechanism

is not simply a hinge, a point of exchange between a mechanism of power and a function; it is a way of making power relations function in a function, and of making a function function through those power relations (Foucault [1977, pp. 206-7]).

What is this subtle presence of power in mechanism if not the shaping and invoking of a special type of non-verbal normative consensus?

To me this seems like a promising, indeed almost an obvious line to take. And yet the word 'technology' does not even appear in the index of *The Theory of Communicative Action* (Habermas [1984, 1987]). I suspect there is a deep reason for this reticence. What would happen to the structure of the theory if the most basic form of purposive-rational action proved to be socially relative? Habermas would lose the sharp distinction between communication and work that ensures the independence of the former and guarantees social theory against regression to a productivist labor myth of the Marxist sort.

Despite these legitimate worries, the price Habermas pays for his methodological caution is too high. We live in a world of ecological crisis, generalized computerization, emerging biotechnologies, new forms of electronic communication and military hardware. If critical theory does not address this world and its problems, it will soon become irrelevant. I will therefore continue to test the hypothesis sketched above.

V. The Technocratic Technical Code

The technocracy thesis holds that human beings have become mere cogs in the social machinery, objects of technical control in much the same way as raw materials and the natural environment. Honneth objects quite rightly that the incorporation of human beings into a technical system implies certain normative conditions that are absent where the object of control is a thing. To this I would add further that these normative conditions can be at least partially delegated to technology, and that that is what technocracy is all about.

The revised technocracy thesis agrees with Habermas that in advanced societies considerations of proper functioning and efficiency of the technologies through which progress has been channeled increasingly replace communicative interaction. However, it adds further that the design of these technologies, and therefore the criteria of efficiency, is not neutral but is normatively biased through delegations that favor the hegemonic interests. These most general delegations are embodied in technical design criteria so basic they form a background of unexamined cultural assumptions about technology. I call these assumptions the 'technical code' of the society (Feenberg [1992a, pp. 313-15]). Under capitalism and its communist imitators, this code biases technical decisions toward the cen-

tralization of power and control, systematically diminishing agency and participation, hence also communicative rationality.

Two types of cases show the emergence of a technocratic technical code most clearly. First, there is the substitution of automated systems for workers' skills. Deskilling aims to eliminate the role of workers' initiative associated with traditional craft labor in favor of ever-more top down control. While this is not new, its significance has changed with the weakening of traditional ideological justifications of capitalism, such as labor and property rights. Today the delegation of human competences to machines not only changes the balance of power between workers and employers, but also changes the very meaning of what it is to *be* a worker and therefore to work well in the organization. Opposition to deskilling is opposition to 'rationality', the new dominant ideology.

Struggles to reverse the tendency toward deskilling and centralization of administration are usually one-sided since management controls the innovation process and selects options adapted to its power claims. Weaker parties are in no position to develop alternatives and so it may appear that management's choices are the unique 'one best way' to higher productivity.

But sometimes these struggles succeed in significantly modifying the installation and application of new technologies, dramatizing the normative aspects of what are usually taken for straightforward consequences of progress. In the context of greatly weakened unions, management itself sometimes chooses to return a certain amount of control to the shop floor in the hope of overcoming motivational problems. This too illuminates the arbitrary nature of the so-called technological imperative of deskilling.

Second, public services are increasingly restructured by technical mediations in a form that ensures the dominance of the organization in control of the mediation. Modern medicine has emerged transformed from such a process in recent years. Vast bureaucracies now mobilize the labor of physicians and through them the bodies of patients, the whole structured around control of buildings, instruments, and financial tools such as accounting systems and computers.

The redefinition of treatment as a form of technical intervention alters the roles of physicians and patients and mediates not only the fact of cure but also the normative dimensions of medicine. In this context, the delegation of communicative, or 'caring' functions to drugs is particularly significant. The failures of this new system reveal the arbitrariness of the technical code on which it is based. Escalating malpractice costs are one indication of the problem; however, they do not necessarily imply the need for change in the code but rather demand perfect performance on its terms.

More significant is the political contestation over the nature of modern medicine and illness that occurs regularly in borderline cases such as pregnancy or incurable disease where technical interventions are least

effective in giving meaning to the natural processes they are supposed to control. AIDS victims' demand for access to experimental treatment is a particularly interesting example of attempts by patients to regain some initiative inside a system designed to reduce them to passive objects (Feenberg [1992b]).

A common pattern emerges from these examples. Despite occasional resistance, such as that of AIDS patients, the technical mediation of work, medicine, and other social activities promotes a general consensus around the thesis that modern men and women are disqualified for meaningful social and political participation. The division of labor becomes the model for the division of society into rulers and ruled. As in the factory or hospital or school, so in society at large, expertise legitimates power, and 'citizenship' consists in the recognition of its claims and conscientious performance in mindless subordinate roles. Habermasian 'communicative rationality' is inhibited at the source by these conditions, which are not due merely to colonization of the Lifeworld, but also to normatively contingent technical designs parading in the neutral cognitive-instrumental mask Habermas himself appears uncritically to endorse.

These examples indicate a way of revising the technocracy thesis to take Honneth's objections into account. The very same process that subjects the individuals to a technical apparatus also elicits a tacit normative consensus. In such cases delegation effectively suppresses all public discussion. The assembly line not only forces workers to pace their work according to management's will, it also defines good work as keeping up with the pace it sets. A medical diagnosis and prescription not only holds out a certain prospect of healing, it also defines a condition as illness and signifies the meaning of care. In such instances, controversies could arise that would be difficult to resolve through discussion: What is good work? What claims can the dysfunctional individual make on society? Technocracy is all about the settlement of these potentially controversial issues through delegation.

VI. Action and Consensus Formation

Honneth insists not only on the normative dimension of technical institutions, but also on the role of social struggle in the establishment of norms. But how to do justice to social struggle in this context without falling back into discredited approaches such as class essentialism? Honneth suggests a starting-point:

The collective actors that relate communicatively to one another need not be understood as macro-subjects; they can be understood as social groups whose collective identity itself is the fragile and always threatened product of a process of socialization carried out between individuals. (p. 275)

The inner life of groups must be studied as a hermeneutic process based on the articulation of situations, interests, and spontaneous action orientations in view of establishing shared beliefs and common projects. While this is an appealing theory, it implies far greater instability than advanced societies actually exhibit. Groups appear 'fragile' to Honneth because of the fragility of the mechanism of group formation he identifies: interpretative understanding. As I will show, there are ways of shoring up this mechanism to achieve a more realistic account.

Honneth refers to Lucien Goldmann's genetic structuralism for support. Goldmann's theory derives from the early Marxist Lukács. For both, class formation depends on the articulation of the implicit content of collective action in common understandings ('class consciousness'). Group identification involves generalization from everyday actions in particular local situations to a broader social conception that implies correspondingly broader (class) solidarities and actions. This is a special type of cognitive procedure, distinct from theoretical reflection, for which action is not merely action and the local is not merely local but both are grasped metonymically as displacing a larger framework of social determinations (Feenberg [1988]).

To apply the reflexive theory of consciousness to the problem of technocracy requires two significant breaks with the traditional Marxist approach: first, class actors must be reconceptualized in terms of their roles in the inner life of modern rationalized social organizations such as corporations and state agencies; second, the actions reflected in consciousness must include not only political and union struggles but also the gestures determined by technical choices. Naturally, these are not the only actions of significance in modern societies, but where technocracy threatens, they overwhelm class identity to such an extent that the organization remains the horizon of action, even oppositional action.

Given these assumptions, what are the consequences of adapting the reflexive theory to the case of technically mediated activities? If the self-understanding of groups articulates their actions, we can show the normative role of technical decisions by reversing the terms of delegation theory and introducing it into the account of organizational consensus.

As discussed above, delegations are normatively rich. They define what ought to be in establishing frameworks for action to which all members of the organization are committed by their very belonging. Hence once a device has been successfully installed, the prescriptions it bears can be raised to consciousness as a concrete content of the normative consensus underlying the organization.

The technical code which shapes the design of artifacts is thus simultaneously the basis of an organizational consensus awaiting articulation. Making it explicit in a technocratic group consciousness stabilizes the group

by giving it a firm basis for coordinated action. When problems and conflicts arise, management can often defuse them by reference to the technical requirements of the work process or the challenge of competitor's technologies. Subordinates are recruited into an explicit normative consensus concerning behavior and goals by such strategies, which resonate positively with the evident facts of the case. The frequent, even predictable, success of these strategies explains why, instead of the fragile and shifting allegiances Honneth projects from a purely hermeneutic theory of group formation, modern societies are structured by relatively stable organizations.

VII. Underdetermination and Operational Autonomy

These considerations take us far along the way toward reformulating the technocracy thesis in the social, but not quite all the way because we still need an explanation for the accumulation of technocratic power in a self-expanding rationalization process. This is the sort of problem in social dynamics that is frequently addressed with functionalist or deterministic methods. Such approaches are reassuring: even if we do not like the direction in which the arrow of time is pointed, the process of development is rational, necessary, dictated by system or technological imperatives. Honneth charges Adorno, Foucault, and Habermas with substituting functionalism for an account of the social struggles in which the increasingly uneven distribution of power is actually decided.

I am sympathetic to this critique in so far as it restores the contingency of the social order and therefore also the potential for effective resistance. But Honneth's argument fails to explain the obvious fact that control of technology serves as a power base in advanced societies. I believe this is because he overlooks another type of system effect that is neither functionalist nor deterministic.

Not all long-term cumulative social processes are responses to functional imperatives; some of the most important result from positive feedback cycles. Modern societies are full of examples: the workings of inflationary expectations, the self-fulfilling prophecies of currency markets, the snowballing effects of urban decline, and so on. I argue here that technocratic power is of the same type, a foundationless, contingent, but nevertheless unidirectional developmental tendency.

The concept of underdetermination is once again useful for my purpose when given a Marxist twist. Marx notes that capitalism liberates the technical selection process from tradition. He shows how the replacement of traditional techniques and division of labor founds a new type of organization—the enterprise—and creates within it a new post in the division of

labor - the entrepreneur. This process is the cumulative result of introducing methods and techniques that reinforce the capitalists' control over the labor process. Eventually, the replacement of workers' competences by machines consolidates the capitalists' power in the new organizations they have created. Rationalization theory and its various descendants—critiques of enlightenment, power/knowledge, technocracy—generalize from this model to explain similar concentrations of power wherever instrumental rationality mediates social activities in modern societies.

Unfortunately, Marx's ideas about technical progress are vague and subject to contradictory interpretations. If, as is widely assumed, he was a technological determinist, the failure of proletarian revolution would irretrievably refute his theory. However, there is room for doubt about Marx's position (Feenberg, [1991, ch. 2]). If, as he sometimes suggests, technological development is underdetermined, with class power playing a role in deciding the direction of progress, then his analysis of capitalism bears interestingly on technocracy.

In this event, technocracy is no mere effect of technological imperatives but must be explained socially and politically. And in fact Marx's description of technical progress in *Capital* implies an explanation. He argues in several passages that the choice between technical alternatives is made on social rather than technical grounds. The capitalist aims not only at the accumulation of capital, but also at control of enterprise. To remain in charge, his technical decisions must reinforce his power and preserve his initiative in making similar decisions in the future. Hence he will introduce no new device, no matter how productive, that diminishes his control.

This is apparently a significant constraint and gives capitalist technical progress its specific direction. Marx even claims that '[i]t would be possible to write quite a history of inventions, made since 1830, for the sole purpose of supplying capital with weapons against the revolts of the working class' (Marx [1906, 1, p. 476]). With passages like this in mind, it is not difficult to construct a non-functionalist systems theoretic alternative to traditional Marxism. In this new interpretation the possession of technical initiative builds on itself much as the possession of capital does, without any deeper level of rationality founding the process.

The chief advantage of this approach is that it leaves a role for social conflict in the technical sphere. If otherwise comparable technical alternatives have differential effects on the distribution of organizational power, it is not surprising to discover that the choice between them often becomes the object of intense struggle. This has been the case with deskilling and medicine, as discussed above. Similar situations of conflict over technical choices appear in education, transportation policy, mass communications, domestic telecommunications, and many other spheres. Here too the extension of organizational control is mediated by technical choices, and on

occasion resisted from below. To the extent that our society is in fact technocratic, this is due to the contribution of these struggles to the formation of a technocratic consensus through the defeat of these struggles.

I use the term 'operational autonomy' to describe the accumulation of power through the iterative selection among viable technical alternatives in view of maximizing technical initiative (Feenberg [1991, pp. 28-29]). The preservation and enlargement of operational autonomy lies at the heart of the capitalist technical code. Any society in which technical development is governed by this code will exhibit the chief traits of capitalism regardless of its property system or political arrangements.

Something like this iterative process of successive rationalizations might explain the rather mysterious 'subjectless' evolution of modern society in Foucault. He describes in great detail the disciplinary system in modern organizations such as prisons, clinics, schools, and factories, but leaves us in some doubt as to the nature of the 'capillary' spread of disciplinary techniques from one institution to another. Honneth understands Foucault to argue that this development is a functional response to population and economic growth, but might it not just as well be due to the self-perpetuating imperative to preserve control and technical initiative?

Reflection on Foucault's theory also reveals an ambiguity about this process which helps to explain why technocracy is often conceived outside the context of social struggle, as it is in Habermas. Operational autonomy is at once a description of agents and of the social structures that empower them. In making technical decisions, capitalists operate relatively autonomously with respect to traditional codes; at the same time these decisions create a centered structure from out of which just such autonomous decisions can be made. When the organization is viewed socio-historically, the focus is on the capitalists' active role in introducing techniques favorable to their own growing technical initiative. But viewed structurally, the capitalists' place in the organization is laid out by the design of the techniques they employ. (The same could be said of bureaucrats and managers in state-owned or non-profit enterprises.)

Since communist systems too are based on operational autonomy, some observers have proposed that a 'new class' similar to the bourgeoisie has taken power in them. However, it is equally plausible to abstract altogether from the role of class agents, since their differing ideologies and property rights are irrelevant, and to focus primarily on the structural facts of the case. Technology, it appears, requires hierarchical administration whatever the political system. Here is the origin of many common formulations of the technocracy thesis.

Little is changed if the formula is reversed, as in Foucault, and technology (e.g. the Panopticon) deduced from a structure of (disciplinary) practices conceived as founding for their agents and objects. In either case the theory

ends up affirming the supremacy of the structure of instrumental action over the social. What is obscured in all these formulations, of course, is the essential role of agency and norms in any underdetermined system.

VIII. Conclusion: The Technocracy Thesis Revisited

Three aspects of a revised technocracy thesis emerge from this discussion of Honneth's book: (1) the distortion of the process of organizational consensus formation by 'delegating' normative understandings to devices, (2) the role of the articulation of action in that process, and (3) the role of technical underdetermination in the accumulation of technocratic power.

Technocracy results from the systematic, long-term selection of those technical alternatives that favor hierarchical control. Devices that can be owned and introduced at strategic times and points can also be used to transform the normative structure of organizations. Such delegations embody a new normative consensus in the apparently unchallengeable medium of technical advance.

The technocracy thesis can now be reformulated as the ever-widening use of technical delegations to consolidate and legitimate an expanding system of hierarchical control. As large-scale organizations come to dominate much of the social process, the significance of operational autonomy grows proportionately. What were formerly rather specialized internal functions of institutions such as workplaces or prisons become general features of social life. Organizations are encountered at every turn busily seeking to resolve normative disputes through technical delegations that effectively establish their power and legitimacy. To the extent that such organizations proliferate and grow, the technocracy thesis gains relevance to more and more aspects of social life, justifying the dystopian projections of the dialectic of enlightenment.

The extrapolation of such a system into the future paints a gloomy picture indeed. Yet this is not quite the picture found in Adorno or Marcuse of a 'one-dimensional' society lacking a space for social conflict. Operational autonomy is the result of group practices that can be contested in the social domain through the emergence of new groups and challenges. Delegations can be problematized, although with difficulty, as we have seen in a variety of struggles over work organization, medical policy, and the environment in recent years. A new *technical public sphere* is emerging in which the normative content of technical decisions is brought to the surface far more frequently and systematically than in the past. Although the expanding technocracy is a real threat, it is not an irresistible force. An account of it needs to be incorporated into a contemporary 'Critique of Power'.

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