

Organisational learning as structuration: an analysis of worker-led organisational enquiries in an oil refinery

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BASED ON A THREE-YEAR EMPIRICAL INVESTIGATION of an oil refinery, this chapter analyses organisational learning in terms of structuration theory. Structuration is the dynamic process by which an organisation's rules and resources constrain individuals, while simultaneously enabling them to create new rules and resources. This was accomplished in the refinery by small groups of workers who conducted organisational enquiries into how to achieve the organisation's purposes. The results were adopted as new organisational structures (norms, policies and procedures), which were then enacted by the workers. Through structuration, workers were able to exercise agency in redesigning their own work processes, and they emerged as self-directed, autonomous learners, who were knowledgeable about the grounds of their activity.

16.1 Introduction

In recent years, policymakers, practitioners and researchers have been taking an increasing interest in the organisation as a site for learning. One reason for this is the European Commission's policy of promoting higher productivity in industry and greater cost-effectiveness in the public services by encouraging the development of 'learning organisations'. The concept of an organisation that learns and manages change to improve its corporate effectiveness first appeared in the social science literature more than forty years ago (Cyert & March, 1963). Today, the most widely cited definitions of the learning organisation are: "an organization which facilitates the learning of all its members and continually transforms itself" (Pedler, Burgoyne & Boydell, 1991, p. 1), and "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights" (Garvin, 1993, p. 80). Both definitions assign agency to the organisation itself, emphasising its capacity for self-regulation and intentional change and its corporate ownership of knowledge. However, theoretical problems are quickly encountered if a capacity to learn is attributed to such an impersonal entity as an organisation. In most educational thinking, learning is assumed to be a process that takes place within individuals, and not something that happens at the level of 'the organisation'. The concept of organisational learning thus seems oxymoronic to many educationalists and there is widespread reluctance to accept that a distinct form of learning exists that can be described as *organisational*. Some critics even claim that talk of organisational learning is nothing more than management rhetoric for exhorting employees to accept painful industrial change.

The aim of this chapter is to clarify the concept of organisational learning and assert its capacity to empower the individuals who participate in it. Of course, a great deal depends on how we define 'organisational learning'. The present definition draws on a wide range of organisational learning literature, including Argyris and Schön (1996), Senge (1990) and Snyder and Cummings (1992). It also draws on the writer's research into learning organisations in the for-profit and not-for-profit sectors, including the health service (Boreham, Shea & Mackwell-Jones, 2000), the chemical industry (Boreham & Morgan, 2002, 2004; Remedios & Boreham, 2004), the financial services sector (Lammont & Boreham, 2002) and the education service (Boreham & Reeves, 2004). On this basis, learning may be defined as 'organisational' when it meets the following four criteria.

The organisation's members collaborate and focus their activity on a common object. Organisational learning as defined here is an object-oriented activity carried out collaboratively. It can best be understood within the sociocultural model of work and learning (Leont'ev, 1978; Engeström, 1987; Boreham & Morgan, 2004). According to sociocultural theory, 'the object of activity' is that part of the environment which becomes the source of the fulfilment of human needs. When an organisation learns, its members seek fulfilment of their individual and collective needs by striving collaboratively towards such an object or 'corporate goal'. Corporate goals are often expressed in the form of mission statements, targets and indicators, although to count as an object of collective activity, such artefacts must express a genuinely shared vision of what the organisation's members want it to become.

Members of the organisation conduct organisational enquiries to find ways of achieving the corporate goal. On a practical level, organisational learning is based on the conduct of organisational enquiries (Argyris & Schön, 1996). These are specially-constituted task forces of employees whose typical remit is to review the organisation's working practices and devise better ways of achieving its purposes. In a fully functioning learning organisation, employees devote an appreciable amount of their working time to these enquiries, which they carry out in addition to their regular work driving forklift trucks, repairing equipment, etc. This means that the working day has to be redesigned to accommodate this additional activity. There is also an obvious need for meeting rooms, communication aids and facilitation of the collaborative problem solving involved. It is an essential part of our definition of organisational learning that it does not just happen as an unplanned by-product of direct work – there must be a planned programme of organisational enquiries, and the direct work of the organisation has to be reconstituted in order to accommodate them.

The organisation's members participate widely in the organisational enquiries. To count as organisational learning, all levels of employee must participate in the organisational enquiries, not just managers, technical experts and consultants. The present-day learning organisation is often contrasted with the kind of organisation envisaged 100 years ago by Taylor (1911), which concentrated all the thinking at the top of the management hierarchy. Decisions about improvements in work methods were based on scientific investigations carried out by managers and these were imposed on the workforce. In one sense, the Taylorist organisation is a learning organisation because its managers learn by applying the scientific method and the whole organisation has to change its ways in consequence. However, the present-day concept of the learning organisation is based on consensual change, and to

achieve this it seeks to involve *all* grades of employee in a collaborative process of corporate improvement.

The results of the organisational enquiries become the organisation's new norms, procedures and policies, and these are enacted by the workforce. Before the organisation can be said to have learned, it must change its corporate behaviour. Corporate behaviour can be construed as the enactment by the workforce of the organisation's routines – its norms, procedures and policies. Thus, an organisation learns when the results of organisational enquiries are codified as new norms, procedures and policies and the employees adopt them. Learning is attributed to the organisation itself to the extent that the norms, procedures and policies constitute an identity or 'company footprint' which persists over time despite the coming and going of individual members. This is the ontological basis for the claim that there is a distinctive kind of learning that is *organisational*.

16.2 Theoretical background: organisational learning, individual agency and structuration

To recapitulate: organisational learning begins with individual work in small groups and teams on how better to achieve the organisation's purposes. The results are embedded in new organisational structures (norms, policies, procedures) and these are enacted by individual employees. As already noted, the difficulty in representing this as 'learning' is that it does not appear to allow sufficient scope for individual agency. Most of the theoretical literature on adult learning takes it as a cardinal principle that authentic learning involves taking responsibility for determining the goals of one's own learning, but pursuing the *organisation's* goals by participating in *organisational* enquiries seems to contradict this. Thus, in a recent critique of the concept of organisational learning, Fenwick (2001) objects that: "... the organization appropriates for its own purposes the most private aspects of people's worlds – their beliefs and values – and conscripts them for the organization's purposes" (p. 82). She argues that authentic learning involves the construction of meaning out of one's self-in-community, and that organisational learning is "intentionally lifted out of this context" and placed in the context of maximising the company's economic performance (p. 80). In a similar vein, Yayi (2003) argues that, even if the employee is aligned to the corporate objective and strives to achieve it voluntarily, this involves internalising the organisation's values, a process which in his view undermines individual agency: "while traditional organizations control people's behaviour, learning organizations control people's thinking" (pp. 2-3). This critical stance is widely shared by general educators in schools and universities and stands in the way of a full acceptance that participation in organisational learning can constitute an authentic learning experience for the individuals concerned.

In the following pages, it is argued that the threat to individual agency perceived by Fenwick and Yayi is illusory, created by the binary opposition of the terms 'individual' and 'organisation' in everyday talk. This linguistic opposition leads to a conceptual privileging of either the individual over the organisation or the organisation over the individual. As a result, it is easy to fall into the trap of assuming that the agency of the individual will be curtailed if we assign agency to the organisation along the lines described above.

The empirical study reported in this chapter suggests that organisational learning empowered *both* the organisation concerned *and* its individual members. To understand how this could be possible, we need to escape from the conceptual restriction imposed by the binary opposition of ‘individual’ and ‘organisation’. This can be achieved by locating these concepts within the theory of structuration. The central idea in structuration is that a relationship of co-construction exists between individuals and the organisations of which they are members. The rules and resources which constitute an organisation’s structure constrain individual actions in the workplace, while individual actions in that context reconstitute the organisation’s structure (Giddens, 1979, p.70). Structuration is central to Giddens’ project to demolish the dualism of agency and structure, which he sees as a fundamental weakness in contemporary social theory (Giddens, 1984). Many theories of learning are dualistic in this way – consider, for example, activity theory and humanistic psychology, both widely cited by researchers into work-based learning. When work-based learning is construed within the frame of activity theory, the social is privileged over the individual; Leont’ev (1978), for example, postulates that “individual consciousness may exist only in the presence of social consciousness and of language that is its real substrate” (p. 60). Likewise, when learning is construed within the individually focused theory of humanistic psychology (Rogers, 1978), the individual is privileged over the social, and collective learning becomes nothing more than the confluence of many individual learnings. The weakness of both these ways of theorising learning is that they focus on a narrow segment of the complex pattern of transactions between an organisation and its individual members. A structurational analysis, in contrast, addresses the whole picture. It avoids subordinating the individual to the organisation and the organisation to the individual, focusing instead on the dynamic interplay between them. This interplay is essentially a relationship of co-construction.

Representing the individual-organisation relationship in these terms demands a rethink on the nature of organisational structure. In a theoretical move that has become highly controversial, Giddens has proposed a radical redefinition of ‘structure’. Within the theory of structuration, this becomes “the rules and resources recursively implicated in the reproduction of social systems” (Giddens, 1979, p. 6); “the rules and resources implicated in social systems ... which are constraining in relation to situated actors” (Giddens, 1990, p. 301) and a process that is “both constituted *by* human agency and yet at the same time the very *medium* of this constitution” (Giddens, 1984, p. 187). The crucial idea here is structure’s capacity to *form* activity – its capacity for *structuring* rather than its immutability as *structure*. The analysis of organisational learning in this chapter adopts Giddens’ view of organisational structure, focusing on how individual employees exercised agency as learners to produce lasting changes in the structure that constrained them. Importantly, they were able to maintain what Giddens (1984) calls “a continuing ‘theoretical understanding’ of the grounds of their activity” (p. 5) – in other words, they were knowledgeable as individuals, not the organisational zombies which critics of organisational learning such as Fenwick (2001) and Yayi (2003) imply. Their knowledgeable ability was ensured by the company’s huge investment in training and development, by the high level of transparency that was achieved across the organisation about its business plan, current performance, standard operating procedures, etc., and by its determination to devolve the power to act on this knowledge from middle management to ordinary workers.

16.3 Empirical investigation of a learning organisation

16.3.1 The research project

The present section reports findings from a study of an oil refinery and petrochemicals manufacturing complex carried out within the European Framework V research project ORGLEARN (Fischer & Röben; 2002, Boreham & Morgan, 2002, 2004). The research was conducted in regular visits to the site over three years, where interviews were conducted with key informants and observations were carried out in plants, control rooms and offices. The latter encompassed the work of a wide range of employees, including process operators, maintenance technicians, clerical and administrative staff, training staff, refinery analysts, refinery technologists and various categories of manager. These visits were followed by 25 one-hour semi-structured interviews with a wide range of these employees, eliciting personal accounts of their involvement in the company's organisational learning initiatives.

The company is located on a major river in the UK and is part of a multinational oil conglomerate. Its main business is refining crude oil into waxes, bitumen and feedstock, the last of which is processed further into petroleum, plastics, paint, detergents, cleaning fluid and the like. In the early 1990s, the company faced a crisis due to its poor performance against strengthening international competition. At that time it was organised on Taylorist lines, with a hierarchy of managers, supervisors and manual workers and a top-down approach to decision-making. Strong boundaries were maintained between departments and between the many trades and professions into which the workforce was segmented. The bureaucratic nature of the organisation ensured that most employees followed fixed procedures, many of which had hardly changed in 20 years. In short, bureaucratic inertia had made the company uncompetitive. Faced with the threat of closure, it committed itself to a major restructuring, which involved reconfiguring itself as a learning organisation.

16.3.2 The creation of a learning organisation

The main aims of the restructuring were (1) to make the business process more adaptive to changing market demands by creating a more flexible labour process, and (2) to increase quality and productivity by developing a commitment to continuous improvement through worker participation in problem solving and the sharing of knowledge. Today the company publicly identifies 'learning as an organisation' as its guiding principle and declares its intention to 'learn as a company from past mistakes and successes' and 'openly share knowledge and learning within the company'. All employees are expected to focus their activities on the corporate goal of becoming 'the best small refinery in Europe', which has been operationalised as a set of targets set out in a glossy booklet – the site plan. Every employee has a copy of this plan and works towards the targets it contains. These are updated each year by a collaborative process of all-to-the-table negotiation, and thus the object of the collective activity is a genuinely shared one - a set of targets which members of the workforce have set for themselves.

Work has been reorganised so that organisational enquiries are part of the normal work process. Knowledge created through these enquiries is codified as new policies

and procedures, which the workforce adopt more willingly than when they were imposed from above. The earlier pattern of hierarchical communication has given way to two-way communication in team meetings, intranet discussions, open forums on the company TV network and other channels of lateral communication. To create space for workforce participation in decision-making, several layers of middle management have been abolished and more responsibility has been delegated to work teams. For example, many decisions previously made by shift team leaders, supervisors and charge hands (all grades which have been abolished) are now made collectively by teams of operators. At the plant level, these teams decide for themselves how they will contribute to the site plan, and their agreed strategy is decomposed into targets and personal development plans. The latter are sent through to the training department, which operates a greatly expanded programme of training and development, with a major emphasis on supporting individuals to achieve their self-identified learning needs.

16.3.3 The Systematic Approach; an example of organisational enquiry

The driver of organisational learning in the company is the ubiquitous practice of organisational enquiry. In addition to their regular work, such as monitoring control screens, repairing equipment or inspecting plants for leaks, from time to time employees constitute themselves into small task forces, which address issues in the refinery's overall performance and problems encountered in the day-to-day conduct of their own work. These task forces involve all grades of staff, and junior employees can take the lead. Sometimes an organisational enquiry is set up at the behest of management and participation is mandatory, but the majority of the enquiries are initiated by members of the workforce. In this way, employees continuously explore mismatches between expected and actual performance, create new models of the way the work should be carried out and modify working practices accordingly.

The company has implemented several different kinds of organisational enquiry (for details, see Boreham and Morgan, 2002). This chapter focuses on one kind of enquiry, the 'Systematic Approach' - a group problem-solving technique, which employees are encouraged to adopt whenever they encounter a problem in their day-to-day work, or if they think of a way of improving the company's overall performance. Instead of reporting the matter to management, any employee can set up a Systematic Approach group to deal with it him or herself. The employee does so in the knowledge that any proposal for changing the work processes arising from the enquiry will normally be endorsed by management. In this way, employees are empowered to change many of the conditions under which they work. Specifically, the Systematic Approach is an eight-stage problem-solving process comprising: (1) exploring the presenting problem, (2) deciding on the aims of the enquiry, (3) stating intended outcomes, (4) setting success criteria, (5) collecting evidence, (6) working out a solution, (7) implementing the solution and (8) evaluating the solution. All 850 employees have attended a residential course on the use of this technique, and the main stages in the process are displayed prominently on wall charts in most working spaces. Middle managers are expected to encourage basic grade employees to set up their own Systematic Approach groups in response to problems rather than impose a management decision themselves, and as managers, they are able to allocate resources to support these groups. One of the employees described how the Systematic Approach has become part of the culture:

“We tend to use the Systematic Approach now every time we sort of want to look at something. I’d say it’s become part of the culture, in that when we get together now, if we’ve got a problem or we’re having a meeting about a particular issue, we say ‘OK, what’s the Purpose, what’s the Task, what do we expect the End Result to be?’ You’ll hear things like this. ‘What’s our Success Criteria, when will we know we’ve got to the end?’ and I think we do that automatically now.”

Any employee who initiates an organisational enquiry based on the Systematic Approach can obtain support from specially trained facilitators. These are workers with regular jobs in the refinery who have attended a seven-day course on facilitating the Systematic Approach. If requested, the facilitator will attend a meeting and moderate the procedure. One described his role thus:

“The Facilitator job was to go in, lead them along, help them to use the Systematic Approach, say ‘Well, you haven’t actually defined your Task yet,’ and they’d start looking. The one great thing that we use now is the Flip Chart - we never used Flip Charts before - but now if you go into a meeting, you’ll probably see Flip Chart paper all over the room where people are writing things down. And so, you’d sort of move the process on and try and stop the fighting by saying, ‘Hang on. You’ve actually said you know the answer, but really we haven’t got all the information together yet, so let’s park it, let’s put it on a piece of paper.”

The following examples reveal the structuration implicit in the practice of the Systematic Approach.

Example 1

In the refinery, a standard operating procedure typically consists of between four and ten pages of A3, detailing how to carry out an operation such as shutting down a distillation column. Previously, the procedures were written by graduate engineers, senior staff who did not perform the work themselves, but now they are written by the process operators and technicians who do. This is a major change in the organisation’s structure and it was brought about by the exercise of individual agency mediated by the practice of organisational enquiry. The original idea came from individuals who were concerned about the uncoordinated way in which procedures manuals were written. They formed a Systematic Approach group, which decided that all the standard operating procedures needed to be rewritten and that this should be carried out by the workforce themselves. To support them, managers hired an external consultancy to design a procedures-writing methodology (the ‘Procedures Development Methodology’) and structuration is evident in the way the group adapted this methodology for their own use:

“We basically picked the bones out of it, said what was good, what was bad and changed it, and came up with the final format ... so it’s a good process and it does work” (account by employee involved).

Significantly, they changed the name to ‘Procedures and Competence Development Methodology’ because they realised that they needed a way of creating new knowledge and sharing it throughout the organisation, not just a way of writing bureaucratic procedures. The company adopted their recommendation. A more extensive account of this initiative can be found in Boreham and Morgan (2004); the relevance to the present argument is that, operating within the formative structure of the Systematic Approach, workers drew on that structure to create new structure - new rules and resources for the conduct of their work.

Example 2

The Systematic Approach was used when a contractor (an outside firm installing new plant on the site) reported difficulties in obtaining materials from the company stores. The company's construction coordinator received the complaint and convened a Systematic Approach group, which included members of the departments involved (stores and procurement), the contractor himself and the contract manager. After agreeing the aim of the meeting and the success criteria, the participants tasked themselves to gather further relevant information. When the procurement department and the company stores reported on their procedures for supplying material, it emerged that company employees were given preference over contractors and that this was the root cause of the problem. Up to that point, none of the departments involved had realised that the existing structures were causing difficulties for outside firms. The Systematic Approach group recommended establishing an appointment system, which would give contractors two set times each day when they could obtain the material they needed. The stores and procurement department amended their procedures accordingly and future problems of this kind were avoided.

As these cases illustrate, use of the Systematic Approach has empowered individuals to shape the company's official procedures. This tends to undermine the critique of organisational learning mounted by Fenwick and Yayi, and to reinforce the point, it is worth listening to the voices of the employees concerned. In their accounts of their involvement in the Systematic Approach, interviewees reported feelings of empowerment, represented themselves as knowledgeable and judged the experience to be motivating. One interviewee described the powerlessness of the employee's predicament prior to the introduction of the Systematic Approach in the following terms:

"You'd have a problem, and it would hang around for months and months... it wouldn't go away ... you'd get a group of people and 'What went wrong?' 'It was his fault!' Then you'd say 'No, it was his fault' and then somebody would say 'Well, I know what the answer is' and then 'Right, OK' and they'd go and do something, and three days later they'd be back and say 'Well, that didn't work.'"

Now, however:

"The Systematic Approach has made a lot of people more aware of how you go about getting something done if there's a problem, rather than whinge about it ... You tend do something about it now ... now, people's approach to problems is different. It's done quick, low key and if it's come out with a correct result, people are more open to change their views or their ways than say 10 years ago, when they didn't want to know."

Employees frequently expressed a sense of greater control over their working lives and their learning careers within the company:

"The whole system is fairer ... people now are much more recognised for their efforts and for their skills and for their achievements, and I think people are quick as well to say 'Hang on. It wasn't just me, it was a team effort'. A lot of that is down to the change in the middle management structure ... Personal Development Plans ... are used in a much more positive way because the individual is encouraged to get involved more. It is more a case of 'Where do you feel you would like to go on from here?' rather than 'This is what I would like you to do'. People are encouraged much more to be involved in their own development, so if somebody expressed a desire, for example, to say 'I'd like to know how to isolate a motor', [middle management] would say 'Why do you feel that is important to you?' and they'd give their reasons. [Middle management] could either leave it to the individuals to organise themselves or it could be given to somebody at central training services to

organise it for them. Yes, I think individuals are much more involved with their own development and much more keen to develop themselves.”

Knowing the company’s economic situation – the huge increase in transparency - seemed to have had a positive effect on how people felt about themselves and their agency:

“... if you want to know what’s happening in the big world of [Name of company], you can find out. And there’s no doubt about it, I think you feel better yourself. You don’t feel so much as just a cog in a wheel. Once you understand what contribution you are making to the business, in the profits, in safety, in reliability and things ...”

To provide a second opinion on the interpretation placed on the interview data, an independent researcher (Richard Remedios) carried out a content analysis of the interview transcripts. This recorded 14 positive comments on the Systematic Approach and only one negative one. It showed that the employees valued the Systematic Approach for the autonomy it gave them and because it was intrinsically motivating. The alternative hypothesis that interviewees gave positive reports on the Systematic Approach because they were under pressure to praise the company can be excluded; first, because the interviews were confidential, and second, because the interviewees were not inhibited from making strong criticisms of certain other company practices, including a particular form of benchmarking, which attracted a preponderance of negative evaluations (for details, see Remedios & Boreham, 2004).

It is clear from this study that Fenwick’s critique of organisational learning – that “the organization appropriates for its own purposes the most private aspects of people’s worlds – their beliefs and values – and conscripts them for the organization’s purposes” (Fenwick, 1991, p. 82) – is difficult to sustain, for the same reason as Yayi’s (2003) critique. The employees of this particular company experienced a powerful sense of their own agency as learners, and as the theory of structuration predicts, their beliefs and values were driving the organisation as much as the organisation was driving them. It seems appropriate to leave the last word to one of the employees:

“I don’t think it [the organisational learning initiative] is designed to railroad you down a certain avenue ... to say ‘You are going to do it.’ I don’t think it’s that. I think that, if it wasn’t for our own experiences, our own impulse, there wouldn’t be these initiatives, and I don’t think any learning would come from it anyway.”

16.4 Relational selves and social practices

If they were not organisational zombies, how can we characterise the identity of these participants in organisational learning? A structural perspective calls for two kinds of analysis to proceed in parallel: institutional analysis, in which structural properties are treated as continuously reproduced features of social systems, and the analysis of individual conduct (Giddens, 1984; Giddens, 1993, p. 288). The previous section explored the former, while the present section focuses on the ways in which individual actors drew upon the structural properties of the organisation in their capacity as participants in organisational learning. The concept of ‘a practice’ provides the unit of analysis. Schazki defines a practice as “a temporally unfolding

and spatially dispersed nexus of doings and sayings” (Schazki, 1996, p. 89). To elaborate on this definition:

- a practice is a routinised pattern of activity;
- a practice is a complex which integrates purposes, bodily behaviours, understanding what to do and say and inanimate objects such as instruments and materials;
- a practice is an open system which exchanges information and resources with the wider social environment;
- a practice is sustained by explicit rules, precepts and instructions;
- individually and collectively, actors are the ‘carriers’ of practices and regularly reproduce the patterns of activity which define them (for discussion of the concept of a practice, see Reckwitz, 2002).

Working practices such as the Systematic Approach are constitutive of the organisation’s structure, suggesting that the definitions of ‘learning organisation’ provided by Pedler et al. (1991) and Garvin (1993) could usefully be extended. The extension is to include a specific reference to working practices, viz. that a learning organisation is one whose working practices promote learning at both the individual and organisational levels. The crucial point for understanding how participation in such practices allows individual agency to be exercised is that, whilst an individual might be the carrier of a practice which evolved before he or she joined the organisation, the way in which he or she enacts it is not predetermined. In their study of organisational routines, Pentland and Reuter (1994) draw a distinction between those organisational routines which fully determine the operator’s actions, and more open-ended routines, which define a pattern of activity but which may be enacted differently on different occasions. It is clear from the research that the organisational enquiries in the oil refinery were based on open-ended guidelines that allowed individuals a great deal of discretion. This was a deliberate policy: one manager interviewed in the course of the research was adamant that “We try to go with, what we call, generic procedures”. The freedom enjoyed by the convenor of a Systematic Approach about whether or not to invite a facilitator to the meetings illustrates this.

The individual participant in organisational learning is thus the carrier of practices which empower him or her to reconstruct aspects of the working environment that impact on his or her own work. In considering the identity of such an employee, it is important to take account of the theoretical re-centring that has occurred in recent years in relation to the concept of the self. In fact, the individually contained self is disintegrating in the face of social change, especially the decline of the old industrial culture, and today occupational identity is more likely to be defined in terms of the *relational self*. The relational self exists in and through its dialogic relations with others (Bakhtin, 1973; Gergen, 1999). Whilst the individually contained self is an independent entity with fixed qualities, the relational self is located in a process of dialogic self-construction. Such a self develops as individuals make sense of lived experience by engaging in dialogue, identifying with categories and discourses and using these to position and construct themselves in successive situations. The old assumption that autonomous agents are people cut loose from all

ties is unconvincing, for to be truly autonomous (as distinct from isolated) one must be embedded in complex networks of relationships (Sherwin, 1998). Autonomy at work – especially in a collaborative workplace that emphasises teamwork, such as the oil refinery investigated in this research - depends on having relationships, because it is only in relationships that a worker can exercise his or her agency to the full. As the analysis of the Systematic Approach reveals, organisational learning takes place in dialogue between relational selves. If this is the essence of organisational learning, then organisational learning can be regarded as constitutive of an autonomous self.

16.5 Discussion

When considered in the abstract, the notion of exercising one's agency as a learner by pursuing a corporate goal on behalf of an organisation appears paradoxical. However, the sense of paradox arises from the binary opposition of the individual and the organisation in everyday language and also in many theories of learning. If we think instead in terms of a community of workers engaged in structuration, then learning is no longer located in processes occurring within the individual, nor in processes occurring at the level of the organisation, but in the dynamic interplay between the two. Within this interpretive framework, the empirical study of the oil refinery suggests that *both* organisational *and* individual agency can be enhanced through organisational learning. Without employee-initiated organisational enquiries, the company would be less successful - there have been more than 200 recorded Systematic Approach groups, one of which alone introduced a reform which is saving the company £500,000 per annum. Yet without the opportunity to engage in organisational enquiries in pursuit of the company's goals, ordinary employees would be less empowered to change the conditions under which they work.

One of the most persistent criticisms of structuration theory is that it redefines 'structure' to suit its argument. Instead of seeing structure as an immutable force which constrains individual behaviour, it is defined as malleable rules and usable resources. Structure exists, says Giddens, "only in its instantiation in ... practices ... [it] has no existence independent of the knowledge that agents have about what they do in their day-to-day activity" (Giddens, 1984, pp. 17 and 26). Many commentators have objected that this does not allow for an analysis of the external conditions under which rules and resources permit agency. Such conditions might include the state of industrial relations and the current stage in the evolution of capitalism. It is true that factors such as these are not normally invoked in a structural analysis. But why should they be? In reply to these criticisms, Giddens (1990) has claimed that "one of the main contributions of structuration theory is to provide a more subtle and satisfactory analysis of social constraint than existed hitherto" (p. 299). It is precisely our analysis of social constraint within the oil refinery that enables us to understand the mutually constitutive relationship between the learning individual and the learning organisation. The concept of organisational structure as a process of *structuring* provides more insight into the dynamics of this relationship than the traditional static concept of structure. Using the concept of structure in Giddens' sense, the structural analysis of organisational learning presented in this chapter reveals how organisational rules and resources enabled employees to exercise agency in

constructing new working practices. It reveals the complex of interconnected and mutually embedded processes – what has been called ‘a blurred web of mutually penetrative forces’ (Wilson, 1995, p. 312) – constitutive of organisational learning.

We will end this chapter with a brief statement of the implications of this kind of analysis. The practical implication is that educators and trainers in the field of organisational learning should focus on the interplay between the individual and the organisation, acknowledging that making organisational learning happen will involve them in creating formative structures such as the Systematic Approach. The theoretical implication is that, in addition to abandoning the dualistic use of ‘individual’ and ‘organisation’, researchers should conceptualise the employee of a learning organisation as a relational self whose actions are constructed out of the social practices in which he or she participates, yet who possesses sufficient autonomy to reconstitute those practices.

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