Design for development: a review of emerging methodologies

Robert Simpson and Roderic Gill

This article reviews current methodologies for the design of development projects and identifies foundational reasons for conflict between design approaches and participatory methods. A number of alternative approaches to the design of interventions in social systems are examined, and the potential application of some of these new ideas within a visioning process that is based on communicative rationality is explored. We conclude that there are many problems to be overcome before describing a complete design methodology which moves away from the objectivist basis of existing design systems, and that the new approach will need to address power relationships and the consequent and interrelated problems of accountability and trust.

KEY WORDS: Aid; Methods

Introduction

This article addresses the state of the art of development project (or activity) design. We have chosen to use the term 'design' rather than 'planning' because it better reflects the nature of the approach that we advocate. Our intention is to draw attention to the shortcomings of current mental models as these are applied to the design process and to compare current practice with other areas of social development. In so doing, we seek to facilitate the re-evaluation of prevailing participatory methodologies through the additional insight that alternative frameworks may inspire. This is not an easy path for practitioners who have invested in and have become used to particular ways of thinking.

We proceed by first discussing the current practice in development design, making some observations on problems that ensue from the choice of certain methodologies. By way of generalisation, the apparent dominant model for development design would seem to have its roots in the objectivist epistemology. This implies a particular worldview or mental model for 'the way things work' that may in many cases be out of alignment with 'social processes'. At the very least, we hope to provide some convincing argument in favour of intentional reflexivity in this regard. This means that those who design development programmes need to explicitly consider the alignment of the 'ways of knowing' that underpin their own thinking and methodologies with the cognitive processes that predominate within the intended 'target communities'. This is the advice provided by Chambers (1997) in advocating the need for 'self-critical

epistemological awareness' (p. 203) as a priority in development planning. We regard Chambers' advice to be worthy of some thorough investigation, and that is our purpose here.

When this advocated reflexivity is lacking, we note the emergence of tension between a participatory approach and the intentions that underpin project design. To support our search for the practical resolution of these tensions, we derive insight from some examples of development-planning applications and propose what we hope may be regarded as sensible pathways forward.

Design of development projects

Development projects are instrumental: they serve a purpose. To this end, design for development projects is about describing a set of activities that will achieve that purpose. This simple statement masks layers of complexity in the actual design process, but nonetheless it serves as a starting point for this review. The areas of complexity that we will investigate include the definition of purpose and the consequent statements of intentionality and problems of interpretation, and the dynamic, discursive, and reflexive nature of the relationship between a designed set of activities and the environment in which these will be implemented.

From our starting point we recognise the vast body of knowledge that has been generated over the history of development, with roots in colonial administration, through Eisenhower's declaration about a state of 'underdevelopment', through post-, anti-, and critical development thought systems, to a situation where, in our globalised world, there is an industry that pursues the objective of increasing the global public good of 'development'. We note that the usually implicit objective for most development involves some increased economic activity. Additional nuances might include explicit intentions in relation to the distribution of the monetary wealth generated by development activity through to explicit intentions about how that additional economic activity might be geared to the cultural and environmental characteristics of the 'target' community. Paradoxically, we include within the scope of the development industry those who would deny its existence or call for its demise. Our starting point acknowledges the size and scope of the industry, and specifically its structure and process. We recognise the power of the development agencies (multilateral, government, and non-government) with massive resources at their disposal, and we focus on the application of some of those resources through projects.

We do not have the space here to describe the history and key drivers behind the current governance arrangements of the international development industry, or more specifically to reflect on how these arrangements may be described as the inevitable consequence of privileged knowledge positions. Nor do we have the space to present a critique of the moral and ethical issues associated with the deployment of those privileged positions within the international development arena. We shall therefore contain the current discussion to a focus on reflexive development-project design and leave the wider institutional dimensions to a later discussion. We note, however, that these issues of ethics are an integral part of the domain that we describe.

Many of those reading this article will be practitioners within the development industry. They will be people who either apply the methods described here, or who are involved in the production of knowledge associated with the project cycle. Eggers (2002), reflecting on the origins of the EU's Project Cycle Management (PCM) approach, provides an overview of the current managerial or process-oriented approach that is commonly applied to managing the project cycle. The important elements of Eggers' reflections are the following:

1. an acknowledgement of the inefficiencies and lack of effectiveness of the development-assistance industry, evidenced in a review by the EU and by reviews in other agencies;

Participatory methods in current design practice

Rick Davies (2004) discusses various representations of theories of change, and provides a basis for understanding how complexity and dynamics might be better handled within project design. The original premise of the logical framework method was that a hierarchical series of hypotheses could represent the theory of change underpinning project design. Davies shows how other structural representations of theories of change may be more suitable to a range of development problems.

However, in addition to various structural aspects of change theories we also need to consider how those theories are framed within processes of change in the economic, environmental, and social context of the project. The need to design projects to account for social contexts in particular requires the practitioner to consider the range of theoretical perspectives available in framing theories of change.

Practitioners using participatory methods routinely engage in the interpretation of local knowledge presented to them. In doing this, they are applying a subjective view of reality (derived from their accumulated experience and knowledge) to interpret views offered by participants. In a design process, what is used to derive the theory of change is a constructed reality based on the interplay between participants. We need to challenge the assumption that any existing design process can adequately handle a situation in which various forms of knowledge are mixed. We need to be assured that some forms of knowledge, or the specific worldviews that define them, are not asserted or privileged over others. At the very least, the practitioner needs to present an inventory of evident worldviews and explain why some have been incorporated into the design process rather than others. Ideally, good participatory process will tend to facilitate the evolution of participants' worldviews through at least some degree of informed synthesis. That synthesis needs to be participant-driven, rather than imposed by the facilitator. Participants need to agree with or 'own' the synthesis if subsequent conflict or lack of empathy with the design process is not to stall development plans.

Within current LFA practice, it is common for beneficiary participation to be included as part of the process of identifying the problem(s) to be addressed. Typically a 'problem tree' is developed and analysed and then converted into a structure of goals and objectives suitable as a hierarchy for the logframe. The problem-identification process or problematisation could be based on participatory methods, either through methods such as PRA or more commonly through the questioning of representative stakeholders. The research method used for capturing the knowledge used in problematisation varies, but the underlying assumption remains that a set of problems can be described, analysed, and converted to a hierarchy of project objectives. It is this process of problematisation that provides the strategic dimension to the LFA by converting perceived problems into an action-oriented schema for their solution. This schema provides the vision (goal) and mission (purpose) of the designed project. It is at this point that any knowledge contained in the problematisation is built into the instrument that is intended to solve the development problem to be addressed. It is also at this stage that the causality between action and outcome is determined, based on interpretations of collected knowledge, and where the hypotheses of the logframe (or any other adopted design model) are constructed.

In analysing the design of projects that are based on a range of different knowledge types developed through participatory methods, the questions arise of whether the conditionals (*if ... then*) of the logical framework approach represent a valid reasoning method, and whether the various knowledge types are amenable to this type of reasoning, or whether other forms of reasoning are required. Typically, participatory research will produce 'expert' or external knowledge and 'indigenous' or local knowledge. Kothari (2001) notes that while participatory approaches are intended to uncover the voices of the marginalised and excluded, 'this can

present problems when the knowledge produced challenges knowledge conventions'. Clearly there is still a vast challenge for both theorists and practitioners in determining whether and how various forms of knowledge can be analysed and combined in a rational instrumental process, while still maintaining the relevance and representations of that knowledge.

The rationality of the logic of the logical framework

Underpinning the logframe procedure is the unquestioned (non-reflexive) assertion of 'instrumental rationalism', as a particular manifestation of a philosophical worldview that articulates an orderly, positivist outlook. The implications of this worldview in relation to development were explored at some length by Meppem and Gill (1998) and Meppem and Bourke (1999). For the purposes of this article, we note that this embedded philosophical position has considerable implications in terms of how the world is perceived and how problems can be addressed. Those perceptions enter into and underpin the process of development project design. The main point is that these deep philosophical underpinnings are not universal, and are therefore not necessarily shared by all those who are part of any particular development story. Development solutions that are devised through one exclusive worldview may not be a comfortable fit with the worldviews of all parties. Those people will feel disenfranchised at best and, at worst, aggressively opposed to ensuing plans.

The logical framework can be seen as an instrument created during a design process, usually by a group of experts. This instrument embeds some very specific 'ways of seeing the world' or 'worldviews' (that is, embedded epistemologies). The 'means–end' target orientation of the logical framework fits the description of an objectivist outlook or epistemology that tends to lead to advocacy of instrumental rationality. This 'instrument to achieve an end' perspective embeds one particular way of seeing things, and then legitimises or imposes that perspective on those who would see the world differently. The instrument is legitimised through its claim to the imprimatur of the experts, which is in itself taken to embed objective truth. Such an instrument allows little or no reflexion in relation to the 'ways of knowing' of those involved in a project's design or implementation. If instrumental rationalism is implied, so too might be the rather dire consequences that some would associate with such a position:

> *This form of rationality affects and infects the entire range of social and cultural life encompassing economic structures, law, bureaucratic administration, and even the arts. The growth of [instrumental rationality] does not lead to the concrete realisation of universal freedom but to the creation of an 'iron cage' of bureaucratic rationality from which there is no escape.* (Weber 1947: 337)

These concerns in relation to instrumental rationality emerge when different claims to objective truth come together, or when those who advocate objective truth encounter others who advocate a constructivist or even subjectivist view of knowledge. These groups or individuals will react when they detect policies or action plans developed through a design process that seems to embed truth claims that are not their own. Avoiding these kinds of concern should be a priority for those who design development projects.

For the logframe practitioner, project design implies a means of visioning a preferred future, or the intention to cause change; and the organisation of resources to achieve the desired change. This managerial approach is based firmly on a positivist position which assumes that these things can be done; and that it is possible to plan changes and implement projects to ensure that they happen. As Davies (2004) observes, there are indeed many ordered situations where this positivist position can be adopted, and this explains the popularity and success of conventional strategic planning within business and the logical framework within the development

industry. Drawing on complexity theory, Davies examines a range of alternative situations where the simple linear representations of the logical framework are inadequate, such as (a) where there is a need to represent more stages of change than allowed in the logframe; (b) where changes and options might result in branching processes; (c) where multiple processes run in parallel either with or without any interaction; and (d) where processes are reiterative or recursive.

A distinct alternative to instrumental rationalism that has emerged in recent planning theory is 'communicative rationality' (Habermas 1984; Dryzek 1997). This approach advocates dialogue in which participants are fully informed and empowered. The emphasis is on a communicative style that might inspire a design process that is fundamentally democratic and hence supportive of the interchange of ideas towards new learning and inspiration through which to define ensuing plans and actions.

Engaging beneficiaries – the contested role of participation

'Participation' is a concept that is inevitably coloured by the perspectives of those who advocate participatory processes, and by those who are the targets of such processes. The term, generally, signifies more than its lexicological definition would imply. Participation may, for example, imply a mechanism for community advocacy. It may imply an intent to achieve inclusive democratic process. Academically, it may imply an explicit recognition of complexity and the need for wide-group learning as the foundation for understanding. To others it might simply imply a planning process that has at least some components of public scrutiny. In the context of project design, participation implies a stakeholder-inclusive process of engagement towards the development of a design.

Any move towards translating a participatory endeavour into operational practice is one that will invariably follow a highly contested path. Given that the meaning attributed to the term is so coloured by different people's idiosyncratic ways of knowing, it is no wonder that its translation into practice has been so problematic. One person's genuinely good intentions may be perceived by another as a 'new form of tyranny'. A useful survey of these controversies is presented in the volume edited by Bill Cooke and Uma Kothari (2001), in which David Mosse notes that while the aim of participation in development planning is to tap into 'people's knowledge', that knowledge is 'constructed in the context of planning and reflects the social relationships that planning systems entail' (in Cooke and Kothari: 17). Such a planning context also conceals a 'complex micro-politics of knowledge production and use' (*ibid.* p.19). To expand on this contention, Mosse identifies four aspects of how this planning context can influence the character of participation and the value of the results obtained. First, knowledge is shaped by local relations of power. Secondly, outsiders' agendas can be expressed as 'local knowledge'. Thirdly, the process of developing consensus can be hijacked by local collusion; and fourthly, project agents or officials can directly manipulate the process and outcomes of what otherwise might be sold as 'people's planning'.

Simon Bell (1994) identified a tyranny of methodologies and mindsets and placed responsibility for the degree of tyranny on the self-awareness of the practitioner and the limits to such self-awareness. This theme was taken up by Cooke and Kothari (2001) in acknowledging that participatory techniques that are intended to empower often result in subjection. This counter-intuitive result is seen as the starting point for a more reflexive understanding of power, based on a 'recognition that participatory development ... is constructed by a cadre of development professionals ... whose ability to create and sustain this discourse is indicative of the power they possess', and that 'these development professionals, in the applications of their ideas of participatory development, are actually engaged in the construction of a particular reality – one that

at root is amenable to, and justifies, their existence and intervention within it' (Cook and Kothari 2001).

Other approaches to designing interventions in social systems

The design challenges discussed above in relation to development are not essentially different from those faced in relation to socially oriented policy and programme development in the so-called developed countries. The occurrence of various types of knowledge and rationality across social groups and regions presents the same issues in developed and developing countries alike. Differences in literacy and power relations make each design problem unique, and methods are being developed that provide the practitioner with analytical and communicative tools and representational forms that can be modified to suit.

Bela Banathy proposed that societal systems are purposeful systems that are evolving, and that design can guide that evolution. From this perspective

> ... *design is a creative, decision-oriented, disciplined inquiry that aims to: formulate expectations, aspirations and requirements of the system to be designed; clarify ideas and images of alternative representations of the future system; devise criteria by which to evaluate those alternatives; select and describe or 'model' the most promising alternative; and prepare a plan for the development of the selected model.* (Banaty 1998:169)

Gregory LaPointe describes a social system as 'a manifestation of complexity at the highest level' and notes that 'the purposeful interrelationships and the creative dynamic interactions of the members ... generate crucial processes, which bring forth unique emergent properties and wholeness' (LaPointe 1998:195). He agrees with Banathy that design is

> ... *a set of methods and activities employed to create and assemble social systems. Ideally, it is a process where stakeholders carefully put together a description of a future system that is socially desirable; culturally acceptable; economically sustainable; technologically feasible; operationally viable; environmentally friendly; and psychologically nourishing.* (LaPointe 1998: 201)

As a way to assess organisational systems that might achieve this ideal, LaPointe describes an approach based on humanistic thinking, which 'puts forward the notion that human beings live within a context of created meanings, and are motivated by a social nature to achieve collective and self-determined purposes' (*ibid.* p.195). This focus on humanistic thinking is extended by proposing four qualities of human nature that are useful in addressing the way in which organisations can allow for and adapt to people's needs. These include development aspects ('each person ... is a life-long architect busily constructing his or her understanding of the world from a pool of acquired life experiences'); socio-teleological aspects ('purposeful human behaviors directed towards the achievement of one or more purposeful goals in a social context'); value-seeking aspects ('all human beings are "value-seekers", and must adopt or create some form of value system in order to function meaningfully in the world.... people use values to regulate their choice of "means to an end" as well as the "desirable end"'); and creative or innovative aspects ('human behavior that involves imaginative, novel, or inventive thinking') (LaPointe 1998:197).

LaPointe used these qualities of human nature to assess the fitness of Banathy's five system types applied as organisational forms. Banathy's system types include the following:

- rigidly controlled
- deterministic
- purposive

- heuristic goal formulating, and
- purposeful intermediate.

Rigidly controlled systems are relatively closed to their surroundings; have specifically defined but narrow goals; organise people under firmly ordered sets of rules that permit limited exchanges between members; constrain people from setting and pursuing their own goals because goals are unitary; empower management to agree on ends and means; and empower management to maintain compatible values and beliefs.

Deterministic system types are relatively open to their surroundings; have specifically defined goals; accept that stakeholder participation is important, but that the opinions of managers and elite technicians are preferred; allow human relationships that follow established rules and standard operating procedures to control and regulate behaviour; and have system-management structures that rely on written procedures.

In the purposive system type, the organisation and its environment are seen to be in a state of mutual interdependence; boundaries are moderately open; the system is able to make some limited adaptations to changes in its environment to maintain viability; goals are integrated under a clearly stated purpose; interaction among components is highly organised, and human participants share compatible system values and objectives; managers have freedom to select operational objectives and methods; and management acts according to agreed objectives and controls from the top down.

In heuristic goal-formulating systems, boundaries are open and there is considerable interaction with the system environment; purposes and functions are self-selected within established policies; there is considerable dynamic interaction of people within the system, with uncertainty, ambiguity, and problem management being characteristic conditions; managers have compatible interests but do not necessarily agree upon ends and means, although compromise is possible. Finally, a purpose-seeking system is open to its environment; is characterised by diversity or even conflict as to its purposes and goals, and compromise or synthesis is possible in adapting to this diversity; managers have compatible interests but do not necessarily agree on ends and means; solutions to problems are considered after evaluating alternatives; and groups argue policies and evaluate various assumptions underlying issues.

In its original form the logical framework created projects (as temporary organisational forms) that were rigidly controlled. Subsequent modifications to the approach have allowed the creation of deterministic organisational forms, and further suggested changes such as the temporal frameworks (which are more like the way in which many current project-management systems actually work) allow organisational forms that could be described as purposive. But the ideals of participatory approaches are (arguably) fundamentally humanistic and require organisational forms that are much more aligned with Banathy's heuristic and purposeful systems.

In Banathy's system-based description of organisations, practitioners will recognise the causes of many difficulties that arise when working across varied organisational forms. Can projects adopt organisational forms that are suited to participatory methodologies, while remaining compatible with rigidly controlled parent organisations? It appears that this has not been a major concern of project designers in the past, but may in fact be a major constraint to effective project design.

Moving towards alternative practice methodologies

Markus Schwaninger noted that 'management science has always aimed at providing concepts and tools for dealing rationally with issues and problems faced by organisations', and that 'over

the decades, the practice and the science of management have increasingly been conceived of as tasks for coping with complexity' (Schwaninger 2004: 411). Noting that 'different methodologies tend to cling to distinct rationalities, and, as any rationality is bounded, so, accordingly, is its respective methodology', Schwaninger concluded that the effort to provide instruments and methodologies for dealing with complex issues has evolved along two lines: a positivist tradition and an interpretivist tradition. Positivist traditions emphasise instrumental rationality, and cultivate structuralist–functionalist approaches. Interpretivist traditions emphasise discursive approaches, and the importance of interaction between multiple perspectives and the creation of negotiated and shared realities.

Other work is moving towards the rich learning possibilities that more decentralised, discursive process designs could afford. Following John Dryzek, discursive designs involve 'collective decision making through authentic democratic discussion, open to all interests, under which political power, money and strategising do not determine outcomes' (Dryzek 1997: 199). The prospects on offer from a discursive design are insights into the meaning of sustainability, a more open-ended elaboration of the sources of problems, and the articulation of possibilities for their resolution that are beyond the reach of an instrumentally governed process. Also on offer are insights into governance arrangements that are more self-monitoring, critically aware, and fundamentally conducive to social learning than could ever be achieved through an objectivist and/or positivist perspective in which existing power relationships and privileged positions are unquestioned and, thereby, asserted.

What, then, does a discursive design for a process look like? The most important feature is 'authentic communication' (Dryzek 1997: 200). The process should be purpose-designed to overcome impediments to communication. It should be one that facilitates the systematic deconstruction of insights through revealing the hermeneutic frames through which they were constructed. We need, in other words, to know how and why people say what they say, while clearly understanding that we can only interpret those things from within a distinctly different frame of meaning of our own. This is reflexively based communication based on an open-participatory framework for visioning whereby all participants are required to articulate their thoughts through a single and uniformly unfamiliar cognitive map-like language. Everyone must go out of their way to paint a picture of their thoughts that illuminates meaning to the degree that others can understand. This symbolic language does not permit the posting of jargon and the hiding of assumed knowledge. Nor does it allow the justification of propositions through recourse to prevailing power relationships or a privileged position.

Outside development practice, there are demonstrated approaches that use communicative rationality for design activities. For example, Marjan van den Belt (2004) describes group model-building processes that address difficult and complex social and environmental problems. Such examples provide some guidance for communicative approaches to project design, but we have not as yet seen methods that integrate multiple cultures, languages, rationalities, and organisations at a scale applicable to most development projects.

A re-interpretation of practice

Logical frameworks are instruments that are representative of or typify the managerial perspective of the mid-twentieth century. Over the past 40 years there have been significant challenges to this positivist managerial view. Patricia Shaw (2002) presents an alternative interpretation of practice within organisational management that is a possible response to Chambers' (1997) call for self-critical epistemological awareness. Organisations are social realities created as a mix of both intended and unintended consequences of planned and unplanned actions. The creation of

this social reality is a complex process within which practitioners work. Shaw argues that many practitioners have styled themselves as facilitators who work outside these processes, who are looking to identify patterns in communicative processes that are stable and repetitive, and who then design interventions to improve the performance of the organisation. Shaw, working from a perspective based on an appreciation of complexity, sees organisation as a paradoxical phenomenon that can at the same time be both ordered and disordered, stable and unstable, or organised and disorganised. She describes a way of thinking that 'emphasizes the self-organizing patterning of communicative actions in complex responsive processes of human relating' (Shaw 2002:20).

How can we reinterpret activity design in terms of Shaw's reinterpretation of practice? In Shaw's terms, practice happens in the present. A design could be seen as an artefact that represents the set of aspirations and intentions of the designers at the time of its creation, but its essential nature is contingent and always open to reinterpretation as reality unfolds. This reality is being created in the 'now' and is fundamentally unpredictable. Our role as practitioners is to immerse ourselves in the conversations that are creating the future, and in this process to reflect and respond as our understanding grows. These conversations are not just those with the recipients of project benefits, but include all conversations within the chain of practice, from within the organisations providing project resources, to people and communities that may be unfairly affected by unintended outcomes. Participation can only be a tyranny when participants are forced to participate in someone else's reality, when practitioners are unreflexive in their response to power relations, and when instruments are seen as something other than artefacts of a social process situated in the past.

Conclusion

This article has attempted to move across a vast terrain of knowledge. Many practitioners involved in designing development projects that attempt to combine the managerial needs of large development agencies with the humanistic concerns of participatory ideals will know the frustration of using methods developed almost 40 years ago. Other practitioners will cope by falling back on the theoretical perspectives that underpinned their professional training, and fail to reflexively examine their own understanding of knowledge and how it is created. Although current practice methods have been continually modified and upgraded, there are still foundational problems related to differing approaches to knowledge and rationality. We have examined a range of authors' views about what these problems are and what they mean. We have also moved outside the development field and examined other views about societal systems and social design processes. In addition, we have discussed new ways in which interpretative methods of communication and documentation can be used as a basis for participatory design. The main insight from our review is the need for 'epistemological reflexivity' (regarding the invariably different worldviews of those to be involved) in the design process and to underpin all interactions with stakeholders.

There are many problems to be overcome before describing a complete design methodology that moves away from the objectivist basis of existing design systems. Not the least of these problems will be power relationships and the consequent and interrelated problems of account-ability and trust. But if these are to be overcome, it will be because of vast improvements in the way we can communicate complicated ideas about the complex systems that are fundamental to everyday social life.

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The authors

Robert Simpson is a consultant working for Coffey International Limited in Australia. He has spent the last 15 years working on international development projects throughout Asia, the Pacific, and Africa. Contact details: 8/12 Mars Road Lane Cove West, New South Wales, Australia. Email: bob_simpson@coffey.com.au. **Roderic Gill** is Director of the Centre for Ecological Economics and Water Policy Research at the University of New England. Contact details: Centre for Ecological Economics and Water Policy Research, University of New England, Armidale, New South Wales, Australia. Email: roderic.gill@une.edu.au.