Business Process Reengineering Reappraised: The Politics and Technology of Forgetting

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Abstract

In this paper, we reappraise the phenomenon of business process reengineering through our own recent case study and survey findings, and through developing an interpretivist account of its appeal and content. A preliminary assessment questions what is actually being achieved under the label of BPR and the efficacy of the methodologies and tools available. We then argue that its claims to radicalism and novelty are exaggerated, provide an externalist account for part of its appeal, together with locating BPR as a form of utopian thought applied to work organizations. We then deepen the analysis by suggesting how its essentially political origins, aims and characteristics link inextricably with the high importance management commentators give to the role of information technology as a catalyst and consolidator of radical change in how work is organized and performed. A key concept throughout is that of deracination — the rooting out of the past. In the view that we develop, a significant impetus within BPR is toward a technology-supported deracination that requires a collective forgetting.

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On his return from Troy, Odysseus' ship became separated from the rest of the Greek fleet and ended up on the coast of Libya. There, a group of inhabitants known as "the lotus eaters" existed whose consumption of the flowers of the Lotus plant made them forget everything except the desire to eat more Lotus flowers. Some sailors succumbed to the temptation and had to be forcibly returned to the ship. [Story in Homer's Odyssey]

1. INTRODUCTION

There can be no doubting the popularity of Business Process Reengineering (BPR), though a variety of different terms are in use to describe BPR activities, including for example process innovation (Davenport 1993), business process redesign (Short and Venkatraman 1992), business reengineering (Spurr et al. 1993) and combinations of such terms. In the United States, a 1993 Deloitte and Touche survey found the average Chief Information Officer involved in 4.4 reengineering projects (Moad 1993). In the United Kingdom, a 1995 survey found some 59% of UK organizations planning or undertaking something called BPR, and all surveys showed increasing BPR activity throughout the 1993-1995 period (see for example Preece and Edwards 1993; Price Waterhouse 1994; Willcocks 1995b). Allied to this popularity are some startling claims for what BPR must, and can, achieve. For Hammer and Champy (1993b), BPR is nothing less than "a reversal of the Industrial Revolution....It isn't about *fixing* anything [it] means starting all over, starting from scratch...the alternative is for Corporate America to close its doors and go out of business." Again, the new approach will, we are told,

drive down the time it takes to develop and deliver new products, dramatically reduce inventory and manufacturing time, slash the cost of quality and win back market share....The following changes are possible: 30-35 percent reduction in the cost of sales; 75-80 percent reduction in delivery time; 60-80 percent reduction in inventories; 65-70 percent reduction in the cost of quality; and unpredictable but substantial increase in market share. [Ligus 1993, p. 58]

Most commentators add that information technology is, or should be, a critical enabler, in some cases a major driver, of radical reengineering projects (see for example Bartram 1992; Davenport 1993; Hammer and Champy 1993a, 1993b; Heygate 1993, 1994). However, despite some high profile cases of success, these claims are as immodest as the reliable data is difficult to find.

In this paper, we reappraise the phenomenon of business process reengineering through our own recent case study and survey findings, and by consolidating and developing several strands of our own thinking. In a preliminary assessment, we question what is actually being achieved under its name and evaluate both the nature of the phenomenon and why it is so popular. We argue that its claims to radicalism and novelty are exaggerated and locate part of its appeal as a form of utopian thought applied to work organizations. We then deepen the analysis by suggesting how

its essentially political origins, aims and characteristics link inextricably with the high importance management commentators give to the role of information technology as a catalyst and consolidator of radical change in how work is organized and performed. A key concept throughout is that of deracination — the rooting out of the past. In the view that we develop, a significant impetus within BPR is toward a technology-supported deracination that requires a collective forgetting. This forms both an essential part of its appeal, but also, if actioned, creates a number of major difficulties that inhibit the regaining of the business paradise so manifestly lost, at least according to BPR's main progenitors such as Champy (1995), Hammer and Champy (1993a, 1993b), and Johanssen et al. (1993).

2. REVIEWING BPR: A PRELIMINARY CRITIQUE

BPR is usually described as a means of facilitating significant, even fundamental, change in the way an organization operates. A key element is a focus on process, usefully defined by Davenport as a structured, measured set of activities designed to produce a specified output for a particular customer or market. The BPR activity described in the literature varies in the scale and type of change contemplated (Jones 1994). Central to BPR practice is a holistic approach to strategy, structure, process, people and technology.

BPR as an analysis, a set of prescriptions for management, and as practice can be assessed in several ways and at several different levels. One concern is to compare the exhortations against what managers claim to have achieved in BPR programs. Hammer and Champy estimated a 70% failure rate for the radical reengineering efforts they had observed, though this figure was not rigorously arrived at, and “implied nothing about the expected rate of success or failure of subsequent reengineering efforts” (Hammer and Stanton 1994). Two US studies show most reengineering projects consistently falling well short of their expected benefits (Hall, Rosenthal and Wade 1993; Moad 1993). In the UK, recent case study research found dramatic improvements in some companies, but documents these examples as few and far between (Bartram 1992; Harvey 1994).

Our own 1995 research in 168 UK-based organizations adds to this picture. High risk, radical BPR approaches were generally not being taken. One indication of this was the low size of spending, with 43% of medium and large organizations each incurring BPR related expenditures of under £1 million. Many of the processes being reengineered seemed to be existing ones to which improvements were being sought rather than those identified as a result of a radical rethink of how the organization needed to be reconfigured and managed. Radical BPR is portrayed as achieving sizeable job losses yet we found that, for all completed BPR projects and all types of process, staff redundancies averaged less than 5% of total BPR costs (see Willcocks [1995a, 1995b] for detailed reviews of the survey data). Generally, whatever the process being reengineered, organizations did not seem to be aiming high when they looked for improvements from BPR. There may well be a cause and effect here, with organizations aiming low and hitting low, because the actual improvements being achieved were also relatively low. The best claimed performance on actual improvements were found to be with core processes. Support, management and cross-boundary process reengineering produced consistently lower improve-

ments than these. Very few organizations were achieving what could be called "breakthrough" results. Thus, of the organizations that had completed BPR programs, if a relatively conservative benchmark of significance of 20% profitability gain, 20% revenue gain and 10% decrease in costs of doing business is used, only 18% of organizations had achieved significant financial benefits from BPR on all three measures. Organizations were achieving, and in most cases aiming for, tangible improvements rather than radical change. The picture of discontinuous change represented in the BPR literature is not clearly underscored in the reported BPR practice.

A second approach is to assess the means by which BPR programs are meant to be accomplished. A prime question raised by the multidisciplinary holism at the heart of BPR study and practice is whether there are robust methodologies and tools available to facilitate the outcomes required from BPR activities. Certainly there are plenty available, including methodologies for developing the enabling role of IT and ones developed from diverse disciplines such as industrial engineering, software development, operational research and systems analysis, change management and the quality movement (as examples only, see Barrett 1994; Belmonte and Murray 1993; Couger, Flynn and Hellyer 1994; Davenport 1993; Harrington 1991; Jacobson, Ericsson and Jacobson 1995; Morris and Brandon 1993). The conclusion has been that there are many approaches, methodologies and tools more or less useful, but that bringing together the offerings from such diverse fields has so far proved difficult and adds up to an immaturity and a lack of integratedness on the methodological front (Earl and Khan 1994; Klein 1994). This is complemented by our own findings. Respondents registered considerable difficulties in finding a methodology that worked for BPR design phases and listed weaknesses in redesign methodologies as one of the main barriers in BPR programs. In particular, formal methodologies were often found less than helpful, likewise what were cited as "methodology vendors" (Willcocks 1995a).

A range of commentators point to the rigor and structure that methods can bring, but also to a number of downsides relative to other approaches (see for example Earl 1993; Mintzberg 1994; Peters 1987). Goals can become easily displaced into serving the method. Often the adoption of methods, together with external consultants, is a sign of an immaturity in the organization's ability to manage change projects. Methods-driven approaches can also encourage inflexibility and one-off, "initiative" approaches, and push out the learning and incrementalism and attention to social and political processes identified as vital where new and radical change is being undertaken (Craig and Yetton 1994; Davenport and Stoddard 1994). In case study research in four organizations, we found the methodologies adopted were often partial and handled some aspects of what should be a holistic approach better than others (Willcocks and Smith 1995). Frequently, IT-based change activities have utilized methodologies that focus on information flows and processes, and are based on systems analysis techniques, but in such a way as to marginalize human, social and political processes and issues (Clegg, Waterson and Carey 1994; Walsham 1993). Our own UK survey found such predilections often flowing into how the increasing number of IT-enabled or IT-driven BPR projects were being handled (Willcocks 1995a). Indeed, what emerges from the BPR literature itself is the frequency with which failure is related, among other reasons, to mismanagement of human, social and political issues and processes (for examples only, see Belmonte and Murray 1993; Moad 1993; Thackray 1993). We will argue later that the reasons for these failures may well be imbedded not just in the methodologies adopted, but also in the political resonances and ramifications inherent in how BPR is conceptualized, constructed as a change process, and operationalized.

2.1 Toward an Interpretivist Account

A further, less instrumentally-orientated, approach to assessing BPR is to investigate the claims of BPR and the analysis and interpretation in which these claims are set. Much of the rationale for BPR has been developed initially in a North American context, then generalized across the developed economies. The focus can be summarized as: How did corporate America lose its way in the business Paradise and how can that business Paradise be regained? The argument underlying much of the BPR management literature suggests that current failure is a direct result of previous success under Taylorite and Fordist work regimes, and a radical break from current managerial practices is required (Hammer and Champy 1993b; Harrington 1991; Johanssen et al. 1993). The BPR approach is presented as simultaneously necessary, radical, holistic and novel.

We have argued elsewhere that the eleven individual changes that make up BPR, at least as detailed by Hammer and Champy, are hardly novel — each has previously appeared, if in a different guise (Grint 1994). As one pertinent example they list “developing IT as an essential enabler of the reengineering process”; however, the concern to exploit IT has grown in importance on the management agenda over two decades along with increasing technological capability and price/performance (Grint and Woolgar 1995). Earl and Khan and Willcocks and Smith, in case study research on IT-enabled reengineering, also support the case that there is much that is not so new in BPR, although there are some novel combinations of old elements. In practice, as we will argue, it may not be the novelty of BPR in terms of a practice, but its stress on transformation and difference that more fully explains its appeal to, and modified adoption by, a corporate audience.

An externalist account is useful here, in that it focuses attention less on whether the *content* of reengineering is radically different and demonstrably superior to anything that went before, and rather more on *why* the package is effective in its particular envelope of space and time. That is, why has reengineering taken off at the beginning of the 1990s and why is it even more popular in the USA than anywhere else? BPR’s popularity, of course, has precedents as far as managerial philosophies are concerned. Moving through Taylorism and Fordism, human relations and neo-human relations, each finding a resonance with external events, and for each of which an externalist account can be given, one can posit the arrival of a fourth wave, the culture of excellence approach where the limits of modernism and Fordism are perceived as the stimulus of change. Reengineering, in this perspective, is the summation of the fourth wave, and BPR can be read as portraying an external and internal crisis to which BPR can provide a manageable, “clean-slate,” response (for a detailed exposition, see Grint 1994).

The neatness of BPR as a rhetorical explanation and, on our reading, what partly accounts for its phenomenal popularity, lies in how, as a self-presented “new” organizational and management idea, it renders an account of both problem and solution and sets up sympathetic “resonances” with related developments in and beyond the world of business. Furthermore a particular appeal lies in juxtaposing the washing of hands inherent in the “clean slate” approach, together with a representation of the novelty element in BPR as, paradoxically (and paradox also has its attractions), historically rooted in American culture. Success can be achieved not through breaks with tradition but through a radical return to tradition. That the USA’s retrospective ideals, manifest in such rhetorical calls as “back to basics,” “stick to the knitting” and “protect the core

business,” appears to have had only limited success can then be read as a result of either not being radical enough, not reengineering properly (Hammer and Stanton 1994), or of not returning to the roots of American tradition. Hence:

[BPR] isn't another imported idea from Japan...[it] capitalizes on the same characteristics that made Americans such great business innovators: individualism, self reliance, a willingness to accept risk and a propensity for change...unlike management philosophies that would have “us” like “them,” [it] doesn't try to change the behavior of American workers and managers. Instead, it takes advantage of American talents and unleashes American ingenuity. [Hammer and Champy 1993b]

To arrive at this conclusion, a certain amount of cultural manipulation is required if the resonances between the idea and the particular culture concerned are to be clear. For example: BPR is supposed to be about teamwork not (American) individualism; it is supposed to be about starting to risk change — so how can change be an element of the US culture; it is supposed to be about radically increasing the level and content of supportive social networks, not about American individual self-reliance. In effect, what counts as important aspects of culture can be interpreted afresh by those who seek to change it.

On this reading, reengineering, at least as represented in the main populist accounts, rests on an interpretation and use of the rhetoric and practice of reengineering that is fundamentally political. Reengineering attempts to provide a new discourse with which contemporary developments can be simultaneously explained and controlled. Following Foucault, one can preface the argument developed below by suggesting that the process of discursive formation necessarily implicates both knowledge and power, theory and practice (Foucault 1980; Wolin 1991). This raises a prime issue: the extent to which the “back to basics” and “return to the roots” movements also implies a “back to politics” movement. As with “culture” and “excellence” in the 1980s BPR rhetoric and practice emerge as ways of talking about and conducting political activity by seemingly other, more acceptable, means. Below we will develop further three aspects of this theme: the political resonances of BPR as deracination; the role of technology in this and how its analysis can be developed; and finally, how BPR's appeal and purpose can be interpreted as essentially about an IT-enabled politics of collective forgetting.

3. BPR AND DERACINATION AS POLITICAL INTERVENTION

In this section, we use the idea of deracination — to pull up by the roots or to remove from a natural environment — to consider BPR. Like so many forms of organizational change, BPR is sometimes premised upon deracination in its assumption that the uprooting of organizational norms and traditions is a necessary prerequisite for radical increases in productivity. This uprooting not only relates to the organizational form — whether it be flattened hierarchies or teams or whatever — but also to the displacement of “normal” management practices. In effect, BPR is adopted and deployed as if office politics either do not, should not or will not exist in the reengineered corporation. In the words of Johansson et al., for example:

[Managers] should measure everything they can....Once managers know what changes have to take place...they will start to influence the behavior of staff, focus on results, and release their creative talent. They also start changing their roles becoming less concerned with control and instruction, and more concerned with challenge and discussion....With this change of management style, *organizational politics can be cast aside*. [p. 202, quoted in Padulo 1995, p. 305, emphasis added]

From the beginnings of industrial capitalism in the late eighteenth century in Britain, management tasks and causal explanations have been locked into models of rational behavior ultimately embedded in the operations of the market: managers do what they do because the imperatives of the market require that it be done. According to Hales (1986), managers achieve this by leading, liaising, monitoring, allocating resources, maintaining production, maintaining peace, innovating, planning and controlling. In other words, managers manage the organization for the benefit of all or for the benefit of the shareholders or for the benefit of stakeholders. Whichever beneficiaries spring to the fore, there is often one group singularly missing — the managers themselves.

At the same time, there have long been arguments that management is as much a political process as a rational one. From both descriptive and critical perspectives, management as a political activity has a considerable and well-documented history (as examples see Bendix 1956; Baldamus 1961; Child 1972; Dalton 1959; Jay 1967; Hannaway 1989; Marx 1954; Stewart 1983). If organizational life is as Machiavellian as some of the literature suggests, then attempting to inhibit this is clearly a difficult task. On our reading, BPR is an essentially political intervention — normative, metaphorical, and practical — into work organizations.

That the conceptualization and analysis of power are important in studying BPR emerges strongly from our recent survey work. Four of the top five, and seven of the top ten, most significant barriers to BPR reported by the respondents related to human and political issues, broadly conceived. As far as interest groups were concerned, lower level employee fear and resistance were rated by managers themselves as much less significant barriers to BPR than middle and senior management. This seemed to be related to the relatively greater power middle, line and senior managers claim to have in the prevailing cultures and political structures in the organizations under review. The finding on the criticality of political/human issues in BPR was endorsed when we asked respondents to identify the critical success factors and what they would have done differently in their BPR programs. Six of the nine top critical success factors related to human/political issues: top management support, gaining employee buy-in, project management, implementation style, communication processes and establishing the need and the levers for change. The strongest single finding when respondents were asked what they had learned from their BPR experience can be summarized as pay much earlier, focused attention to the human and political issues inherent in BPR (see Willcocks 1995a).

Despite this, most conventional perspectives on organizational decision making and action, including those of the main BPR progenitors in the management literature, are predicated upon a very traditional theory of power. These perspectives tend to imply that where organizational power is in the hands of an individual or a small elite, then power emanates from the center to the

periphery with the causal influence similarly centrifugal (see Handy 1985). In practice, if subordinates themselves do not act, then a leader has little power; only as a *consequence* of subordinate actions can leaders be deemed to have power. Our own evidence suggests the difficulty that a BPR program can then run into: middle and line management resistance was the first, and the prevailing culture and political structure the fourth most significant barrier experienced in BPR programs. Even assuming senior management support for BPR, it inevitably runs into political problems. Power, in this perspective, therefore, is contingent upon the production and reproduction of a network of associations that facilitates “acting at a distance” (Latour 1986). Thus, power is a consequence of action, rather than a cause of action.

This shift from the “principle” of power to the “practice” of power, as Latour (1986) calls it, or from power as a possession to power as a relationship, as Foucault’s writing implies (1980), also suggests that subordinate action only occurs through the interpretation of self-advantage by the subordinate: subordinates obey because they consider it to be in their self-interest to obey. In turn, it is likely that the command of the leader will become distorted through what Latour calls the “translation” process: not only are leaders dependent upon their subordinates but a subordinate’s translation of the edict may well prove to be a distortion of the leader’s intention. The implication of this is that, rather than the rays of power spreading out from the center to the periphery in a determinate and unmediated fashion, they are both highly contingent and the subject of constant interpretation and renegotiated. Such a revision in this context implies that the existence of policies or rules does not ensure the enacting of such policies or commands. Moreover, difficulties in BPR initiatives may lie in the misrecognition of power: if subordinates are ultimately in control of their own destinies, then whether BPR — or any change program — fails or succeeds is ultimately dependent upon them being persuaded to act in particular ways. In practice, as Giddens (1984) describes, a dialectic of control operates. It is also useful, following Foucault (1988), to refer to power as a relationship, and therefore to power relations in which resistances are formed right at the point where relations of power are exercised (Foucault 1980). Following these considerations, the power of the deracination concept imbedded in BPR becomes more clear, but so also do the difficulties which come with trying to operationalize the uprooting of the past and planting of the new.

All this brings a great deal of weight to bear on winning the hearts as well as the minds of stakeholders. In the BPR case, rhetoric and emotional appeal become a highly important power resource (Grint 1994; Jones 1994). Rhetoric is implicated in power relations to the degree to which it supports the legitimacy of change. On a broader front, legitimacy is tied in with politics as the management of meaning (Pettigrew 1985; Willcocks, Currie and Mason 1996). The dimensions of the political appeal of deracination concept has even further dimensions when reengineering in its radical versions is located as a particular form of utopian thought applied to work organizations. On this reading, reengineering’s innovation is in the idea that only an attack upon all fronts simultaneously in which every possible institution, ritual, practice and norm is subject to critique and reconstruction, is likely to succeed. The premise of the radical argument is that incrementalism is itself a barrier to change. This does not imply that *all* attempts to change should be utopian in their scale and direction (see Yin 1994) but rather that utopian thought here should be considered rather differently from its traditional role, in More’s *Utopia* and Huxley’s *Island* for example, as fit only for dreamers, fit for “nowhere” (see Grint [1995] for a detailed account).

Thus reengineering can be located as a utopian form of thought, necessarily political in its use during interventions to galvanize organizational practice. However, our own evidence (see above) suggests that the radical extent of the change required explains both the wide rhetorical (but few practical) successes *and* the many relative disappointments with reengineering. On this interpretation, the high degree of uncertainty and risk involved unhinges the nerves of those attempting to reengineer so that they seek more conservative and instrumental approaches to change that appear both less risky and more plausible. This, of course, is precisely the argument made over thirty years ago by Lindblom's (1959) account of "disjointed incrementalism" or "muddling through" and the prior "satisficing" behavior described by Simon (1947). These incisive critiques of rational decision making imply that decision-makers do not approach organizational problems with a clean sheet of paper and an ideal, but with a pre-folded piece of paper and in the light of existing structures and policies (see Jabes 1982).

Of course, such political and organizational realities have already been recognized in several revisionist alternatives to the utopian version of BPR (see for example Heygate 1993; Craig and Yetton 1994; Davenport and Stoddard 1994). Our own survey evidence shows a complementary picture. Politics intrudes in another way. Even if the form and extent of the change is as utopian in its radical result as reengineering suggests, it is unlikely that the end product will emerge as a depoliticized island of paradise in a Machiavellian sea but, rather, as an island where managerial life may have changed but it remains essentially political: there are still careers to be carved out, clans to join and gangs to avoid. Indeed, in the revitalized, dynamic and slimmed down reengineered organization, the transparency of the operations may mean that political life has to be, if anything, more subtly handled than before, but handled nonetheless. If Morris's "News From Nowhere," and the works by More and Huxley were utopian, nevertheless they represented visions where political ideas, interests and actions were strongly represented. In practice, and as our survey evidence suggests, there is nothing inherent in BPR as a process or outcome that depoliticizes organizational life; if anything, politics breed in times of major, IT-enabled change (Pettigrew 1985; Willcocks, Currie and Mason 1996; Willcocks 1995a).

4. TECHNOLOGY IN THEORY AND AS POLITICS

In the management literature, information technology is also a highly significant element in how the Utopia that could be ushered in by BPR would be constructed and run. If most commentators point in BPR theory to IT as a critical enabler of business process reengineering then, notwithstanding the limits of the survey, the data can be interpreted as supporting the claim that IT also emerges from self-reported managerial practice as an important enabler of BPR activity and support for redesigned processes. Thus, in our 1995 survey, 58% of respondents rated the IT role in enabling radical process redesign as "critical," 32% rated the IT role as "marginal," while 10% said IT had no role to play in their BPR projects. For even more organizations, IT played an important role in supporting redesigned processes: 68% of respondents rated IT process support for BPR as "critical" in their organizations. IT, or rather its management, also figured as one of the top ten critical success factors for BPR programs, while technical deficiencies, together with poor IT management, were also experienced as seventh out of the ten most significant barriers to BPR. IT represented between 24% and 45% of total spending on each of the BPR programs we reviewed.

IT was regarded as a critical element in the success of the top “best performers” that had completed BPR programs. This group consisted of the “breakthrough” organizations and the organizations claiming significant profitability, revenue and cost reduction improvements as a result of BPR. In practice, over 75% of the top 30% “best performers” in BPR did see IT as critical in both enabling radical process redesign and supporting redesigned processes. Over half of the top best performers were incurring over 40% of their total BPR spending on IT, though for the others IT spending was average or below for the type of process being reengineered. This finding is based on a small sample but supports research findings elsewhere that there tends to be little or no correlation between size of IT spending and organizational performance (Willcocks 1994; 1995a).

In our reading of the BPR message and the degree of IT utilization, IT has a highly significant role in how BPR is constructed and operationalized. One highly political employment — IT’s role in collective forgetting and remembering — is dealt with in the next section. As a precursor, in this section we reconsider perspectives on technology in organizational settings, with a view to reconstructing the relationship between technology and politics, and indeed the possibility of technology as politics.

One common understanding of technology is as the BPR “black box”: the mysterious and complex amalgam of metal and plastic into which pass problems and out of which flow solutions in a manner both impressive and relatively easy to measure, and therefore understand. In effect, technology is seen as really the only objective, solid, dependable and measurable thing in a world of dynamic change and subjective confusion. Moreover, technology — or at least contemporary information technology — offers a powerful solution to the “reverse salient” (Hughes 1987) which has hitherto inhibited organizational change. The consequence of apprehending technology in this way is to make it impervious to social analysis, to make social analysts “forget” that what the technology is, what its capacities and consequences are, can be the subject of considerable dispute. In fact, one might want to suggest that what counts as the role played by technology is the upshot of a contingent negotiation, not something which can be derived from close perusal of the technology or its human supporters.

This common, and traditional, approach to technology is premised upon an acceptance of one or another statement of the technical capabilities of technology. Sometimes the view accepts that there may be disagreements and ambiguities as to what precisely the technical capacity of any artefact or system is, but holds to the view that some objective view of technical capacity is in principle available and this technical capacity is viewed as inherent to the technology (artefact or system). For this reason, the perspective will be referred to as *essentialist*: technical attributes derive from the internal characteristics of the technology. Moreover, these internal characteristics are (often) supposed to have resulted from the application of scientific method or from the linear extrapolation and/or development of previous technologies.

But what happens if we reconsider technology as no more nor less of a black box than any other element in the BPR equation? This general approach has been referred to as *anti-essentialist* (see Grint and Woolgar for an extended review of this approach). This encompasses a broad church of perspectives, including “social shaping” (e.g., MacKenzie 1990), “social construction of technology” (e.g., Bijker, Hughes and Pnich 1987; Bijker and Law 1992) and what has been called

“designer technology.” These otherwise different approaches share the view that the nature, form and capacity of a technology is the upshot of various antecedent circumstances involved in its development (mainly taken to include design, manufacture and production). These antecedent circumstances are said to be “built into” and/or “embodied in” the final product; the resulting technology is “congealed social relations” or “society made durable.” Differences between anti-essentialists turn on the specific choice of antecedent circumstances — between for example, “social interests,” the “solutions sought by relevant social groups” and “social structure and the distribution of power.” Although anti-essentialism is characterized by some heated internal disputes, all parties share the aim of specifying the effects of these circumstances upon technological capacity.

One particular approach within the broad anti-essentialist model that seems worth exploring here in detail is Actor-Network theory. Actor-Network theory seems to imply three critical issues need to be “remembered” rather than forgotten. First, the world is composed of “hybrids” (Latour 1993) rather than discrete elements of the social and non-social. In effect, a world full of naked and isolated humans is as unviable as one full of autonomous technologies. There are virtually no conditions under which humans exist except within networks of other humans and non-humans. These “hybrids” or “Monsters” (Law 1991b) run counter to the analytic tradition set up under the procedures and rules of the Enlightenment philosophies (Latour 1993) and pose formidable problems of analysis since our understanding of the world is premised upon divisions between people and things not the agglomerations. They are also problematic because our tradition has been one in which the specific “effect” of any variable can be readily assessed.

However, when we reconsider the world of hybrids, attempting to measure effects becomes extraordinarily difficult. One problem that is particularly pertinent here has already been alluded to: how can we differentiate between the “effect” of IT in the reengineering process and the “effect” of all the other elements? Since BPR is, by its very nature, a holistic hybrid, it becomes an impossible task to evaluate the significance of the discrete elements. Traditionally, of course, we persuade ourselves that, because we can assess the capacity of a technology, we can assess its impact. Relatedly, while we can grasp an objective view of technology we are forced to remain with subjective views of the human element. Thus we are forced to conclude with only tentative evaluations of the whole even if we accept that the result is a consequence of the mixture of human and non-human.

However, as a second point, Actor-Network theory suggests not just that a holistic analysis is necessary but also that we should avoid “switching registers” (Law 1991a, p. 8) when we move from analyzing the human and the non-human. This symmetry of analysis runs not just counter to the entire Enlightenment but has profound implications for understanding the significance of both the human and the non-human. Callon (1986), for example, in his account of certain French scallops, poses it in a counter-intuitive form that talks of the “interests” of the scallops in aligning themselves to one particular actor-network rather than another. The significant point here, for our purposes, is not whether he *really* means that scallops can have interests or whether this is a mere rhetorical flourish but the impact of this approach on our understanding of the human. We may dismiss Callon’s seemingly arrogant attribution of interests to scallops but might this merely reflect our more traditional — and equally arrogant — attribution of interests to other humans on the basis of a similarly thin veneer of knowledge and understanding? That is, since we probably know

as much about the *real* interests of scallops as we do about those of other people, perhaps we can learn from Actor-Network approaches both by discarding the different registers that inhibit understanding and by reconsidering our universally all too easy attribution of interests, cause and effect.

The third aspect of Actor-Network theory that is relevant to our discussion is the notion of the network's strength being derived from the robustness of the links rather than the "inherent" strength or power of any discrete element. This idea of technology being "society more durable" (Latour 1991), or political amber, is especially relevant to BPR's radical claim to enhanced performance since it asserts that the holistic union of the social and technical is the key to the strength and influence of the approach. But to what extent is the radical garnering of a heterogeneous network within BPR premised upon taken-for-granted claims about the capacity and effects of its component parts, when the capacities and effects of both human and non-human elements are themselves the result of constructive, or constitutive, rather than descriptive efforts?

In general, the anti-essentialist approach, and particularly Actor-Network theory, has enormous policy implications for technology design, development and use and this, in turn, may be critical for explaining the success or failure of various BPR initiatives. However, it is important to note that three key features of the general anti-essentialist approach threaten to compromise its radical potential. The first is the ambivalence associated with the idea of antecedent circumstances being "built in," since this seems to imply that a technology is "neutral" and can be objectively evaluated until such time as the politics or values are built in. Since, to borrow a phrase from Levi-Strauss, technologies always arrive "cooked" and never "raw," it is difficult to accept that a non-evaluative account is plausible. In other words, only if we can forget the political dimension of technology will we be able to analyze it. Yet, since we can only know the technology through the evaluative interpretation such a "raw" analysis is illogical. The second problem is the difficulty in specifying the nature of these "antecedent circumstances." In short, this is to problematize the assumption that "interests" are transparently available to the analyst and do not require considerable interpretive activity. Unless we can be certain that we can "read" the interests of various groups into various technologies, we might be chary of this. The third stems from the view that technologies, albeit those at the end of a cycle of embodying antecedent circumstances — the final stabilized technological products — are still capable of having effects; that is effects which, again, do not require interpretive action — they speak for themselves (see Grint and Woolgar for a detailed critique).

In sum, Actor-Network and other anti-essentialist approaches to technology can offer a more heuristic purchase on the significance of technology to the success of BPR, although they bring a number of compromising problems with them. Only in Actor-Network theory do the "things" appear to have the same status as "humans" in the development of interests. In radical versions of BPR, as among our survey respondents, there is high stress on redesign through the notion of process with IT as critical enabler. We would argue that artefacts — in the BPR case information-based technologies and redesigned processes — can themselves be interpreted as having political properties (see also Winner 1985). Clearly as part of the politics of BPR, "things" as well as people need to change radically, and in doing so the Actor-Network that results can make concrete the repoliticized, reengineered organization. In the next section, we explore more fully how the

Actor-Network can be conceived as being formulated politically in the context of supporting the deracinating thrust in BPR toward collective forgetting and remembering.

5. TOWARD FURTHER INTERPRETATION: DERACINATION AS COLLECTIVE FORGETTING

The process of political deracination finds its ultimate expression in BPR's rhetorical attitude toward organizational culture and history. Indeed, it is in statements and inferences made about the past that analytical elements — such as utopias, non-rational decision making and psychological abdication of responsibility — combine to produce a rhetorical effect of sweeping proportions. While this effect is most apparent in the radical “breakthrough” claims of certain BPR proponents (Hammer 1990; Hammer and Champy 1993b; Harrington 1991; Johanssen et al. 1993), it may also be discerned in the “incremental” prescriptions of various revisionists (Heygate 1993 1994; Davenport 1993). The rhetorical trope in question is BPR's exhortation to audiences that they, and with them entire corporations, forget the past. Before we examine the nature of this appeal in full, however, it is necessary to establish clear conceptual links between espoused “forgetting” and other forms of deracination.

On the basis of a participant observation study of a computer installation, Case (1995) documents an emergent, repeated and prominent pattern of behavior; that is, the failure of designers, programmers and operators to meet deadlines and, ultimately, their inability to deliver a working computer system. The study details a complex interplay of “technical” and micro-political factors which combined to produce an accelerating cycle of “investment without result.” During development of the system under scrutiny, there was repeated “frustration” experienced by participants as various software and hardware elements were deemed to have malfunctioned. Frequently, however, it was not “technical problems” which prevented successful operation, but deliberate political strategies on the part of individuals or coalitions within the host institution and supplying organization. Much empirical and theoretical work supports this finding (Coombs, Knights and Willmott 1992; Markus 1983; Pettigrew 1973, 1985; Pfeiffer 1992; Robey and Markus 1988; Willcocks, Currie and Mason 1996). Our own survey also confirms this general observation and underlines the political dynamics of BPR implementation (see also Belmonte and Murray 1993; Moad 1993; Thackray 1993).

The means by which participants (project managers, systems analysts, consultants, programmers, operators) constructed and rationalized “failure” ranged from momentary expressions of cynicism and sarcasm through to “organizational amnesia” (Case 1995). Metaphorically adapted from psychiatry, this latter notion intentionally invokes an image of “traumatized” individuals turning away from their experience, both mentally and socially. The *Longman Dictionary of Psychology and Psychiatry* defines amnesia as

a partial or complete, temporary or permanent loss of memory due to (a) organic factors....(b) psychogenic factors, as in unconscious repression of painful or traumatic experiences. In the latter case...it serves as a *defense against anxiety and distress*, or as a way of *escaping from specific situations*. [1984, p. 37, emphasis added]

The pathological image of a distressed and anxious person seeking to escape the guilt and pain of their history resonated strongly with observed conduct. Individuals who attempt to flee an unpleasant organizational reality do so through a process of motivational “substitution.” In accordance with Freud’s Pleasure Principle, such socio-emotional flight becomes a form of self-protective rejection (Board 1978; Kets de Vries and Miller 1984). The participant denies an “unfavorable” interpretation of past events and simultaneously replaces it with a more “favorable” account, accompanied by an optimistic set of future organizational possibilities.

The American philosopher and literary critic Kenneth Burke identifies this process of motivational substitution as a generic rhetorical strategy found in many forms of textual expression and hortation. He refers to the phenomenon as “secular futurism” (Burke 1969, pp. 333-335), a notion which is particularly helpful in apprehending BPR’s master trope. Rhetorical moves employed by BPR proponents bear more than a passing resemblance to the patterns of conduct described above. In short, we encounter a peculiar cocktail of cultivated “amnesia” and “utopianism.” The following represents a typical passage:

Reengineering is about beginning again with a clean sheet of paper. It is about rejecting the conventional wisdom and received assumptions of the past. Reengineering is about inventing new approaches to process structure that bear little or no resemblance to those of previous eras. [Hammer and Champy 1993b, p. 49]

Why are BPR proponents so eager to encourage a radical denial and renunciation of the past? As we have noted, much of the literature of the protagonists and commentators points to the potential benefits of “IT-enabled” BPR. Where such an intimate link does exist, it could be suggested that BPR is being sold as an IT solution to an IT debacle. In these cases BPR’s overriding justification derives from the construed failure of past IT investment to deliver promised productivity improvements. Viewed from this perspective, furthermore, BPR literature offers cathartic absolution of the guilt associated with past IT “mismanagement.”

While BPR’s rhetoric demands that its audience forget the past, protagonists themselves are by no means enthusiastic to do so. On the contrary, BPR relies fundamentally on a careful and purposeful reconstruction of the past; one which makes implicit reference to its “sinful” and abhorrent nature. Churchward and Bennett (1993), in their report on BPR and “Work Flow” techniques, for example, cite “spectacular” levels of US expenditure (\$1 trillion) on IT in the period 1980-1989 and question the efficacy of such investment. The management consultant John Pearson (1993), in his BPR sales pitch, quotes US Bureau of Labor Statistics to demonstrate that, despite high levels of “per-information-worker” investment, overall white collar productivity has fallen in the period 1970 to 1992. Likewise, Heygate begins in his paper on IT-enabled restructuring with a direct reference to the failure of past IT promises:

The failure of computer technology to deliver on ambitious promises of bottom-line value, together with a number of conspicuous systems disasters, has led many top managers to question the notion that IT can be used to gain competitive advantage. [1994, p. 137]

In each of these cases the intention is to emphasize how IT solutions have failed to fulfil their promise. Pearson intimates, for instance, that a shared intuition of this painful truth is now being “rationally” borne out. As he puts it, “The gut feeling that despite all these investments in technology, we have not really become more productive; is now supported by various studies” (1993, p. 2).

Such observations focus on the pain of the past in order to set the stage for its victimization and the cathartic appearance of a secular savior — BPR. History is reconstructed so that its various agents (both human and non-human) may be roundly scapegoated by managers in the present. Through their implicit “confession” to having played a part in this despicable drama, audiences are simultaneously offered absolution and a chance to partake of the new technological sacrament.

Nowhere is this logic more plainly evident than in the work of Hammer and Champy (1993b, pp. 49-50). In typically immodest fashion, they contrast their “Manifesto for Business Revolution” with Adam Smith’s *Wealth of Nations*. What they refer to as Adam Smith’s “paradigm” is construed as the embodiment of all that is “evil” about the industrial/commercial past; a kind of secular Satan whose memory has to be exorcized and whose material legacy annihilated. Hammer and Champy “reject” the assumptions of Smith’s “industrial paradigm,” referring to such notions as the division of labor, economies of scale, hierarchical control, and so forth. Such “nasties” are without exception characteristics of a modern, or in their terms “early-stage,” Fordist industrial era. The reader who, likely as not, will recognize within themselves and their organizations a strong commitment to “Adam Smith’s industrial paradigm” is then offered secular absolution and salvation in the form of BPR.

By scapegoating a collective organizational past and recommending collective amnesia, proponents of BPR make available *collective* absolution. IT managers are invited to reestablish their “innocence” and sense of identity through a ritual transference of guilt. What guilt? The guilt accruing from decades of costly errors in decision and implementation. In sum, the billions (pounds, dollars, yen, etc.) “squandered” on IT solutions that have been seen to “fail” or otherwise not lived up to their initial performative “promises.” Would-be believers are being invited, as it were, to be “born again” and to cleanse themselves of taints associated with past managerial misdeeds. The collective forgetting of histories, “amnesia writ large,” thus performs a central role in this rhetorical calculus of “vicarious atonement.” It operates, as in general with political manifestos, to “configure” the past for present rhetorical purposes (Chapman, McDonald and Tonkin 1989). Most conveniently for the priestly suppliers of new “solutions,” it disassociates them from involvement with snake oil remedies of the past, which otherwise might look uncannily like those panaceas presently on offer. All may happily be forgotten and forgiven: “Reengineering is a new beginning” (Hammer and Champy 1993b, p. 2).

We are reminded of a parallel in Greek mythology recorded by Homer in his epic the *Odyssey*. On his return from Troy to Ithaca, Odysseus is blown off course by a tempest and separated from the rest of the Greek fleet. In due course, he arrives at the coast of Cyrene (present-day Libya) where he encounters the legendary Lotophagi — the Lotus-eaters. The peoples of Cyrene are addicted to eating lotus fruit, consumption of which results in their losing all memory save that of the desire to eat more fruit (see Guerber 1994). The hero of the epic, while fortunately not succumbing to the temptation himself, experiences enormous difficulties tearing his companions free from the

seductive malaise of the lotus induced amnesia. Analogously, Heygate (1994, p. 137) refers to "IT's troubling lack of business value" and has no hesitation in suggesting that managerial consumers invest in "new intelligent applications," promising to make good the faults of the old. This logic would presumably extend reflexively to BPR (whether IT-enabled or not). If it has not yet delivered the expected results, it is because consumers have not yet forgotten enough; a malady that is best remedied by ever more copious and conspicuous consumption (see, for example, Grint and Case 1995).

6. CONCLUDING REMARKS : (RE)ENGINEERING FORGETTING

The appearance of the "(re)engineering" metaphor in BPR guise is historically distinct from earlier manifestations of mechanistic imagery in managerial innovations. Even though there are obvious parallels, BPR does not simply replicate the nineteenth century "engineering" spirit of Taylorism. Contemporary (re)engineering takes place in an era of silicon innovation and, correspondingly, derives inspiration from the new technological wave. It is thus not so much a question of *engineering* business processes as *reengineering* them in accordance with the connotations of a post-mechanistic metaphor. In many ways, the micro-electronic revolution heralded an intensification of the spirit of calculation and measurement inherent in earlier clockwork models of the universe. Advances in micro-circuitry supply the material means by which accelerating computational speed and accuracy can be accomplished. These technologies, in turn, have acted as post-Fordist *mise-en-scene* for the development of managerial interventions in the organizational realm.

We have already noted that, in collapsing the common-sense dichotomy between "technology" and "society," Latour (1991, p. 129) suggests that "technology is society made durable." It would be no contradiction, however, to reverse this proposition when we consider how these durable technologies turn back reflexively on their co-creators. Conforming with the demands of a post-mechanistic metaphor, BPR implies that "society is technology made malleable." "Starting from scratch" might thus be apprehended mimetically as, say, the reformatting of a PC hard drive — wiping the memory with a push of the button. In the nomenclature of MSDOS: BPR = del *.* , the implication being that entire complex organizations may purge their collective memories and practices with the same ease as dropping a few file addresses.

The image of BPR's espoused intent to "scratch" or "delete" memory seems all the more ironic given IT's role as facilitator of data storage and retrieval. The increasing "power" of information and communications technology resides in its ability to store ever denser new forms of digitized information at ever lower costs and process it at ever faster rates. An unintended corollary of the enhancement of artificial memory, however, may be a proportionate reduction in the importance of sheerly human memory, culture and history. Viewed in this light, BPR is contributing to the institutionalization and rationalization of a much wider form of memory loss in post-industrial societies. As we have seen, proponents of BPR certainly prescribe a form of "ahistoricity" and organizational erasure. In effect, they entice managerial audiences to indulge in acts of cultural-historical nihilism with little or no regard to the wider consequences.

In his concluding remarks concerning the application of IT-enabled BPR, the protagonist Heygate tacitly acknowledges many of these points:

There is, of course, no way to know for certain how these challenges will play out in any particular case. In an environment shaped by intelligent technology, there are few, if any, hard-wired solutions. Managers will not discover what to do by deducing proper courses of action from first principles. Instead, they will need to experiment and prototype and pilot-test — proactively, aggressively, repeatedly. [1994, p. 147]

In this statement, then, we glimpse the envisioned effects of BPR induced, IT-enabled amnesia. Uncertain, displaced and deracinated entities wander aimlessly in worlds void of organizational and cultural meaning. Their only *raison d'être* is that of commercial necessity. Stripped of volition, their “repetitive” actions merely mimic the quasi-random heuristics of the “intelligent” machines with which they form partial cybernetic connections (Haraway 1991; Strathern 1991). In the absence of a richer social milieu, expression becomes purely one-dimensional, undirected yet emotive. Entities in competition need no other response than naked aggression:

“Don’t automate, obliterate!” [Hammer 1990, p. 104]

“On this journey... we shoot the dissenters.” [Hammer 1993, p. 71]

This final reading perhaps helps to explain, and also provides further insight into the many ramifications and consequences of, the corporate lotus-eating inducements presented in the BPR literature. While organizational politics can be quietly forgotten, it is clear that Machiavelli will still live on.

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