

Chapter Two

Social Engagement and the Creation of Knowledge

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Introduction

This chapter offers an approach to knowledge generation in higher education through reflecting on the various relationships between university and society. In an attempt to come to grips with the challenges posed by growing calls for greater responsiveness to external demands, it is proposed that neither external nor internal determination of the nature and focus of the university's operations provide adequate models for university–society relations. Instead, it is argued that universities and academics should endeavour to find a dynamic balance between internal and external determination by simultaneously pursuing social responsiveness and seeking to maintain institutional integrity. Thus, the notion of *socially engaged knowledge generation* is promoted as an approach to academic practice that is aimed at both contextualising teaching and research for optimal social impact, and maintaining the institutional integrity of the university by keeping core institutional features intact. The basic strategy is to integrate teaching, research and service. Such an approach is not unique or new, but what makes this approach different, is that it provides a systematic methodology that enables academics to engage with different sites of knowledge and practice without having to choose an exclusive focus on any specific source or site of knowledge generation.

The pursuit of a contextually or socially informed and engaged academic practice is advanced as an academically legitimate way to enhance the position of the university in society. In other words, engagement with practice is seen as a means of enhancing student learning, generating knowledge, and expanding networks and reciprocal relations between university constituencies and societal stakeholders and thus creating academically informed social benefits. The effects of

a more socially engaged mode of knowledge generation has consequences for the process of curriculum design or restructuring, programme design and implementation, research, problem-solving projects, and so forth, that will have to be dealt with in future.

This chapter is structured in the following way: it starts with a brief description of the origins and background developments against which the approach advocated here was developed. This is followed by an exposition of five ideal-typical structural arrangements depicting different forms of relationship between university and society. These are used to contextualise an approach that seeks to avoid the limitations of these arrangements through socially engaged knowledge generation. This approach to academic practice is then briefly described. Next, a brief overview is provided of intellectual traditions that share a commitment to integrating theory and action. Finally, socially engaged knowledge generation is unpacked in terms of sequential action steps.

Origins

The notion of socially engaged knowledge generation has its origins in debates about the nature and role of community service at the University of Port Elizabeth during the mid-1990s. It emerged out of a problematisation of prevailing notions of community service. The essence of the argument against community service was that since it was perceived as an ideologically motivated add-on to teaching and research as the primary functions of the university, academic staff were reluctant to devote substantial time, energy and resources to it. As a consequence, community service was likely to remain a peripheral activity attractive only to a handful of socially aware academics. These welfarist actions, alien to the nature and core functions of universities, had emerged particularly at historically advantaged institutions, in an effort to convince post-apartheid South Africa of their commitment to progressive change. In the course of debate, I proposed that contextually informed teaching and research were better forms of service.

Background Developments

This debate occurs at a time when in some parts of the world there appears to be a trend among universities to move towards more rather than less engagement with the external environment. For instance, in the USA, the notion of university engagement with society has been a common idea in the system of higher education since the establishment of land-grant institutions in 1862, and yet there are voices

calling for an even deeper relationship between university and society. By 1981 Ernest Boyer had already posed a challenge to the academic community to link higher education and service to the nation. Today many universities incorporate *service learning* into their regular programmes and curricula but there are still calls for universities to do more and to do it better. In 1999, for instance, the Kellogg Commission on the Future of State and Land-grant Universities in 1999, for instance, called for the establishment of 'engaged universities'. In US and European literature about the changes facing universities, the theme of a more externally oriented university has featured prominently since the late 1990s. Universities are called on to become more 'responsive' (Tierney, 1998), and studies of successful universities suggest that the secret to success is to become more entrepreneurial and 'adaptive' to the surrounding environment (Clark, 1998; Sporn, 1999; Slaughter, 1997).

In South Africa, universities now increasingly practise some form of *community service* or *outreach* to historically disadvantaged communities. The notion of *service learning* is being introduced to the South African higher education community by way of a multi-institutional project funded by the Ford Foundation and co-ordinated by the Joint Education Trust (2001).

The Structure of University–Society Relations

It may be argued that in a developing society, like South Africa, universities have an obligation to concern themselves with knowledge aimed at development. They also have to understand that the pursuit of academic excellence is intimately related to the extent to which they succeed in effectively engaging with the multi-layered and multi-dimensional environment in which they are located in ways that can be academically justified.

The principal reason for promoting socially engaged knowledge generation for universities, is that much of the knowledge that is required by universities to enhance their societal significance is embedded in the societal context or environment outside the university.

The argument for socially engaged knowledge generation may be placed in perspective by distinguishing between a range of different structural relationships between the university and its environment. These relationships vary in terms of the balance of power and the direction of the interaction. The nature of these relations condition differences in institutional autonomy, the chances for maintaining institutional integrity, and levels of societal relevance. What is more, these different

structural arrangements produce differences in approach to academic practice and knowledge generation.

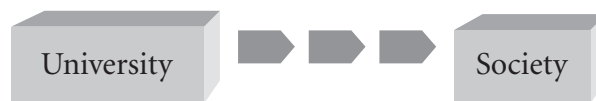
The following five structural arrangements are described below:

- ▶ Internal self-determination
- ▶ External determination
- ▶ Limited or pseudo engagement
- ▶ Promiscuous engagement
- ▶ The corporate university

These are stated in general and ideal or typical terms. Relations between institutions and their environment are never as simple as described here, but this degree of abstraction is required to build the rest of the argument.

Internal self-determination

The first systemic relationship that comes under scrutiny is one that is characterised by a high level of institutional autonomy or independence from social forces. Structurally, the university is the dominant party in the university-society relationship. In other words, this is an institutional condition in which the university leadership and academics have a high level of freedom to pursue their own agenda in a self-centred, even indulgent, fashion. An implication of this situation is that the social impact of the university may only be felt in limited areas and often only as an incidental by-product of individualised academic pursuits. While the direct relevance of universities to society would generally speaking be relatively low, institutional integrity would be high.



In this model, decision-making about the nature of pedagogy, curriculum design and content is perceived to be the sole prerogative of internal university bodies such as senate, faculty, schools, academic departments and individual academic personnel. Institutional bureaucrats are allowed into the academic process only as technical advisors. Gibbons et al. (1994) describe this as traditional science – as knowledge generation that is confined to distinct disciplines, motivated by the internal cognitive and social norms that govern basic research or academic science. That means that it is carried out in the absence of some practical goal and occurs

mainly within the context of the university. Those who participate in the process are all from the same disciplinary and institutional background. Quality is determined by way of peer review of the contributions made by individuals. Knowledge production in this sense is disconnected and aloof from society. Knowledge, theory and theorising are pursued as ends in themselves, and not as means of solving social problems or making a social impact, and science is seen as the pursuit of objective truth and discovery of universal laws.

External determination

At the opposite end of the continuum are institutions that are owned and/or controlled by some external social institution or group, such as the church, state, a commercial enterprise or community. In this model, an external social group has the power to monopolise decisions regarding the institutional mission and practice. Thus, institutional relations with the external group may be characterised by domination and subordination. Institutional autonomy is limited, opportunities to maintain institutional integrity are limited, and societal relevance may be high but noticeably selective or skewed in terms of who benefits from institutional services, and in relation to the nature and content of the knowledge generated and disseminated. Extra-institutional interests and agendas determine academic practice and content. Thus the nature and content of curriculum is designed to serve the needs and interests, and conform to the ideology, of an external party.



One version of the external determination model is the commonly articulated argument that ‘the university belongs to the community’ and therefore should *serve* the community. The ideas of community ownership, and service to the community, become problematic when the rendering of the university’s primary service is prescribed *exclusively on terms demanded by the community*. The paradox intrinsic to this position is that it assumes that the community (that is, the supposed beneficiary of education) is already so knowledgeable about the nature of its needs and problems and the appropriate forms of response to these, that it is able to take command of the scientific problem-solving enterprise. Equally, such an approach assumes that the supposed beneficiaries of higher education are conversant enough with the nature of higher education and science to adeptly manage their own education. An inference of such an approach is that the university should perform

the functions of a development agency and direct its services towards popularly defined needs of society. The risk is that the university will become impotent to render higher level scientific services and in the process lose its integrity as an autonomous and distinct institution.

The point here is that when university functions are *wholly determined* by external environmental dynamics, the university invariably loses its integrity and fails to generate value for the benefit of society on the basis of its *particular* institutional qualities and strengths – many of which derive from the exercise of relative autonomy.

Limited or pseudo engagement

A less extreme version of the internally self-directed model is where a university seeks to engage with the external environment but on the basis of an underdeveloped concept of the relationship between teaching, research and service, or does so out of self-interest, or feels obliged to engage (or appear to engage) with society or particular sections of it.

An underdeveloped notion of the relationship between the functions of the university may lead to fragmentation and a form of engagement that does not utilise all the opportunities to achieve reciprocity. The compulsion to engage may be a defensive reaction response to pressure from the state or another powerful societal grouping, or may arise from the desire to be politically correct or to gain self-interested benefits from apparent engagement. Such engagement is limited and one-directional. The university remains the dominant party in a one-sided and self-centred relationship and the nature and content of academic practice is only minimally (or coincidentally) influenced by external contextual dynamics. Knowledge generation thus remains confined to the traditional science model, and the level of relevance or value added to society is less than may have been the case if the motivation for and practice of engagement were based on a more genuinely integrated and mutually beneficial model.



The popular American notion of *service learning* is, in its conventional form, an example of limited engagement. While service learning cannot summarily be dismissed as mere limited engagement – since it takes many different forms that could potentially result in real academic and social value being generated – it tends

not to utilise fully all the opportunities for learning and knowledge generation that engagement offers.

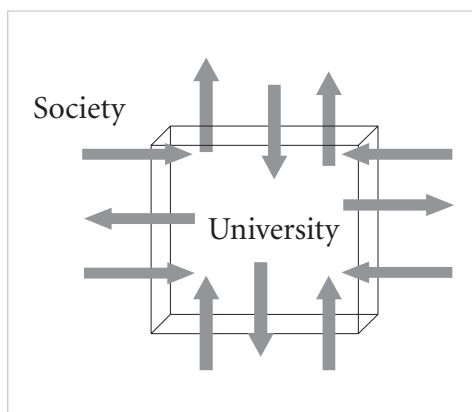
Community service and *outreach* are members of the same family as service learning. These voluntary practices reflect engagement of a welfarist form – taking action that would benefit those in need or contribute to a worthy social cause evidently aimed at signifying a caring attitude and an acceptance of civic responsibility. While there may be justification for such action in the broadly defined operations of the university, it fits uneasily into the realm of activities that constitute the primary concern of the university. The problem with such an approach is that it is an add-on to the ‘core business’.

What may be called the *insipid* version of the *entrepreneurial university* model is another common, though unexpected, contemporary form of systemic relationship in which the university can be described as self-centred and only minimally informed by the external environment. The focus is placed almost exclusively on the financial wellbeing of the university instead of enterprise, innovation and responsiveness. In pursuit of revenue, some institutions move into the education market place under the banner of responsiveness.

Promiscuous engagement

Another extreme position can be called *promiscuous engagement* – a mode of knowledge production and dissemination that is associated with the frantic and chaotic institutional dynamics of the so-called postmodern knowledge society. In this context information and knowledge are the primary means of producing market and social value and are generated at greater frequency and in more institutional sites than ever before.

In this situation, the university is no longer a unique and systemically exclusive site of knowledge generation and dissemination. In order to compete and be relevant, academics and academic units enter into all sorts of partnerships and liaisons – mainly with external parties who seek to use science for innovation, enhanced productivity and competitiveness in global

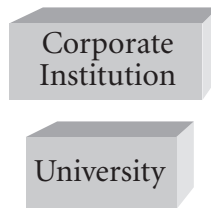


markets. In this case the historical dichotomy has collapsed and university-society relations reflect an absence of boundaries.

This is the so-called Mode 2 scenario sketched by Gibbons et al. in the *New Production of Knowledge* (1994). Gibbons and his co-authors describe Mode 2 knowledge as characterised by application, trans-disciplinarity, accountability to society and the market, and evaluation of quality by users instead of peers. This postmodern version of the university has lost its special status as a distinct institution, not only because its primary business has been absorbed into a diversity of other social institutions, but also because knowledge production occurs according to non-scientific rules. While the frantic haste for innovation and application provides a motivation for engagement, the pressure to reduce the time lag between innovation and commercialisation results in the evaporation of structured moments for distanced, abstract and theoretical reflection, and reduces the social value of science and the university.

The corporate university

Finally, a relatively new occupant of the contemporary education landscape is the *corporate university*. In this case academic practice is absorbed into the corporate environment. The university is established and owned by a corporate entity with the effect that the ‘university’ loses all autonomy and institutional integrity. Its operations are defined according to particular corporate needs and culture, and relevance is high but specific to the corporate institution.



One can only assume that corporate universities have their origin in dissatisfaction with the provision of generic education. As a consequence, a company sets up a university within its own organisational framework, so as to educate and train its employees according to the specific requirements, mission and culture of the company.

Motorola University, for instance, states that its ‘products’ and ‘services’ are designed to link directly to their strategic objectives and to improve business results (Motorola University, 2002).

In this structural relationship the pendulum has swung over to the demand side to the extent that the traditional space for critical, autonomous reflection is completely eroded.

Socially Engaged Science – Beyond Internal/ External Determination

All the structural arrangements described above imply a choice between internal or external determination. The implication of this either/or approach seems obvious – something is sacrificed, and outcomes are either deprived of the riches of theoretical reflection or the riches of practical wisdom.

In pursuit of an approach that captures the benefits of both theory and practice, a socially engaged mode of the knowledge generation is advanced. In order to escape the grip of a binary opposition, a complex third option is offered that seeks to achieve a dynamic balance between internal initiation and external engagement. It is based in essence on an oscillating, circular model to escape the internal/external dichotomy, and offers an approach that is founded on dialogue, reciprocity and inter-dependence.



Intellectual traditions that share a commitment to integrating theory and practice

The approach to the academic practice promoted in this chapter is based on an integration of theory and practice. Such an approach is not unique and the current efforts build on a range of intellectual traditions that are based on the logic of inclusion and integration of theory and practice. What makes this contribution different is that it offers a more structured and systematic way of creating a reciprocal relationship between academic practice and society. Before fully articulating the suggested approach, it is useful to offer a brief overview of intellectual traditions that have influenced the approach advocated in this paper and that share a commitment to recognising and integrating different sources and sites of knowledge generation.

Aristotle and intellectual virtues

Following Bent Flyvbjerg (2001) the notion of socially engaged knowledge generation can be explained against the background of classical Greek philosophy by contrasting the views of Aristotle, on the one hand, and Socrates and Plato on the other. For Socrates and Plato, knowledge is invariable across time and space, and it is produced through the application of analytical rationality. Flyvbjerg notes, however, that Aristotle,

... distinguished between several 'intellectual virtues', of which epistemic science, with its emphasis on theories, analysis, and universals, was but one, and not even the most important. Aristotle added intellectual virtues dealing with context, practice, experience, common sense, intuition, and practical wisdom, especially the intellectual virtue named *phronesis* (2001: 54).

Aristotle distinguished between *episteme*, *techne*, and *phronesis*. *Episteme* concerns universals and the production of knowledge that is invariable in time and space, and which is achieved with the aid of analytical rationality. It corresponds with the modern scientific ideal, derived from Socrates and Plato, that became dominant during the Enlightenment and has come to constitute what is regarded as genuine science. Whereas *episteme* resembles the ideal modern scientific project, *techne* and *phronesis* denote two contrasting roles for intellectual work. *Techne* can be translated into English as 'art' in the sense of 'craft'. As an activity, *techne* is concrete, variable and context-dependent. The objective of *techne* is application of technical knowledge and skills according to a pragmatic instrumental rationality. Where *episteme* concerns theoretical 'know why' and *techne* denotes technical 'know how', *phronesis* emphasises practical knowledge and practical ethics. *Phronesis* is often translated as 'prudence' or 'practical common sense'.

Socially engaged knowledge generation can be seen to draw on all of these conceptions of knowledge. It is an inclusive approach that builds moments of theorising, critical reflection, engagement with practice, common sense, factual information, inter-disciplinary discourse, and so on into a cyclical process, avoiding the need to make a forced choice between types or sources of knowledge.

Hermeneutics and related approaches

Socially engaged knowledge generation is consistent with a broad range of post- or anti-positivist traditions, such as hermeneutics, interactionism, constructivist theory and interpretive and constructivist methodologies in promoting the idea of an ongoing cycle of dialogue with different perspectives on, and sources of,

knowledge. The search for and understanding of different interpretations of reality by differently situated subjects or communities, without assuming that an ultimate and final truth is obtainable, is also common to these approaches.

Experiential and transformative learning

Socially engaged knowledge generation is also consistent with the views of thinkers such as the American pragmatist John Dewey (1938) and others who saw learning and inquiry as thought intertwined with action. Dewey's basic formula of 'experience plus reflection equals learning' served as the basis for much of the thinking that led to service learning and the notion of experiential learning. The theory of experiential learning gained prominence with the work of people like Mezirow (1980), Freire (1988), Kolb (1984) and others who in the early 1980s stressed that the heart of learning lies in the way we process experience, and in particular, on our critical reflection on experience. They depicted a cycle that begins with experience, continues with reflection and later leads to action, which itself becomes a concrete experience for further reflection. In his theory of transformative learning, Jack Mezirow suggests that individuals can be transformed through a process of critical reflection and Paulo Freire (1988) describes the process of conscientisation, by which adults 'achieve a deepening awareness of both the socio-cultural reality which shapes their lives and their capacity to transform that reality through action upon it'. Kolb further refined the concept of *reflection* by dividing it into two separate learning activities – perceiving and processing. Kolb thus added another stage, called 'abstract conceptualisation'. Whereas in the critical reflection stage we ask questions about the experience in terms of previous experiences, in the abstract conceptualisation stage, we try to find the answers. We make generalisations, draw conclusions and form hypotheses about the experience. The action phase, in his interpretation, then becomes a phase of active experimentation, where we try out the hypotheses.

Cyclical theories of learning

Cyclical theories of learning or experiential learning cycles take many different forms. These cycles are frequently (but not exclusively) described as having three stages. The basic 'look, act, think' routine (Stringer, 1999: 16) is one way of depicting this dynamic process of inquiry which is also associated with action research. Kurt Lewin (1964) is credited as the pioneer of *action research* in the 1940s. The conception of action research, however, has changed markedly since then. Prominent writers like Kemmis and McTaggart (1988) see the method of action research as

having four moments, namely, reflection, planning, action and observation. These research moments exist inter-dependently and follow each other in a spiral or cycle. *Participatory* action research is a method of research in which creating a positive social change is the dominant driving force. It embraces principles of participation and reflection, and empowerment and emancipation of groups seeking to improve their social situation (Seymour-Rolls & Hughes, 1995).

Constructivist theories of learning

Socially engaged knowledge generation acknowledges both the social origins of knowledge and the multi-perspective complexity of social reality, and seeks to uncover this social and multi-dimensional reality instead of depending on abstract and single sources of information. It accepts the *constructivist* premise that knowledge is actively constructed by learners, not passively received from the environment, and that coming to know is a process of adaptation based on and constantly modified by a learner's experience (Von Glazerfeld, 1991). The presumption is that learning is socially situated or anchored, which implies that most learning is context-dependent, so that cognitive experiences situated in authentic activities, such as project-based learning, apprenticeships, or case-based learning, result in richer and more meaningful learning experiences. It is also assumed that learners negotiate with their social environment in the process of knowledge generation by forming and testing their constructs in a dialogue with other individuals and with the wider society. And finally, it is assumed that collaboration with others is desirable because it enables negotiation and testing to occur.

Engagement with community of practitioners

The aim of engagement (in socially engaged knowledge generation) is not primarily motivated by a need to find an 'ultimate truth', but rather to reveal different truths and realities – constructions – held by different individuals and groups. To some extent, the ideal is to create the conditions within which divergent views, perspectives and theories can be formulated so as to construct a higher level of synthesis. While engagement with many perspectives is promoted, the emphasis is on engaging with the *community of practitioners* (Lave & Wenger, 1990) and *users* of knowledge in order to acquire knowledge and insight into the context within which knowledge is being applied or used. It is believed that there is much more to learn about a particular profession, occupation, or activity than what is contained in the overt or core curriculum. There is much to learn about what happens at the

interface between the application of knowledge and the contextual response to it that is often either not observed or regarded as peripheral (or irrelevant) from an education and training point of view.

The *community of practice* involves much more than the technical, knowledgeable skill involved in being a pharmacist, an industrial relations officer or a community development practitioner. A community of practice is a set of relations among persons, activities, and the world – over time and in relation to other tangential and overlapping communities of practice. Lave and Wenger (1991) argue that a community of practice is an intrinsic condition for the existence of knowledge because it provides the interpretive support necessary for making sense of its heritage. Thus, participation in the cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice, its power relations, and its conditions for legitimacy define possibilities for learning.

Like constructivist theories of knowledge socially engaged knowledge generation challenges us to rethink what it means to learn, indeed, to rethink what it means to understand. It takes seriously the premise, as advanced by Lave and Wenger (1991: 15), that meaning, understanding, and learning are defined relative to action contexts, not to self-contained structures. Lave and Wenger (1991) use the concept *situated learning* to challenge the traditional notion of the locus of learning as the individual mind that acquires mastery over processes of reasoning and description, by internalising and manipulating structures. Like thinking, learning so construed, takes place in the individual. Lave and Wenger (1991), on the other hand, argue that learning is a process that takes place in a participatory framework, not in an individual mind. This means, among other things, that it is mediated by the differences of perspectives among participants in discourse or practice. It is the community of practitioners, or at least those participating in the learning context, who 'learn' under this definition. Learning is distributed, as it were, among participants in interaction. It is not a one-person act. While the learner may be the one transformed most dramatically by increased participation in a productive process, all who participate would also be transformed.

Systems, feedback and generative learning

In addition to these ideas about cyclical learning processes, it is also helpful to think about the nature of the learning process in systems terms (O'Connor & McDermott, 1997: 124. Systems thinkers use the notion of a *feedback loop* to explain the learning process – one takes action, one interacts or participates in action, and then one

experiences the results of those actions and takes decisions based on those results, which leads, in turn, to further actions. In accepting this logic, socially engaged knowledge generation also subscribes to the idea of *generative learning* (Wittrock, 1990) in the sense that we allow our mental models (theories, ideas, perspectives, etc.) to be influenced, perhaps changed, by the feedback. The implication is that learners, students and academics in effect generate their own learning by generating and solving their own problems instead of solving a pre-defined problem. In this way, knowledge generation involves the processes of engaging with the environment and reflecting upon it to produce definitions of problems and issues, thus making science a perpetually self-renewing practice.

Levels of learning

Recently Dreyfus and Dreyfus (1988) produced a model of human learning that suggests that people pass through several phases or levels in the learning of skills, where 'skills' are understood to range from the technical to the intellectual. They identified five levels in the human learning process: the novice, advanced beginner, competent performer, proficient performer and the expert.

The Dreyfus model elucidates the importance of context-based experience in making the qualitative jump from analytical rationality to intuitive understanding and expert judgement, thereby enabling the design of a learning process and teaching practice that incorporates multiple forms of rationality, multiple types of learning and multiple sources of knowledge.

Socially engaged knowledge generation in action

A socially engaged approach to knowledge generation, as advocated here, incorporates the notions of learning as a staged development process, the learning process and as cyclical in form, with learning and practical benefits to be derived from the ongoing oscillation between theory and practice, reflection and action, and so on. In the broad schema of university relations with society, the market and the community, socially engaged knowledge generation meanders along the path where external and internal determination meet or overlap. It proposes a structural shift in university-environment relations towards ongoing dialogue, exchange, and interaction between the contexts of learning, teaching and application.

For the purposes of socially engaged knowledge generation, the basic action or experiential learning cycle is adapted and refined as a mode of knowledge generation on a higher education level by integrating the critical dimensions of

academic practice (theorising, research, teaching and learning) with critical aspects of the context of application (community of practice, users, policy framework, etc.). Different moments of conceptualisation, action and engagement add to the generation of new knowledge or understanding, making the knowledge generated more relevant to the context of application and therefore to development needs.

The socially engaged knowledge generation process contains specific provision for the transfer of knowledge from practice to the teaching and learning process and for it to impact on curricula in an ongoing fashion. The expectation is that such a process will not only enhance the quality of academic knowledge but also benefit society by way of generating problem solving knowledge.

The order of the proposed 'stages' for socially engaged knowledge generation are not programmatically fixed, but should rather be understood as theoretically sequenced in order to enunciate features of the relationship between different facets of the process.

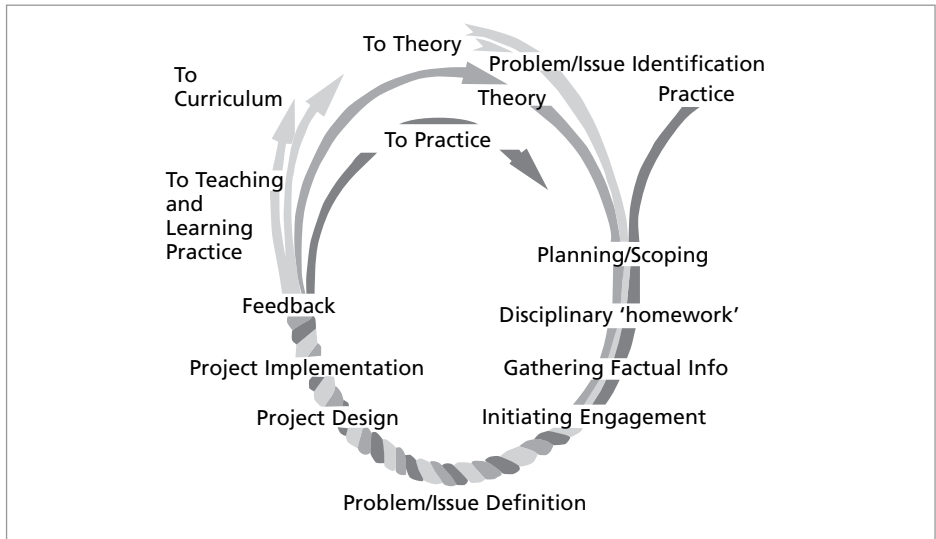
It is recommended that the following stages be included in a socially engaged knowledge generation process:

- 1 Identification of issue/problem/development challenge;
- 2 Planning/scoping;
- 3 Disciplinary engagement with state of the art/global debate and theory;
- 4 Gathering of factual information;
- 5 Initiating engagement and team building;
- 6 Theory/contextually informed definition of issue/problem;
- 7 Design of knowledge generating project;
- 8 Implementation of knowledge generating project; and
- 9 Feedback to practice, teaching and learning practice, curriculum and theory.

Throughout the process, students or learners take part and participants reflect on theoretical discourse, conceptualise and re-conceptualise issues, and in particular, it is proposed that all parties involved continually pose questions about values and power.

Generally speaking, the process is approached in accordance with the research principles of systematically gathering information, recording, writing up, and analysing trends and patterns.

Figure 2.1: Socially engaged knowledge generation



In what follows the elements of socially engaged knowledge generation are explored as items and moments in a series of steps or phases. As explained above, the items of the process are only presented as elements of a sequential cycle for explanatory purposes. Reality tends to be much messier than the process described here, and disciplinary traditions, subject matter, and a host of other factors may determine a different type of process.

For the moment this process is offered with the confidence that it is workable in most of the Social Science and Humanities disciplines. Nine case studies at the University of Port Elizabeth are being written up, which contain evidence of the viability of this process.

Identification of issue/problem

The point or source of initiation is a critical issue because it is intertwined with questions about institutional integrity and academic agency. So-called traditional science is predominantly self-referential and the advancement of knowledge typically emerges out of academic discourse itself. In the case of most experiential learning approaches the learning process tends to emphasise experience or action as the point of departure.

In principle, a socially engaged knowledge generation process could be initiated in many ways and from many sources. Since the primary aim is to (re) establish the

linkage between the contexts of theory and a societal context in order to enhance the societal value of science, the strategy employed is to reduce (without eliminating) the space between academic practice and the dynamics of contemporary society.

However, in order to simultaneously maintain the value of science in the process of knowledge generation, the conditions for academics and scientists to be initiators and primary agents of knowledge generation and problem solving by way of science need to be fostered. Ideally, the process of knowledge generation should emerge out of an informed and contextualised academic or theoretical discourse and then proceed to engagement with the context of application.

While cognisant of populist, post-modernist, epistemological and other arguments against theory and theorising, the approach adopted and propagated here grants a pivotal role to theory. However, it does not promote theorising for the sake of theory. Knowledge and theory for their own sake are extravagant luxuries in a resource-poor developing society, but knowledge generation in a university context that is bereft of theory is intellectually impotent and institutionally self-negating. The university will manufacture its own demise if it abandons its role as an institution concerned with theory and theorising. Moreover, the university has a critical social responsibility to facilitate theoretical discourse because theoretical reflection is one of the higher levels of human capability that enables us to see the so-called 'bigger picture' and to assess the actual or inherent quality of our thoughts and ideas.

This approach does not promote a narrow and over-specific or ideal notion of theory since that could be epistemologically unachievable, particularly in the case of the Social and Human Sciences (Dreyfus & Dreyfus, 1988). Instead theory is used here in a broader sense, as a rigorous statement that may serve to solve a problem or enhance insight and understanding by offering a generalising statement about a phenomenon. Theories are thus appreciated as generalising statements that assert a connection between two or more types of phenomena – a quality that makes theory potentially *useful*. The argument for theory, then, is premised on the idea that we need theory because it enables the generation of progressive problem solving statements. It enables programmes of action and its pursuit protects the academic integrity of the university. It is through higher level and broader spectrum insight, derived from theory, that good academic practice has something special to offer society. In the case of the approach offered here, the role of theory is important to ensure that academics have something special to offer society.

This also means that agency is a significant consideration. With the 'ivory tower' severely discredited, the idea of a self-directed academia has become passé. For a variety of reasons, academics have lost social status and are less likely to be entrusted

with the exclusive determination of the nature and content of higher education. Instead, there are growing local and international calls for social determination of the academic agenda. Even though one may concur with much of the prevailing critique of academia it would be defeatist to accept an imposed 'other-directed' approach. External determination means loss of agency. However, as stated earlier, an either/or approach is not advisable. Instead, academics should be confident and assertive about using their disciplinary know-how as a point of departure, and should be agents of their science while becoming as informed as possible about the social context. Academics should do research and render service as an extension and an application of the theory with which they are familiar. The ideal is that academics have the capacity and willingness to occupy their systemic 'space' with confidence, and not be other-directed to the point that they become mere disempowered instruments in the agenda of another sector of society. They have the opportunity to contribute to societal development by way of critical and theory-informed scrutiny of the issues raised in public debates and everyday life. While it is important that everyday life and public discourse provide a means of contextualising academic work, academic engagement with public discourse cannot be one-way traffic. It is essential that academics use their 'academic/theoretical space' to interrogate public discourse and everyday life.

In addition to stressing the importance of academic agency and the need to promote knowledge generation that is theory-initiated, this approach also means that academics must, in the first instance, be good disciplinary craftsmen/women. The issues and problems that academics and their students concern themselves with should be identified in the realm of academic and theoretical discourse. What is more, theorising and theoretical knowledge should be valued as vital in guiding the knowledge generating process but this is only possible when theory can be taken to represent the 'state of the art' and it is informed (but not determined) by the context in which it is practised.

With the above said it must be reiterated that the engagement that follows on the initiation of the process is more important than the source or origin.

Planning/scoping

While socially engaged knowledge generation is concerned with protecting and promoting the integrity of academics and the university, it is critical of the conventional *laissez faire* nature of traditional science. It takes the academic process beyond the unstructured milieu of traditional science into a more structured process that utilises features of project management practice in order to plan and implement a knowledge generation process. It is from this process that the notion of *scoping* derives.

Scoping is the exercise, at the beginning of a project, whereby project managers anticipate the key features of their project in a brainstorm-like fashion. Some of the questions that would be asked in such an exercise that would be relevant for our purposes include: Why are we doing this? What are the deliverables? Who will gain from the outcome? Who are the stakeholders? What's in it for the stakeholders? Who should be on the team? Who is the project leader? What is the time frame? What is the initial budget?

The point is that despite its specific and unique features, the scientific process of knowledge generation is in many ways similar to any other project, and needs to be approached like other projects that are supposed to lead to useful outcomes and results. Socially engaged knowledge generation is deliberately designed to be responsive to the needs of society, and it is inevitable that it will entail interaction with partners, clients, teams, funders and other external parties. This requires a more 'managed' approach to knowledge generation compared to traditional science. It also provides opportunities for consultancy, academic entrepreneurship and commercial spin-offs from innovation.

The exercise of scoping enables one to acquire focus and clarity on matters like size, effort, cost and time, ownership and buy-in issues. It enables fast achievement of consensus on the goals of the project, and alerts one to pitfalls.

It seems that one of the critical items to be considered at this point is how one will ensure that the project unfolds as a learning experience. In other words, how to extract as much information and learning out of the process as possible as well as how to ensure that learners gain as much benefit from the project as possible. The Dreyfus model (Dreyfus & Dreyfus, 1988) discussed above provides a guide to designing a knowledge generation project in such a way that it simultaneously serves as a learning process. The idea is that learners may move along with the unfolding project, and be enabled to move through a developmental process of initial familiarisation to the more advanced levels of learning. Different types and levels of engagement are appropriate for different levels of learning.

Disciplinary 'homework'

It is important that academics do not embark on multi-stakeholder, socially relevant projects without having achieved a reasonable level of theoretical and disciplinary competence in order to add to the inter-disciplinary exploration of issues, and to add value in their engagement with society. There is little to be gained from artful application of outdated knowledge.

'Getting the facts right'

A socially engaged knowledge generation process challenges us to 'get the facts right'. Too often we proceed without knowing the latest facts and figures about a particular situation. Scientists, particularly Social and Human Scientists, often scoff at the notion of 'facts' and 'objective knowledge'. Quantitative or statistical data are at times dismissed as mis-representations fabricated by people with hidden agendas. There is also a tendency among those of us with an anti-positivist tendency to argue that there is no such a thing as objective reality. This sometimes arduous debate about the nature of reality is perhaps very necessary to alert one to the dark side of science and the pretensions of empiricism, but it should not be used as an excuse for passivity.

Socially engaged knowledge generation requires us to *factor in* information that is presented as objective facts and figures and then challenges us to utilise it in a critical fashion.

Like all other forms of knowledge it should be seen as part of the complex of information that should be gathered by people who see their business as the production and dissemination of knowledge. As with all other information, the academic is obliged to critically scrutinise facts and data, and the learner should be assisted and given the opportunity to develop the skills and techniques of gathering, critically assessing, and processing data.

Initiating engagement with the environment

Instead of assuming that once one has some command of academic or theoretical discourse, that one is sufficiently equipped to 'make one's mark on the world', the socially engaged knowledge generation process demands that one refrain from offering academic or theoretical solutions to societal problems until one has engaged with different sites of knowledge production and application. It is recommended that a process of contextualisation be embarked upon whereby the academic, scientist or lecturer and his/her students engage with different sites of knowledge production and perspectives. The process of engagement is deliberately initiated at some point with the idea of maintaining these relations and building a multi-disciplinary, and highly skilled team with varied perspectives.

In principle, the notion of engagement denotes an open-endedness in terms of potential sites of engagement. However, the primary site for engagement is the *context of application* – in other words, the site where knowledge is being used by 'users' and practitioners. Engaging with the context of application could mean many different things. The important point, though, is that one wants to create oppor-

tunities for the learning process to become informed by the insights and knowledge that are held by practitioners, users and people that frequent the vicinity of the application of theory to practice. The aim is to bring the theoretical and practical closer to one another and to extract new insights from the context of application that can be used to challenge or confirm theory.

The socially engaged scientist will regard working within *popular 'grassroots' discourse* as important. Where traditional science calls for publication in accredited journals and presentation of papers at academic conferences as the highest form of academic practice, socially engaged science regards these media and forums with some scepticism. Insofar as academic publications and conferences promote knowledge and science for its own sake it is part of an old paradigm. The engaged scientist regards the popular media as important sources of information and a means for engagement and the dissemination of knowledge. It is through these media that academics can enhance their impact on society. However, the approach presented here should not be understood as favouring knowledge generation that is determined by populist considerations. Engagement with popular discourse is promoted, not because popular debate is assumed to be superior, nor because it is the politically correct thing to do, but because the popular viewpoint is an important part of the spectrum of perspectives that have an impact on, and shape, what we call social reality. The implication is that popular perspectives (and unpopular ones for that matter) must be incorporated in the process of knowledge generation. It is essential because of a particular understanding of how knowledge can be enhanced, acquired or generated with the aim of greater social relevance.

It seems appropriate, in a South African context, to explore the *policy landscape* as a site where the development agenda is articulated. The policy debate could serve as a rich site for learning and the identification of issues, problems and challenges facing society. It is crucial, however, that academics, researchers and learners do not see policies as untouchable and beyond critical scrutiny. In fact, one of the important contributions that higher education has to make to society, is to scrutinise and engage with the policy debates of the day. A common failure among academics is to abandon their critical stance in order to be politically correct. Policy discourse is important to familiarise the learner with the 'debates of the day', to encourage the forming of opinion, and to explore the linkage with theoretical discourse. But policy discourse is often inadequate as a means of accessing the local or popular discourse. Governments are not always as closely in touch with the grassroots as they think they are, and often promote agendas which are those of international or global agencies instead of addressing local needs.

A primary mode of knowledge generation and dissemination in the information or network society is the *Internet*. The nature of academic practice has been irrevocably changed due to the massive dispersion of knowledge and information on the Net. The context of application and community of practitioners should be (and is) increasingly understood and located in global terms. The opportunities bestowed by virtual engagement through information technology (and in particular Internet Two) may launch an unprecedented wave of transformation that will permeate all spheres of education and knowledge generation. This issue is intensely significant to the topics under discussion here but will only be explored in greater depth as part of future research.

Most development issues and problems are multi-dimensional and require *multi-disciplinary* investigation. As stated earlier, disciplinary competence is a primary responsibility of every academic. Inter-disciplinary openness and engagement is a necessity in view of the nature of reality. Socially engaged science promotes partnerships and team formation across disciplinary lines.

It is vital to appreciate the importance of multi-disciplinary and stakeholder networking as of significance beyond the point of the particular project being engaged upon. It may easily happen that projects turn out to be of limited impact or significance but that the relationships built in the process endure beyond the project and become the platform for future fruitful engagement.

Defining the problem/issue

Unlike many traditional scientists, the socially engaged scientists have remained in the reception mode up to this point. They have been absorbing information and have resisted the temptation to arrive at theoretically informed definitions of the situation. Only at this point in the socially engaged knowledge generation cycle should an attempt be made to generate a definition of the problem or issue. It is appropriate at this point to withdraw into a state of reflection to consider what has been learnt and to ask questions about what the information says about the original theoretical perspectives. It would be appropriate to write exploratory articles at this stage in which understanding is sought and information integrated to define an agenda for knowledge generation. An idea should emerge from this process as to where a contribution may be made to the progress of science and the improvement of society, and a range of questions, hypotheses, or other tentative forms of knowledge, that can be tested and critically scrutinised, should be articulated.

Project design

From this point the knowledge generation process becomes a *project* with definable objectives and outcomes that will simultaneously contribute to knowledge generation and the solving of societal problems. This means that scientists and or their associates must acquire the capacity to be project managers or co-ordinators. They must write proposals, raise funds, form teams, and implement projects according to plan and time schedule. It is assumed that at this point the process has gathered together a team of people from different sites of engagement with whom a degree of consensus has been reached about the fact that there is an issue or problem about which they are concerned, and about which they want to do something. They may decide to bring into the team project management expertise or not, but they have to know how to proceed and design a knowledge generating or problem-solving project.

Questions should also be raised regarding how to use technology in the process of analysing the issue or problem and the nature and role of technology in the substantive topic under investigation. The point is that technology must be seen as a means of enhancing and speeding up the process of development, and all opportunities to reach further through scientific means should be explored. However, the questions posed below about value and power should always be asked to guard against the undesirable use of technology in a developmental context.

Project implementation

Implementation in a knowledge generation project is always a research, learning and teaching process, and not simple implementation in the regular, practical sense of the word. Academics are not implementation agents and the university is not a development agency. This means that even though engagement in pursuit of knowledge is propagated, the aim of projects is to generate knowledge with the results transferred to the practitioners.

While socially engaged knowledge generation does not prescribe any particular research methodology, in view of the above, the case study approach (Yin, 1994) merits specific attention. Dreyfus & Dreyfus (1988: 71–2) remind us that the case study approach, as a method of research, teaching and learning, provides opportunities for real-life contextualised experience which is valuable to make the qualitative leap from rule-governed analytical rationality to the intuitive, holistic, and synchronous performance of tacit skills. They also point out that well chosen case studies can help learners to achieve competence, and for researchers,

... the closeness of the case study to real-life situations and its multiple wealth of details are important in two respects. First, it is important for the development of a nuanced view of reality, including the view that human behaviour cannot be meaningfully understood as simply the rule-governed act found at the lowest levels of the learning process, and in much theory. Second, cases are important for researchers' own learning process in developing the skills needed to do good research. If researchers wish to develop their own skills to a high level, then concrete, context-dependent experience is just as central for them as to professionals learning any other specific skills (Dreyfus & Dreyfus, 1988: 72).

Feedback

Ideally the socially engaged knowledge generation process up to this point will have succeeded in generating new insights and new knowledge. The outcome of this process must be fed back into teaching and learning practice, curriculum and theory.

With the assistance of practitioners in the project team, a strategy should be designed to 'package' and disseminate knowledge in such a way that it adds value to society. Academics may become involved in implementation in practice, but only up to a point. Once an initiative becomes self-sustainable, academics should withdraw. They should not become the practitioners, even though they should seek to maintain the relationship, be involved in monitoring, and seek opportunities for a new cycle of knowledge generating engagement with practice.

It is also important that knowledge generation processes be used in the search for employment opportunities for graduated students, employment opportunities for others, and entrepreneurial spin-offs. Successful research universities in advanced societies are productive and successful in terms of churning out new innovations, patents and commercial spin-offs. Socially engaged knowledge generation, that grapples with development issues in a developing society, may not be as productive in this sense but may nevertheless produce its fair share of spin-offs with commercial or non-commercial potential.

Instead of academics offering their services in fields unrelated to their own disciplines, they should develop opportunities for consultancy work as an extension of their academic practice. It is along this route that an appropriate notion of academic entrepreneurship (as opposed to the insipid version referred to earlier) will be developed.

Next, it is important that the process of engagement with the environment be used for enhancing the teaching and learning milieu. One of the great opportunities

that comes from working with skilful practitioners is that they may be brought into the teaching process as adjunct professors.

Ultimately learners must benefit from engagement. If this objective is not achieved the process can hardly be described as academically successful. The results of the process must return to the undergraduate curriculum. It is the responsibility of the academic to extract from this process the information that will serve to take theoretical and academic discourse further. At some point in the undergraduate curriculum the academic should build in a component that results directly from his/her own research and knowledge generation. Opportunities must be created for post-graduates to share their knowledge with undergraduates and for other members of the research team to engage with undergraduates.

The more important point is that curriculum should be seen as the ongoing emergent outcome of engagement with the environment. In order to be responsive to the challenges posed by the environment and to be competitive with the new agencies of knowledge generation and dissemination, universities need to become much more dynamic and acquire the ability to continually redefine the nature and content of the curriculum as well as the means and methodologies whereby knowledge is disseminated.

Theory is the desired end goal and the starting point of the next cycle. It is hoped that the socially engaged scientist and his/her students have learnt something from engaging with practice that can be added to the existing body of knowledge, and that they have raised new questions and issues that can be taken up as the next challenge.

Values and Power

Instead of pursuing the positivist ideals of traditional science, the approach adopted in this chapter does not claim to be value-free. On the contrary, it is suggested that a particular effort should be made to introduce values in the knowledge generation process by asking a particular set of questions *throughout the process* of knowledge generation: What are we doing? Where are we going? Is it desirable? What should be done?

For Flyvbjerg (2001), the objective is to find a balance between the prevailing instrumental rationality and value-rationality by promoting and facilitating the capacity of individuals to think and act in value-rational terms. He suggests that one's attitude to the situation being studied should be taken as one's point of departure, but that one seeks to ensure that such an attitude is not based on

idiosyncratic morality or personal preferences, but instead on a common view among a specific reference group to which the researcher refers. For Flyvbjerg the socially and historically conditioned context – and not the rational and universal grounding desired by some philosophers (but never achieved) – constitutes the most effective defence against relativism and nihilism.

In the South African context this means that knowledge generation and scientific projects designed for the purpose of societal development and progress should be informed by the values that underpin our own transformation process. Even the adoption of new information and communication technologies and the transition to the network society should come under critical scrutiny. As stated earlier, the point is that science as an end in itself and without any developmental direction, is a luxury which can be little afforded in a society like South Africa. The practice of science should be informed – but not determined – by the contours of local discourse.

Flyvbjerg (2001) also recommends that we introduce into our scientific endeavours questions about power and outcomes: Who gains, and who loses? Through what kinds of power relations? What possibilities are available to change existing power relations? And is it desirable to do so? Of what kinds of power relations are those asking these questions themselves a part? He offers an analysis of power guided by a conception of power as productive and positive and not only as restrictive and negative. Knowledge and power, truth and power, rationality and power, are analytically inseparable from each other; power produces knowledge, and knowledge produces power. The central question is *how* power is exercised, and not only who has power, and why they have it; the focus is on process in addition to structure (Flyvbjerg, 2001: 132). With these questions and with a focus on value-rationality one may relate explicitly to a primary context of values and power.

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