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Evidence of the 'new competencies'?

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In this chapter, I review the knowledge of Porgera history and society that mine management has sought to acquire, since proving the prospect in the 1980s, for use in its dealings with the mine area community. In a more general context, the kinds of skills and knowledge required to do this professionally have been advocated as the 'new competencies' of mining (Davis 1995). Conversely, attention to these matters in the industry is acknowledged to have been patchy over the years, and shortcomings have been blamed for the onset of lesser or greater crises, such as those which have occurred at Ok Tedi, Panguna, and other places. Senior industry figures make a direct link between performance in the 'new competencies' and the exposure of their investors' capital to financial risk, and this is certainly the public face of the mining and petroleum industries in Papua New Guinea.

At Porgera, the resources attached to dealings with the mine area community have not been negligible: over 500 families had been relocated and provided with new houses by 1995, about K60 million worth of business contracts had been let to Porgerans, about K30 million had been paid out in compensation for clearance of bush, crops and houses on land required for mining, and sundry lesser benefits had flowed to the community (Banks 1997). At the same time, more staff were deployed by the Porgera Joint Venture (PJV) in

Community Relations and Lands functions, notably with the realisation that law and order problems on the Enga highway would not be dealt with by state agencies, to the point where about 85 people were thus employed across the province—a far greater number than ever used at any other mining or petroleum project in Papua New Guinea (Bonnell 1994:112).

Nonetheless, the scale of the benefits has only a partial connection with the ‘new competencies’. Of the 85 staff positions, only a handful were managerial, and perhaps only two or three incumbents held tertiary qualifications, none at higher than degree or diploma level.¹ Much has been made of the hiring, at all sites, of ex-members of the Australian administration—notably those with long field experience—and it is certainly true that, with the demise of the field services since Independence, more recently trained field officers simply are not available to carry out the practical tasks of day-to-day community dealings. But excellence ‘in the bush’ at the edges of an organisation is not the same thing as the entrenchment of bush intelligence at its heart.

I must acknowledge the limitations of method that face the reviewer of ‘new competencies’ in the mining industry. For example, should the scope be limited to mine management, or extended to include the collectivity of junior staff, middle managers, consultants, journalists, church representatives, public relations officers, government staff and others who make up most of the knowable interface between the mining operation and the community? Also, as most managements conduct their business behind closed doors—or, more precisely, publicly document only a few of the myriad decisions that are taken each day—what allowable steps of inference can bridge the gaps that will necessarily be left between public pronouncements and private deliberations? I suggest that the best way to overcome this problem is to focus on the outwardly assessable capabilities and actions of the collectivity of people mentioned above. It would be ideal to have a great deal more inside knowledge, but this should not be a handicap in examining evidence of an organisation’s outward actions (Table 9.1).

This exercise can have an orthodox ‘research and development’ model as its point of departure, in which case the logical direction of argument will be vertically down the table. But one might also adopt company self-interest and protection against mine closure—a well-defined, but minimal performance criterion—as the point of

Table 9.1 Assessable capabilities in relation to social issues at PNG mining operations

Capability	Externally assessable actions
Observation and research of social issues	Demonstrated capacity to collect appropriate knowledge
Analysis and reporting	Demonstrated capacity to conduct analysis of social issues, to interpret correctly and highlight points of relevance, and to present these to others through reporting.
Representation to decision makers	Demonstrated capacity to channel information on social issues to decision-making points within the organisation.
Management emphasis	Uptake of this information in the development of clearly articulated management strategies and policies.
Implementation and follow-up	Demonstrated capacity to make use of information on social issues to in an explicit way to defend the project against unnecessary risk.

departure, in which case the argument may proceed in the opposite direction: ‘We need information to defend the shareholder’s investment against risk: so what kind of information do we need?’ My own view, and that of many mining company executives, would be that the minimalism of this second line of argument means sailing too close to the wind; it is simply reckless.

Unfortunately, agreement at the level of corporate rhetoric (‘our programs are second to none’) is a far cry from actually meeting objectively sound performance standards. What I want to demonstrate in this chapter is that what managements say that they aspire to, and even believe that they achieve, is different from what they are actually able to achieve. I shall call this difference a ‘performance evaluation gap’. Several such gaps are possible, and they have knowable and predictable causes. I should add that the purpose of this exercise is not purely academic; gaps of this nature, if they exist in any area of management, expose business enterprises to risk.

Baseline research during the period of exploration

Prior to the development of the mine, the only ethnographic accounts of the Porgera area which were based on anything more than a short visit to the area (for example, Meggitt 1957) were those written by Father Philip Gibbs (1975, 1977), the Catholic priest at Mungalep mission. On the other hand, very detailed ethnographic work had been done in some adjacent areas of the highlands (see Feil 1987; Ballard 1995).

At all recent mining projects in Papua New Guinea, the Social and Economic Impact Study (SEIS) has formed the basis of the company's dealings with the mine area community. In the Porgera case, it is surprising that the SEIS consultancy team did not include an anthropologist (Pacific Agribusiness 1987). For their discussion of the social environment, the authors evidently made some limited inquiries of their own, but also gave a lengthy summary of relevant information from Biersack's (1980) doctoral thesis on the nearby Paiela people, alternatively referred to as the 'west' or 'western' Ipili in the literature (see Biersack 1995a). One member of the SEIS team later noted the availability of other studies of neighbouring peoples, such as Goldman's work on the Huli, but said that 'Biersack had written the only specifically Ipili work that I could find' (Robinson 1991:1). He added that he was unable to understand it, though he encouraged ethnographers to continue their work: 'If the studies are made and the writing is accessible then the studies will be widely used and have an important and beneficial effect on the people' (*ibid*:7).

This is a clear declaration in favour of applied anthropology, and an example of the 'agreement in principle' with the need to make as much use of available sources as possible. In which case, one wonders why the SEIS team did not consult Wohlt's (1978) doctoral thesis, based on his work at Yumbisa village in Kandep District, which is as close to the southeastern part of Porgera as Paiela is to its northwestern part (see Biersack 1995a: Map 2). Wohlt dealt at length with the dispersal, across the western Engan region, of the branches of a genealogical group known as Molopai, and the rights and obligations of individuals at the various places where members of this group had settled. The same highly flexible social structure is found in Yumbisa as in Porgera, and much the same vocabulary is used for its component parts.² Wohlt's genealogies show that the Bipe people of

Kairik (Burton 1991:25–6) are Molopai people, while others are found in Tari, Paiela, Kandep and Laiagam. His analysis throws into question whether the Ipili people even ‘exist’ in the same way as, say, Motuans or Hageners do—as ‘tribal’ groups subsuming locally bounded subgroups, whether these be territorial clans or the dispersed cognatic structures found in Porgera. They begin to look far more like the local representatives of regionally dispersed ‘genealogical groups’, lumped together under one name only because they live in one place as neighbours (see also Wohlt 1995).

The ethnographer’s first reflex on discovering such regional links must be to uncover as many as possible and map them out. There are frequent references in the SEIS to the land rights which Porgerans hold in various parts of the valley, by pursuing cognatic links of kinship, and to the flexible manner of reckoning relatedness to other people. The authors were correctly concerned with the ‘severe vulnerability’ of the system once gold production started (Pacific Agribusiness 1987 Appendix B:6), but do not seem to have grasped the regional breadth or generational depth of genealogical reckoning,³ and could only make limited suggestions as to how to plan for the impact which this might have. Wohlt’s work could have helped them in this respect. In the event, the restriction of access to land within the valley has shown itself to be a minor nuisance compared with the problems caused by the mass immigration of genealogically connected people from Laiagam, Kandep and Tari. This was to become the most serious socioeconomic impact on Porgera within a very short span of time, and was to preoccupy Fritz Robinson in his subsequent work on relocation for the PJV (see Robinson 1991:3–4, 1994b).

Why did the SEIS authors not consider Wohlt’s work? Does this count as a ‘failure’, and was their understanding of Ipili society compromised as a result? What lessons can be drawn for the management of social impact at all mining projects?

First, the quotation above suggests that, if anthropologists only write well, then the results will be ‘widely used’ by the mining company. Obviously this is not true; Wohlt writes luminously well, but his work was not used.⁴ I suggest that the reason only partly lies with the mix of specialisations among the members of the SEIS team and their lack of immersion in highlands ethnography. Their greatest enemy was shortage of time.⁵ A single field period of six weeks in April–May 1987, which included the certain distraction of frequent meetings with company and government officials, seems to have been

all that was available to the main study team. It is vanishingly unlikely that serious analytical knowledge of the social system could have been obtained under these conditions.

Second, I believe that their neglect of Wohlt's work did count as a failure, and the portrayal of Ipili society did fall short of providing useful insights into Porgeran society. I will not dwell on which detail is correct and which is incorrect, but rather refer to the nature of ethnographic understanding itself. Anthropologists make frequent references to entering the field with an over-simplistic or inappropriate knowledge of the people they are going to study. This leads to periods of intense but unstructured data collection, at which point confusion reigns, the society appears chaotic and patternless, and its members inconsistent and even illogical. Kenneth Read (1965:32), already an experienced field ethnographer, wrote of post-war Goroka that 'for weeks after my arrival I knew the valley only as a visitor knows a strange city'. Peter Lawrence had the same problem among the Garia of Madang Province: he probably unravelled their cognatic kinship system (which bears close comparison with that of the Ipili) during his doctoral fieldwork in 1949–50, but his full account of it (Lawrence 1967, 1984) was delayed for years because his colleagues were not equipped at that time to make sense of the extreme flexibility of Garia social arrangements. If a person of Lawrence's analytical skills required many subsequent visits to the Garia to 'nail' their social system to the satisfaction of his readership, it is very unlikely that a social impact study team, without an anthropologist, would properly characterise Ipili society in a matter of weeks.

To be frank, the SEIS authors should have owned up to this, but instead presented 'data' of a quality that is embarrassing to mention, such as a land tenure survey based on a questionnaire administered to Grade 6 schoolchildren (Pacific Agribusiness 1987 Appendix B:9). When, in the report's findings, it is claimed that 'Ipili society and land tenure were studied in detail' (Pacific Agribusiness 1987:95), the writer or writers are having us on.

Third, important lessons can be drawn from this. At Lihir, Filer and Jackson (1989:43) mused over the inability of managements to judge the competence of consultancy work, and the 'insight [this] gives into the way that an image of traditional social structure is...established [at] a major mining development'. I can confirm that a particular image of the project area became fixed at a very early stage of

exploration at many other mining operations in Papua New Guinea (see Burton 1997). The basis of an early impression is serendipitous. Apart from anything else, contacts between company and community during early exploration are likely to be particularly haphazard and unrepresentative of later, more permanent dealings. But a constant bugbear is the hiring of inexperienced consultants in the early stages of exploration, typically followed by the use of a one-stop-shop general consultancy firm which employs well-qualified specialists who are then enjoined to cover fields other than their own. This is harmless enough if, to take a hypothetical case, all urban geographers may be expected to grasp the key issues in major specialisms of this discipline. But asking a neophyte to stray into the ethnography of a previously unresearched society is a reckless practice. The key issues, the fieldcraft, and the complex nature of relationships with informants—to name but a few things—do not come packaged as off-the-shelf knowledge. Let me demonstrate this point with another Porgera example.

The SEIS was preceded by the collection of genealogies among some Special Mining Lease groups by Father Gibbs (1981, n.d.) and by two former PJV employees, whom I shall call A and B, in 1982 and 1984 respectively. Gibbs had basic training in anthropology (1975), had spent many years at Porgera, and had a relationship of a special nature with his congregation: in other words, he had the prerequisites for proper ethnography which I have just mentioned. Having gone over his genealogies myself, I can vouch for the fact that his work was of excellent quality and was highly reliable. But I also had to dissect the shortcomings of A's and B's genealogies when I began work at Porgera in 1990 (Burton 1991:2–3). It is sufficient to say that A counted so many people twice (without noticing) that he made a probable total of 6,000 people into more than 11,000. B, for his part, knew of Gibbs' work, but said it was unnecessary for him to read it. Even worse, his 'agnatic' bias, originating from a place in Papua New Guinea which is organised quite differently from Porgera, led him to discard genealogical connections through women—a critical error in a society where connections through women are very important indeed.

I mention these points, not to put down A and B, but to draw attention to the poor level of performance evaluation in relation to social studies undertaken by company managements when undertaking mine planning studies. This is far from just being a Porgeran problem. Filer and Jackson's remarks above derive directly from the lack of competence which A demonstrated again at Lihir,

where Kennecott were his next employers; they describe at some length (1989:43–50) the difficulties which they experienced in undoing A's confusions at this new site. Coming onto the Lihir scene a little later, I still found it necessary to deal at some length with the failings in management strategies for understanding the local land tenure system (Burton 1994a, 1994b).

Yet another amateur genealogist whom I encountered at Porgera in 1990—let us call him C—had been employed by Conzinc Riotinto Australia at the Hidden Valley prospect in Morobe Province. C's work was even worse than A's, and his material on Hidden Valley contained nothing which I have been able to use in any way during my own subsequent work in that area (Burton 1996).

All of these examples demonstrate a corporate inability to review specialist information, and a contradictory attitude to anthropology. The work cannot be 'welcomed' on the one hand, but lie unused and unreviewed on the other. I suggest that this failing is due to the absence of the know-how needed to turn ethnographic observations into management strategies which can be implemented. Elsewhere, I have written (1996:i) that the sentiment expressed in the search for the 'new competencies' is frequently overwhelmed by an anti-academic feeling which is revealed in a propensity to 'fly by the seat of our pants' after all.

Companies can surely do better than this when the stakes are so high. We can argue that they have not yet hired the Masters of Business Administration with first degrees in this or that social science—a fair criticism—and play this off against an accusation that anthropologists write in an 'inaccessible' way (as Robinson complains), but I prefer to point to lack of continuity between the SEIS approval process, the submission and approval (by the state) of an Environmental Management and Monitoring Programme (EMMP), and the actual implementation of that programme. In the Porgera case, the SEIS 'ended' three years before the first gold was poured, and implementation of the EMMP began a year after this event. Hence a four-year 'performance evaluation gap' which coincided with what Bonnell (1994:12) terms the 'period of maximum social disruption' at a mining project—the construction phase. Needless to say, I can only describe these kinds of gaps as having the potential to inflict grave damage on any project. The Community Relations staff will be working flat out during this phase, and cannot be expected to shoulder the extra workload of ensuring a continuity of research and planning functions.

Reporting and planning in the period of operations

The person who is primarily charged with the job of implementing the SEIS at a mining project is the Community Relations Manager.⁶ This person is in a difficult position because he (all have been male to date) must get on with the day-to-day dealings between the project and the community, which are 'operational tasks', as well as being responsible for upgrading the knowledge contained in the SEIS and other baseline studies, and for longer range strategic planning in consultation with corporate-level executives. In practice, these tasks do not go together at all. It has been demonstrated at sites throughout the length and breadth of Papua New Guinea that operational matters expand enormously and overwhelm the capabilities of the Community Relations staff to do anything else. What remains is usually called 'fire fighting' by insiders.

The EMMP

In formal terms, what is expected to happen is that the EMMP will be drawn up by the company to implement the recommendations of the Environmental Plan, which in turn may contain as few as a hundred words on social issues distilled from the SEIS and various baseline studies. The EMMP is a document required under the *Environmental Planning Act 1978*, which regulates those projects which have been developed since it came into force.⁷

At Porgera, the EMMP was drafted in 1990, just before production began, and finalised a year later. The 35-page draft EMMP document contains two paragraphs on management of the social environment (PJV 1990b:8.13). In the framework setting out the 12 components of the 'long-term environmental monitoring' programme, which range from 'generated sediment tonnages' to 'trace metals in human scalp hair', social monitoring is not mentioned at all.

It was into this rather unordered state of affairs that I came to start my own work at Porgera in 1990. Although I was not party to it at the time, one of the two sentences in the draft EMMP referred explicitly to my project—saying that it was about to start. With an environmental scientist (Saem Majnep) present for part of the time, I and two students from the University of Papua New Guinea then did social and human ecological mapping and census work over a period of about six weeks between June and October. This included a full census of Porgera, which was carried out by about 25 Porgeran assistants working in parallel with government enumerators during the 1990

national population census.⁸ Our reports were completed by May 1991 (Majnep 1990; Burton 1991). In the next version of the EMMP, the paragraphs referring to long-term monitoring of the social environment were changed to read

[a] demographic survey was carried out in June 1990 to collect data on human settlement in area around the mine. The results will be used in the assessment of changes in the population that are associated with mine construction. The timing of subsequent surveys will be determined by agreement with the PNG Government and will depend upon the significance of any changes determined from the 1990 data.

A socio-economic liaison committee has been formed comprising representatives from Porgera, Enga Provincial Government and PJV to monitor issues of concern to local people. Although communication channels are well established with the local people by means of the PJV Community Relations Department, the committee will establish a formal link between the PJV, the community and the Government (PJV 1991:8.13).

But such correspondence as I have retained shows that our reports languished for 14 months before proposals for follow-up work brought about a formal response. Then, from mid 1992, contacts between Unisearch and the PJV were renewed, and these led to the commissioning of new work by Glenn Banks and Susanne Bonnell which began in November 1992. Even at this stage, there was still no framework for long-term monitoring.

The inaugural meeting of a Porgera Social Monitoring Steering Committee, chaired by the social planning officer in the Department of Environment and Conservation (DEC), was held in Porgera on 4 March 1993. This represented the 'formal link' to the state regulatory body mentioned in the EMMP. The meeting set my colleagues and I the task of writing a plan for what was termed the 'Porgera Social Monitoring Programme', and we completed this task in June 1993 (Burton and Filer 1993). We recommended two streams of reporting

- Stream A to be carried out by specialists (economic modelling study, social change study, census project continuation, health study, etc.); and
- Stream B to be handled by means of internal company, government and non-government organisation reporting.

From 1993, annual reports were to summarise and combine the outputs from both streams.

Since our document was laboriously assembled after consultation with other parties to the Steering Committee, and built on earlier

documents which had dealt with similar issues, it was unlikely to have been technically defective. At least, no other party responded by saying so. But here lies the problem—no other party responded at all! The upshot was that some of Stream A proceeded, but other parts were dropped, the Steering Committee failed to establish its own priorities, and there was no supervision of the programme by the company's Environment Manager, who was the designated point-of-entry for EMMP matters. The coordinating role which ought to have been played by the state regulator (DEC) was downgraded to that of a passive receptor, incapable of effective comment, and perhaps politically compromised by events being played out at other mines (see Bonnell 1994:118).

Comparison with other projects

At the time, I had some difficulty in making sense of these outcomes, because my proposed census project was the first casualty amongst the parts of the monitoring programme which were dropped. However, my subsequent involvement in the design and implementation of social monitoring programs at several other projects has now provided me with a broader perspective on these events.

At Ok Tedi, no monitoring programme was required under the enabling legislation, but the political situation by 1991 had made the neglect of basic research downstream of the mine an increasingly untenable course of action. A Unisearch-based monitoring programme, coordinated by Colin Filer and myself, and involving a team of specialist fieldworkers, produced 12 reports over a four-year period from 1991 to 1995 (see Filer 1991, 1997b; Kirsch 1995; Burton 1997). While this may sound like a successful exercise, it proved to have been commissioned by one section of management as a means of stirring another, then somnolent, section into action (Filer 1996). The achievement of the project's goal was also its weakness, because the target of the ploy was antagonised by it, and field officers were denied access to our findings for five years, including the crucial years of the Ok Tedi litigation.

At Kutubu, I wrote a short 'annual report' for Chevron in 1993 (Burton 1993) summarising the equivalent of 'Stream B' data on the company's behalf for presentation to the DEC—though belatedly catching up with 1990 and 1991 data only. To the best of my knowledge, this elicited no comment from the Department. Although I lost track of this project for a long period thereafter, new information

confirms that no similar reports were written in subsequent years. The lack of a formal structure for this work was its obvious weakness: the information presented fell into a bureaucratic void, and no action was taken on recommendations to upgrade Chevron's internal reporting system to the Porgera specifications. I presume that this was due to the absence of any local equivalent of the Porgera Social Monitoring Steering Committee, and to confusion about the point-of-entry for such monitoring work.

At Lihir, as already mentioned, the Environmental Plan contained three paragraphs on the proposed management of the social environment (NSR 1992), and the unresponsiveness of Kennecott management, then based far away in Salt Lake City, meant that no initiative was taken to maintain the process of social impact assessment until the Australian government's Export Finance Investment Corporation obliged the new operator, Rio Tinto Zinc, to do so as a condition of the project's sovereign risk insurance. Yet this also seems to have meant that social monitoring reports are hidden under a dysfunctional blanket of confidentiality (see Filer 1998), while the consultant responsible for this work has been hampered by management directives concerning her avenues of communication with company staff and community members.

In each of these cases, we see performance evaluation gaps of several kinds. Management 'turf wars' are evident at most projects as a factor in disrupting the effective implementation of proposals. A serious difficulty everywhere, including at Porgera, is the lack of a clear point-of-entry to the company for social monitoring feedback and reports.⁹ All consultants report confusion: reporting is variously to the Environment Manager, to an Executive Manager, to the General Manager, to a steering committee that does not meet (as at Porgera), or to a financial institution. Worse, the point-of-entry can change between proposal and report, or from one report to the next. One thing is clear: at no project have the reports gone, in the first instance, to the Community Relations Manager!

This is a structural form of disruption, but its effect is similar to the gap in time between the SEIS and development of the EMMP. A period of paralysis occurs as various actors consider what to do next. It is very likely that this will coincide with the most critical phase of the project, when realignment of the local political process occurs, and new, unanticipated forms of impact arise. I have mentioned elsewhere the parallel difficulties being experienced by the Community Relations

Manager in the early stages of a new project. A multiple increase in the operational workload, connected with the rush of compensation and lands work at this time, always coincides with an exhausting struggle by the Community Relations Manager to retain the priorities of his department in the face of an increase in the number of line managers during project construction, and the intervention of 'rogue players' engaged in reorganising the management structure in ways that pitch Community Relations staff into unnecessary competition with other sections or departments for the attention of the Mine Manager. I calculated that it took an average of 5.3 years for the community relations managers at three projects to win an upgrading of their department's activities to recover the ground lost since the days when community liaison staff and exploration geologists were the only people on site (Burton 1995:3; also Bonnell 1994:111).

Internal reporting

In light of these considerations, it is not surprising that I have only mentioned the activities of Community Relations departments in passing. It goes without saying that these departments carry the workload of daily dealings with the community, and simple observation shows that this is an exhausting assignment. What kind of internal reporting are Community Relations staff able to accomplish in the course of a year?

At Porgera, different people could come up with different lists of the most important problems faced by the Community Relations Department since the end of the exploration phase. It is worth making a comparison of one possible list with the permanent record we have of each item (Table 9.2).

All staff complete written monthly reports for the Community Affairs Manager, who summarises this for the quarterly reports given to the Joint Venture Partner meetings (Glenn Banks, pers. comm.). This certainly draws attention to immediate needs, and shows what responses have been made to current problems, but it does not provide the 'big picture' of how effective Community Relations programs really are. Theoretically, there is plenty of scope for those involved with the work to do this, because they do possess the most intimate knowledge of what is going on. But it does not happen because staff are too busy with other matters. Among the reports listed in Table 9.2, only the short papers by Robinson (1994a, 1994b, 1994c) and Hiatt (1995) could be said to exemplify this kind of 'in-house' product.

Table 9.2 Principal community relations tasks since exploration

Task	Risk	Value	Reporting
Daily liaison	Stoppages; riots; mine closure; etc	Nil to capital value of mine	Anecdotal accounts; monthly reports; <i>Ipilil Wai Pij</i> newspaper; mentions in <i>PNG Resources Magazine</i> ; etc
Relocation	Build-up of social tensions; undesirable impacts etc	>K11m (move 500+ families into new housing)	Mention in speeches of executives; study in advance of relocation (Robinson 1988); short conference papers (Robinson 1994a/b/c); sections of Bonnell (1994)
Compensation	Disgruntlement of aggrieved, un-compensated parties; 'landowner strikes'	K25.9m (1987-92 only)	Mention in speeches of executives; economic modelling reports in social monitoring program (Banks 1993; 1994a)
Business development	Stoppages; riots; mine closure; etc	K24.4m to Porgeran contractors to Dec 1993	Mention in speeches of executives; Business Development Plan (PJV 1990a); Porgera Business Study (Banks 1994c)
Lands important in mine rehabilitation plan	Stoppages; riots; mine closure etc	See 'Compensation'	No review of tenurial problems to date; for garden surveys. See Banks (1994a), and sections of Bonnell (1994)
Welfare and social development	Longer-term risk, esp. in relation to youth	See 'Daily liaison'	Bonnell (1994)
Enga highway issues	Road blockages, thefts, lost time	K?m	Media reports. Paper to Chamber of Mining and Petroleum by Hiatt (1995)
Hides power line	Potential delay in opening Stage 2; destruction of pylons (~5 to date)	~K1m/day when power unavailable; replacement pylons K?m	No known socioeconomic evaluation to date; subsistence improvement work in some places by John Vail.
Infrastructure Tax Credit Scheme projects	Disgruntlement of areas away from the mine; road blockages etc	K9.8m for period from 1993-Oct. 1996	No known socioeconomic evaluation to date (implementation reports for Tax Office exist); publicity through media coverage
Downstream river impacts	Writ from Porgera River Alluvial Miners Ass'n (1995); ongoing threat of writ from Strickland Kulini Landowners Ass'n	cf. July 1996 Ok Tedi settlement + legal bills	Early technical review by Sullivan et al. (1992); major environmental review by CSIRO (1996)

Two cases are instructive in this respect. Susanne Bonnell was hired to work as a welfare officer in the PJV Community Relations section, and especially to implement the recommendations contained in Robinson's earlier relocation study (Robinson 1988:7; Bonnell 1994:18). When I liaised with her at the time of my census project in 1990, it was obvious that she had no time to set about writing anything, let alone to evaluate her own work. After resigning from this job, and spending some time away from the project, she was re-hired as a consultant to do this type of evaluation without having the burden of operational work.

Another person was one of two experienced former patrol officers on staff in 1990, who was given the job of negotiating land usage agreements along the route of the 80km-long transmission line from the Hides gas project to the Porgera mine. The work was carried out under enormous pressure from landowners and a tight deadline set by the mine development plan. No sooner was the work finished than he was laid off, notwithstanding the fact that most of the agreements had been rushed, and a strong element of 'subjectivity' remained in the land investigations (Robinson 1991:6). My own observations confirmed that there was no time, given the deadline imposed by the engineers, to make the more thorough inquiries that this vital pieces of infrastructure really merited. Close to the anniversary of the relevant agreements, the same officer was taken on as a consultant to handle the annual lease payments, but he was soon idle again, and spent the next two years seeking work before taking up a position in the Community Relations department of another mining company.

Both cases illustrate the inability of staff in salaried positions, who know that they are rushing important tasks, to either slow down and devote more time to them or to achieve anything resembling an adequate level of documentation of what they have done. In the first case, the staff member was permitted the breathing space to do this, and has written a report (Bonnell 1994 and this volume) which should actually have been part of the internal documentation of the operational work of her section. In the second case, the staff member was left high and dry. No evaluation of the power line work was done, and the predicted demolition of power pylons¹⁰ took place a couple of years later. The cost of repairs and downtime for the mine easily outweighed the miniscule savings achieved by laying off the investigating officer before his work was properly documented.

Conclusions

The point of my discussion is not to prove the truth of the old proverb that 'a stitch in time saves nine'—even if the incidence and cost of well-known breakdowns in company-community relations suggest that a stitch in time can actually save the entire suit of clothes. Everyone concerned with social issues in the mining industry already knows this. The problem is that the industry fails to entrench the high priority, continuity of effort, and level of resources which is needed for the management of social issues. Common sense says that this should happen automatically, but in most situations the pace of mining construction far outruns the concurrent capabilities of those who handle these social issues to make credible and appropriate responses as a project evolves.

Explanations

A partial explanation comes from the indeterminate nature of social impact crises, when compared to the more definable parameters of engineering or the physical environment. Bridge designers, for example, face calculable fears about what their creations must withstand, so that their specifications for construction are credible and usually uncontroversial. By contrast, the worries of social planners in relation to mining impacts are frequently as convincing as a vague fear of the dark to the engineers and geologists who form the bulwark of mine management.

A universal problem is that agreements made at a political or legislative level are used by company executives as a guide to internal policy for far too long after they have ceased to reflect current political realities—if they ever did. This was clearly the case at Panguna and Ok Tedi, where the projects were regulated under their own acts of parliament. To overcome this particular shortcoming, a more flexible format was adopted in the guideline agreements for the Porgera project. Following a 'forum process' designed for local stakeholders to sort out their own positions, the agreements comprised a formal contract between the government and the mining company, and a separate set of Memoranda of Agreement (MOAs) between the national government, the Enga Provincial Government, and the local landowners (West 1992). A similarly localised form of bargaining took place over the Lihir project, resulting in an Integrated Benefits Package which the Construction Manager described as the local 'bible'.

But these innovations have done almost nothing to address the problem of making adequate resources available for the urgent tasks of community relations. This department is repeatedly sent into the battle for mine construction without sufficient staff, buildings, vehicles, computers, radios, and other basic facilities (see Bonnell 1994:112; Burton 1995). The ink was hardly dry on the Porgera MOAs when it became obvious that neither the national government nor the provincial government was going to uphold its responsibilities in respect of local development issues. Internal correspondence shows that, in early 1990, the company's senior Community Affairs staff were 'sceptical about the capability of the E.P.G. [Enga Provincial Government] to monitor and address socio-economic problems', and requested an expanded role for their department. They also warned that they personally had no time to spare, given their existing workloads, to pursue this expansion or even to oversee it. It appears that one major distraction at this juncture was a debate with senior executives over the company's localisation plan¹¹

The justification for...long term expatriate incumbents is the Bougainville experience. The BCL Department of Community Affairs had been reduced to a few national officers who were reluctant to convey the approaching storm of malcontent to Management (Hiatt 1990:3).

The Community Affairs Manager won a partial victory, and the expansion required to cope with operational work was achieved—by about 1993. But office facilities had yet to be improved, and Bonnell was still echoing the above comments in 1994.

Future concerns also include the sensitive issue of localisation...If Community Affairs is totally localised there is a danger of senior mine management becoming isolated from the needs, concerns and attitudes in the community. This would have an adverse impact on both the community and mining operations—which appears to have been the case in Bougainville (Bonnell 1994:112).

In fact, raising the spectre of Bougainville and questions about localisation should have been long dead methods of argument. The principle of 'best practice' applies when any in-country issue—inappropriate legislation, failing administration, and cultural or 'conflict of interest' problems—makes any activity come up short of what can be judged to be the best (and safest) attainable standard. Yet the PJV has been able to mount only intermittent efforts to bridge the research and planning deficit, given that it has proved too difficult to

push the national and provincial governments into fulfilling their capacity-building commitments¹² and their obligations to 'develop and monitor the social and economic strategy of the Porgera project' (Hiatt 1990:2). By 1997, action had been taken on only some of the issues identified in 1990, and few of the specific monitoring recommendations made by Banks and Bonnell in 1994 had been implemented.¹³

Comparison with responses to environmental fears

In this context, it is worth briefly examining the company response to fears of environmental damage in the Lower Porgera/Lagaip/Strickland river system. In August 1995, the company contracted a CSIRO consultancy team to undertake a comprehensive review of the mine's impact on the river system; the team reported in December 1996 (CSIRO 1996). I have a particular interest in the issues at stake, having written several reports myself on downstream communities in the Ok Tedi-Fly river system, including the Middle Fly flood plain area (for example, Burton 1994c). As my own knowledge of Ok Tedi Mining Limited's environmental programs would have led me to expect, the CSIRO report called for a significant expansion of the PJV's environmental research and monitoring capabilities, notably an upgrading from 'narrow focused' compliance monitoring (the 'minimalism' I discussed in the introduction to this chapter) to 'monitoring for impact' (CSIRO 1996, Recommendation ES5).

By and large, I have no specialist criticisms to make of the content of this report.¹⁴ It was an appropriate response to the realisation that environmental fears might jeopardise company operations, and the threat of lawsuits from aggrieved landowners (see Table 9.2). But we may also note that the team recruited to undertake this study included no less than four professors and another four Ph.D. holders, and we may wonder why such a battery of 'big guns' was never wheeled out to deal with the social monitoring programme. I appreciate that operational community relations matters are now much better resourced than they were previously, and I hasten to add that the quality of the work undertaken by Banks and Bonnell is not in question.¹⁵ Neither of these things are at issue. The imbalance is between the degree of seriousness with which the two sectors have been taken in the overall process of planning, monitoring and evaluation of company operations.

Various reasons can be put forward to explain this disparity. There is every likelihood that physical environmental data and recommendations fall into a scientific 'comfort zone' for executives with traditional mining industry backgrounds, whereas the same people find it harder to accept the discursive nature of social science as having a comparable validity. At the same time, the socially-generated risks to mining projects, especially in Papua New Guinea, often come to the surface in a political form, thus bringing social research and the formulation of social policies into collision with the prerogative of senior executives to handle the company's external political affairs. This may be termed a problem of managerial demarcation.¹⁶ The result is a reduction of capacity to deal with social issues, both within the company and among government agencies and other organisations involved with the Porgera project. A much greater share of the agenda handled by executives acting intuitively, or using 'common sense', at a level of political relations is really amenable to the more formal treatment we see given to environmental issues. Better performance can be achieved through better information about the social environment, better analysis of it, the development of proactive management strategies, and a more rigorous follow-up (see Table 9.3).

For this to happen, there needs to be a more critical level of oversight by managers, and review processes need to be more systematic than any yet seen at a major mining project. Company staff need still more engagement with what Davis (1995:2) calls the 'soft skills that are, in fact, hard skills', so that they have the expertise to be able to recognise and lose their fear of this engagement. It is regrettable that this can only be achieved, under present circumstances, by pulling apart the record of what has (or has not) happened, rather than by offering a forward-looking prescription for how to go about evaluating company performance in social areas. But this will be possible in due course, and I hope to have given a hint here (albeit by pointing to gaps in the record) that the most basic steps are not speculative and are capable of measurement. Indeed, they fall squarely into the realm of management structures, good planning, meaningful consultation, and above all, the precautionary principle and the avoidance of risk. The desired outcomes, if this has not been spelled out already, are a swifter and more sure-footed responsiveness to crisis, more agile organisations able to anticipate and steer away from risks of socio-political origin, and an enhancement of the capacity to bring benefits to both investors and landowner communities on a long-term basis.

Table 9.3 Demonstrated capabilities in relation to social issues at Porgera

Item	Demonstrated at Porgera
Observation and research	Observation: a good capacity to see what happens daily. Research: negligible capacity due to workload; weak interest in matching environmental research capabilities in area of social issues.
Analysis and reporting	In the organisation: poor capacity (other than internal memos, monthly reports). Use of external consultants: at a low level and discontinuously; hampered by shifting points-of-entry and problem of demarcation. Use of external planning team: no interest shown.
Representation to decision makers	A much improved capacity since the start of operations.
Management emphasis	In the organisation: slow visible responses betray inability to escape short-term exigencies. In the industry: declarations not matched by guidelines or definition of standards (e.g. absence of Codes of Practice).
Implementation and follow-up	Extremely slow. Self-handicapped in aim to be pro-active.

Notes

- 1 Outside Porgera, in particular, the numbers are generally made up of assistants with a Grade 6–10 education.
- 2 Yumbisa has the terms *yami* and *tata*, while Porgera has *yame* and *tata*, for 'family' and 'genealogical branch' respectively.
- 3 A figure of three generations before the present is mentioned, but I did not take long (in 1990) to find a genealogy spanning 14 generations. In point of fact, in Papua New Guinea, the Ipili stand out, along with the Huli, as having notably deep and well-organised genealogical knowledge. Another howler is the statement that 'the Ipili have lost much of their oral tradition in recent decades' (Pacific Agribusiness 1987:5). No serious ethnographer could possibly characterise the Ipili as having 'lost their culture' (in which oral tradition is an integral part).

- 4 It is not conceivable that his doctoral dissertation was too recent to be noticed. Wohlt was employed by the Enga Provincial Government in the implementation phase of the *Enga Yaasa Lakemana* development programme. Both the baseline study for this programme (Carrad *et al.* 1982) and Wohlt's own technical papers on subsistence farming were mentioned in the SEIS.
- 5 An acknowledgment of this point appears on the first page of Appendix B, 'Factors shaping Ipili society' (Pacific Agribusiness 1987).
- 6 'Community relations' and 'section' or 'department' are used generically in this chapter. In fact, the Division of Community Affairs at Porgera comprised three sections: Community Relations, Lands, and Business Development (see Bonnell 1994). Note also that the phrase 'Community Relations Department' is used in the Porgera EMMP (PJV 1991:8:13).
- 7 Of currently operational mining projects, only Ok Tedi is regulated under its own act, which dates back to 1976.
- 8 Provincial elections coincided with the national census week in July, and Porgera's census was put off at short notice. My work was a consultancy for the PJV, while operational costs for the assistants were borne by the Porgera Development Authority. Training of the assistants and field coordination were handled in my absence by Susanne Bonnell, and the census was carried out during the week of 1–5 October 1990.
- 9 I am grateful to Glenn Banks for discussion of this particular point.
- 10 This was predicted in the course of normal conversation in 1990, because the Bougainville crisis had begun with the demolition of pylons in 1988.
- 11 I do not possess an archive of PJV's internal memoranda. I happen to have this one because the next two paragraphs requested a census be done and suggested that I undertake it.
- 12 Notable among failed national government commitments in the area of social and economic development were the non-existent 'long term economic development plan' and the 'Porgera District Hospital'—a joint national-provincial government commitment which was due to be honoured by 1992, but which had not opened five years later.
- 13 The census of Porgera which I had hoped to complete was a 'vital project' in 1990 (Hiatt 1990:3), was proposed and supported in mid 1991, was accepted in our early 1993 proposals, then dropped again in July 1993. Several company employees did genealogies and censuses in the 1993–94 period, but a 'comprehensive census of the whole of Porgera District' was still being recommended in Bonnell's report (1994:120).
- 14 Actually, I have a major criticism. The hydrological discussion in Chapter 4, concerning the reversal of flow in the Herbert River between Lake Murray and the Strickland (CSIRO 1996:5–4), fails to

mention the dominant role of El Niño events in the human and natural ecology of the lagoonal systems of the Fly River flood plain (Burton 1994c:9–10, Appendix C). An innocent mistake? I can only hope that the omission has been rectified in the proposed 'program of integrative investigations in the flood plain and the Lake Murray region' (CSIRO 1996, Recommendation ES8).

- 15 At the time, Glenn Banks was a doctoral student at the Australian National University. He has since completed a dissertation on the socioeconomic impact of the Porgera project (Banks 1997).
- 16 In my view, the demarcation lines are usually drawn in the wrong place, because the industry is rarely able to distinguish the turmoil *within* a society, which finds outward expression in political form, from the political process of a society's *external* affairs. But there is no space here to examine the incidence and consequences of this failure.