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Multiple knowledges, multiple languages: are the limits of my language the limits of my world?

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Reconciliation of the multiple knowledges involved in international development depends, in the first instance, on all participants hearing the multiple languages of the people involved. A dream that surfaces and resurfaces throughout human history is the dream of a world in which all peoples can hear each other. For the 12 years period from 1992 to 2004, the Local Sustainability Project worked with over 300 communities in four different countries on resolving sustainability issues. Some five sets of collaborating and often competing contributions to all lasting decisions were those of the individual, the community, the expert, the organisation and the integrative thinkers. The divisions between different interests were strong enough to represent distinct paradigms or knowledge cultures with their different content, forms of inquiry and languages. This article argues for the development of an open and inclusive language that respects the original languages, allows all the speakers to be heard and opens up fresh avenues for collective learning. It argues against the proposition that the limits of a language mean the limits of the speaker's world.

Introduction

In the complexities of international development, people from the developed countries and the developing countries, policymakers, practitioners, experts and communities speak from within their own experience. Together, they should be able to generate a creative synergy, reaching outcomes that no one of them could achieve alone. However, Ludwig Wittgenstein's edict 'The limits of my language mean the limits of my world' alerts us to a major barrier to reaching a shared understanding among the many different interests. This article explores the potential for developing an open and inclusive use of language, in search of a language that respects the original languages, allows all the speakers to be heard and opens up fresh avenues for collective learning.

The context: a timeless dream

We live in a time when our existing languages seem inadequate to grasp the immensity of the social and environmental changes taking place on our globalised planet. In all long-established societies, the voices of the different interests have joined in constructing a common language. In turn, that language has shaped their world. In times of acute

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change, societies struggle through their languages to come to terms with the present without losing their past (McMahon 1994). That challenge has never been greater than in the globalising world, where every community is impacted by the change in a different way. Nowhere in that world has the struggle been greater than in the relationships between the North and the South, between the developed and developing countries and between the minority world of those who have much and the majority world of those who have little. Even listing those categories masks a complex web of interdependent relationships. This article argues that reconciliation of the multiple knowledges involved in international development depends, in the first instance, on all participants hearing the multiple languages of the people involved. It argues against the proposition that the limits of a language mean the limits of the speaker's world. A dream that surfaces and resurfaces throughout human history is the dream of a world in which all peoples can hear each other. From the Old Testament's Tower of Babel, the Buddhist goal of enlightenment, the Greek origins of democracy to the Ubuntu of Africa, the Tjukurpa of the Australian Aboriginal people and to the World Wide Web and the United Nations of our own era, the dream persists. All versions of the dream offer ways of harnessing the potential for synergy, while avoiding the trap of imposing a single authoritarian language. The dream of a shared understanding among different peoples comes closer to reality with the second millennium. Worldwide flows of people, finance, resources and information are creating a globalised world from above and from below (Falk 1999). The social media of the Internet is bringing many people together in unprecedented ways (Kaplan and Haenlein 2010). The emerging semantic web of Web 3 offers linkages between ideas that go beyond even the open environment of Google (Berners-Lee and Fischetti 1999). Multiple pathways that contribute to a collective construction of knowledge have become all encompassing. There are suggestions that we may be entering a new Renaissance (Robertson 1998) or a fresh Enlightenment (Ferreira 2009). The times are so different, however, that the growing capacity for constructing a collective knowledge needs a term of its own. It is too early to decide what that might be. In this article, the communication dimension of this emergent capacity is called collective learning (Brown 2008). The biblical parable of the destruction of the Tower of Babel tells of the jealousy aroused by the power of a society in which all peoples understand one another (Box 1). After an era of specialisation and fragmentation, there are growing signs of this generation being able to rebuild that tower. Although aggressive leaderships and divided nations continue to reject the very idea of cooperation, complex issues are increasingly being addressed through open dialogue among all the interested parties. Globally, specialist, organisational and community interests are being brought together in international forums such as the 1992 and 2002 Earth Summits of the World Conferences on Environment and Development, the 10 years of the grass roots World Social Forum, the successful Montreal Protocol on reducing the ozone hole and even the aim of the now obsolete Kyoto protocols on addressing climate change.

Think tanks of all political varieties (from the USA Heritage Foundation to The Other Economic Summit TOES) and charters for collective action (World Health Organisation 1985, Earth Charter Initiative 2003) have emerged during the past half-century. Centres for dialogue have been set up in Sweden, Canada and Australia. Global programmes combining a wide range of specialisations have been convened to address the global issues of climate change, poverty, biodiversity and disease control. Ongoing programmes, listed in the same order, are the International Panel on Climate Change, United Nations Millennium Development Goals, the International Union for the Conservation of Nature and the Atlanta

Box 1. The Tower of Babel

In the city of Babel, the peoples of the then world came together to build a tower. By speaking a language all could understand, they were able to cooperate in building the tower higher and higher. Finally it reached the heavens and God became jealous of their power.

> Yahweh came down to see what they did and said: 'They are one people and have one language, and nothing will be withholden from them which they purpose to do.' So Yahweh said, 'Come, let us go down and confound their speech.' And so Yahweh scattered them upon the face of the Earth, and confused their languages, and they left off building the city. Genesis 11:5–8

Centres for Disease Control and Prevention. All now produce synthesis papers in everyday language, which are able to be read by the experts, contributing organisations and the general public alike.

At the local scale, collective social movements based on local initiatives for social change include European and American Sustainable Communities programmes, the worldwide networks of Transition Towns and the World Health Organisation's Healthy Cities Programme. In each of these initiatives, individual localities retain their own languages, identity and ways of operating, at the same time as contributing their collective learning to a global collaborative network.

The wide range of open forums at all these scales confirms that it has become standard for collective initiatives to bring together the powerful interests of organisations, experts and communities. However, simply bringing these interests together and hoping for their collaboration has not been enough. The failed 2010 Copenhagen meeting on climate change, the inability to bring peace to the Middle East and the many unsuccessful smaller scale efforts in urban town planning and local water management demonstrate just how difficult multi-voice collaboration can be (Le Borgne *et al*. 2009).

Many initiatives seeking to bring multiple knowledges together have come to the same conclusion (Berry 1999, Carson and Martin 1999, Powell 2006, Kelly *et al*. 2008). Summing up their work, they agree that lasting collective decisions contain the following elements: key individuals' commitment to the collective task, respect for different pathways to the same goal, a broad range of specialists to interpret events, reorientating institutions to include integrative structures and the mutual recognition of a shared problem.

Then the question arises: Is it possible to fulfil these conditions and achieve the dream of a shared understanding in a world fragmented by divisions of knowledge and differing levels of power?

The issue: hearing many voices

One school of thought considers knowledge sharing across different languages to be impossible. The Sapir–Whorf hypothesis holds that a language determines the thinking capacity of the speakers (Whorf 1956). Philosopher Wittgenstein put forward much the same proposition as 'The limits of my language mean the limits of my world' (Wittgenstein 2001). That hypothesis dominated much of twentieth-century thinking on language.

These extreme views of the limits to learning set by a language are now discounted, although they can still be influential. The limits certainly do not hold in practice. Aboriginal

Australian and Inuit peoples have no experience with or words for technology, yet members of these cultures excel as expert mechanics. People change their countries and their professions and become accepted as competent members of both. A gifted few, such as Leonardo da Vinci, excel in all the knowledge domains (Clark 1935).

We have noted that contemporary moves to collective decision-making consistently involve negotiations among the contributing specialists, influential organisations and the affected community. Speaking about any one of these particular interests not only sets in train a particular use of language, it also establishes a level of status. In Indonesia, status is marked by the use of different languages. In Anglophone countries, the different sources of knowledge form a power hierarchy marked by distinctive languages, all the more insidious because largely unacknowledged.

For the 12 years period from 1992 to 2004, the Local Sustainability Project worked with over 300 communities in four different countries on resolving sustainability issues. Not three but five sets of interests emerged in every case (Table 1) (Brown 2010). The collaborating and often competing contributions to all lasting decisions were those of the individual, the community, the expert, the organisation and the integrative thinkers (Brown 2008). The divisions between different interests were strong enough to be distinct paradigms in the Kuhnian sense, paradigms strong enough with their different content, forms of inquiry and languages, to be called knowledge cultures (Table 1) (Kuhn 1970, Brown 2010).

In any society, each member holds all five roles and thinks in all five languages, as an individual, a citizen, a specialist and a member of an organisation and brings these together whenever they make a decision (Polanyi 1958, Lakoff 1994). Action research on decision-making in Australian, Hong Kong, Malaysian and Nepalese communities found that all participants held all five of those roles. In practice, however, the dominance of one group led them to base their knowledge and their language only on one (Keen *et al*. 2005, Brown 2010). This bias towards one among several different possible knowledge bases is confirmed in the seminal work of Kolb on adult learning (Kolb 1984).

With the widespread use of English as a negotiating language, the five sets of interests can become an imposition on other cultures, unconsciously in some cases and actively through the process of colonisation in others. The difficulties in redressing the impact of the Anglophone world on other societies have been widely documented, including the bias in research funding (van Kerkhoff 2010) and in cross-cultural education (Grootjans 2010).

In both the developed and developing worlds, a major impediment to collective learning is the power hierarchy among the contributing interests. Specialised knowledge has held the dominant position in the Anglophone world since the nineteenth century Enlightenment.

Table 1. Languages of five knowledge cultures, after Kuhn.

	Five knowledge cultures				
	Individual	Community	Specialised	Organisational	Holistic
Content	Personal lived experience	Mutual place-based experience	Academic disciplines, professions	Reports, regulations, precedents	Symbols, metaphors, images
Form of inquiry	Reflection	Dialogue	Observation	Cost/benefit	Imaginative
Language	Introspective	Storytelling	Technical terms	Agendas	Aesthetic forms

Source: Adapted from Kuhn (1970) and Brown (2010).

In the twenty-first century, this leadership is giving way to the pressure from organisational agendas (Ralston Saul 1992). Although the two forms of knowledge vie for prominence, they each carry more weight than the contributions from community, individual or holistic knowledge.

Next in the hierarchy comes specialised knowledge. A specialist can be defined as someone who concentrates on one particular aspect of an issue. The strength of this reductionist approach has made it possible to place a man on the moon, eradicate small pox and map the human genome. On the other hand, the dominance of the specialised approach has tended to mask the contributions of the other constructions of knowledge (Illich 1975). The search for objectivity led to strenuous efforts to exclude the 'I' of individual knowledge (Popper 1975). Furthermore, the specialised disciplines often fail to listen to community contributions, to the extent that a visiting sociologist is likely to claim more accurate knowledge of a community than a community member. Yet local knowledge is repeatedly found to be more reliable on local issues than that of the relevant specialists (Wynne 1996).

Organisational knowledge is widely regarded as self-serving. Development organisations have been known to pursue their own internally generated knowledge goals ahead of those of the developing country (Ferreira 2009). Nevertheless, the strategic knowledge held by organisations, whether government, non-government or industry, contributes valuable knowledge of what is possible and how to get there. Organisational knowledge has been heavily criticised for being without an ethic (Ralston Saul 1992, Berry 1999). More recently, the need for transparency and clarification of an organisation's public role has become a matter for public concern, for instance the Valdez Principles (Sanyal and Neves 1991).

Community knowledge is generated wherever groups of individuals share the same experiences, interests and/or place. Even when there are disagreements among the members, they are at least debating the same ideas. Lewis Mumford suggested that every community is built around the integrative symbols of palace seat of power, temple source of spiritual values and granary place for storing resources (Mumford 1966). For an Anglophone community, this might be the city hall, the market and the banks. The language of communities is carried by such stories and symbols.

Holistic knowledge occupies the lowest rank of the power hierarchy. The leap in understanding generated by a creative contribution is frequently dismissed as irrelevant or even vexatious. Yet synthesising concepts such as biodiversity and democracy help bring all players to the table. Language in itself is creative, dynamic and malleable. Art and music can bring a fresh understanding of an issue to all the interests. The Anglophone culture is much criticised for its comparative lack of emphasis on the use of imagination and creativity (Hospers 1969).

Hearing one another across knowledges and their language boundaries is a necessary condition for making collective decisions and for moving on to collaborative action. For key interests to arrive at a synergy from sharing their various forms of knowledge, the answer need not lie in everyone having to learn a new language. Existing forms of language are part of the richness and the continuance of their speaker's culture. Rather, the answer can lie in the recognition of the need for an inclusive language.

The resolution: working towards an inclusive language

Attempts at a single universal language have not met with success. Esperanto limps along with few speakers. French was the diplomatic language of the nineteenth century but gave way to English. English carries the heritage of having been imposed on the peoples of the

widespread British Empire, often with violence. Although colonised countries officially returned to their original language on independence, English remains their language of education, commerce and international trade. Although non-Anglophone societies must still maintain their cultural identity and original language, for the many interests involved in development, English appears to offer a possible vehicle for a shared language.

If, however, we take English as a vehicle for collective learning, it comes with its own strengths and weaknesses and the risk of reducing the use of local languages. The first step would be to recognise the bias in using English at all. A comparison with other languages establishes that English is more linear in its logic than Greek, more restricted in words connected with creativity than French, more concerned with single factors than traditional indigenous languages and less rich in its emotional language. For instance, English has comparatively few words for colour and shape. It has only single words for key social concepts such as love and language, whereas French has two. English makes much use of single clauses, whereas Greek allows for nine (McMahon 1994).

Furthermore, there remains the English speakers' bias in favour of using science-based knowledge. Figure 1 offers an inclusive framework, presenting constructive relationships among the decision-making knowledges in the form of a nested set. As all knowledge originates in the human head (Polanyi 1958, Goffman 1959), this is represented in Figure 1 by the ring of dots forming the outer circle of the nested set of knowledges. Next comes community knowledge, constructed by the shared experiences of many individuals and

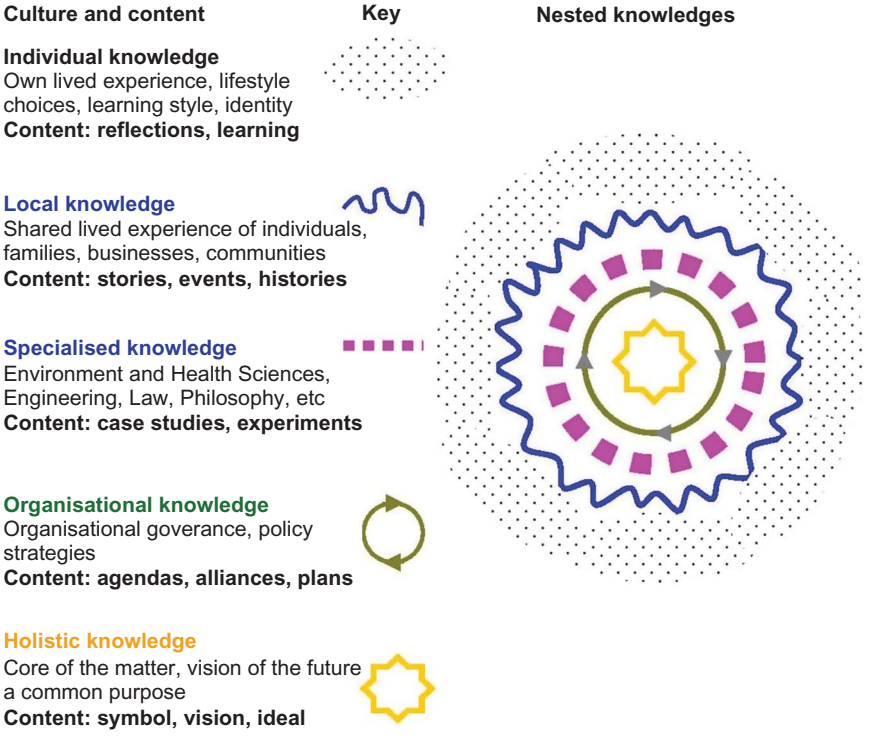

Figure 1. Knowledge cultures as a nested system.

communicating through stories and symbols (Table 1). Hence they have a wavy line in Figure 1 indicating the diversity of communities' experience.

Specialised knowledge depends in its turn on observations supplied by individual scientists and their communities of practice. As each scientific community has its own construction of knowledge (Table 1), that layer is presented as a ring of separate boxes. Organisations build on each of the forgoing knowledges to set their agendas and develop their strategies to meet those agendas. The closed circle with unidirectional arrows is symbolic of the extent to which they concentrate on their own objectives. At the core of this nested set is the capacity for a creative synthesis, signalled in Figure 1 by a star.

Although the separate decision-making interests have been identified in English-speaking study sites, they can also be recognised in other language communities (Brown *et al*. 2003, Aslin and Brown 2004). Linguists suggest that Anglophone countries use a simpler and more exact form of language than others. Reliable information can thus more readily be shared, although it may also be limited. The use of English can reduce the capacity to express the richness of complex issues and also imposes its hierarchy. Given the ubiquitous use of English, the question arises: Does it have the potential to provide the basis of an inclusive language?

As well as the non-hierarchical nested set of languages, adjustments that make English a more acceptable vehicle for an inclusive language include many successful examples of realignment. Diana Meadows (Meadows *et al*. 1992) in *Beyond the Limits* argues that to allow all possibilities to be considered, we need to use 'and' rather than 'but' and use 'also' instead of 'or'.

Over the past few decades, sexist language has increasingly been reorientated to include both genders. The exclusion of women from management has been redressed by the use of chair of a committee rather than chairman. The generic use of man and mankind has moved to the collective nouns of human and humankind. The standard use of 'he' as the author or principal person of interest has been changed to 'he and she' and 'they'.

Warlike language can be changed to include other ways of resolving conflict. The use of goals rather than targets, resources rather than war chests and programmes rather than campaigns allow for a range of options, rather than commitment to an aggressive course of action. A dilemma for an inclusive language is when to search for inclusive terms and when to include the parallel uses of diverse interest groups.

Consider the multiple languages for describing just one relationship, that between a community and its environments; a relationship central to all social inquiry. A community experiences the world from the inside-out and from the outside-in. Putnam (2000) describes this two-way relationship as the building of bonding and bridging social capital. In the language of anthropology, the relationship would be described as endogenous (internal) and exogenous (external). In ecological science, it would be the study of habitats within ecosystems. An organisation would approach the relationship as different levels of power, bottom-up and top-down. These multiple perspectives are not mutually exclusive. In combination they can lead to the synergy of a richer and more complete understanding of the topic.

Ironically, being inclusive may make it necessary to exclude some options. Speakers with different opinions can choose to communicate through discussion, debate, defence and dialogue (Hajer 1996). Although each type of response is appropriate in some circumstances, defence and debate will perpetuate oppositional thinking. If the aim is collective learning, the choice will be dialogue. The rules of dialogue developed by Bohm indicate just how challenging that choice can be (Bohm 1996). The rules ask for the participants to listen without judging, to suspend disbelief, to distinguish between inquiry and advocacy

and to forgo the need for any predetermined outcome. As this runs counter to much usual practice, a mediator or a conductor is often needed to guide the process.

Stakeholder, scenario and jigsaw are all terms that need to be reconsidered in an inclusive language. Stakeholder implies that the outcome of negotiation is production of goods and services of some kind. Its use limits the person or group to those with a recognised interest in the outcomes. This can exclude the contributions of marginalised and emergent interests. A rainforest may have a spiritual value and a public good interest simply because it is there. Its conservation may be of great importance to a future generation. Stakeholder negotiations rarely include spiritual values or the rights of the unborn. Interest groups would be a more inclusive phrase.

A scenario predicts a future on the basis of what is known. It can be based on a wish list, a projection and a prediction. A wicked problem (a complex problem with no obvious solution) requires creative thinking on what could be, rather than what is already known. In an inclusive process, all parties are free to use their imagination on all possible futures, sharing their creative ideas. Visioning would be a more accurate description of this process.

It is standard practice to refer to combining the elements of a complex issue as completing a jigsaw puzzle. Where the goal is collective learning, this is far from an accurate description. A jigsaw repeats a predetermined picture and the shape of the pieces is fixed. A better analogy would be the artistic collage. Here the pieces are brought together afresh to illuminate a central idea. The unique combination creates a fresh picture that no one contributor has seen before.

The dream of a collective language able to maintain the richness of the contributing languages seems not so far away. Closer examination of existing practice offers ideas of how a collective language works.

The practice

So far we have been exploring the propositions that collective learning is an essential element in sharing multiple knowledges, and that an inclusive language is a necessary pre-condition for collective learning. We have noted that the languages of individuals (introspection), communities (stories and symbols), specialists (technical terms), organisations (agendas) and holists (syntheses) are being heard in an increasing number of open decision-making forums.

We have also concluded that English, being a pragmatic and linear language, requires structural changes to allow entry to other forms of thinking. For instance, translation tools will be necessary wherever English is not a familiar language. Direct translation is no longer an issue with the use of the Babel Fish, which provides cross-translations among French, German and English and includes Japanese and Korean. Something else is needed. The concept of traducture (Wa Goro 2007) recognises that any translation among different languages can never be exact. The exchange will always involve the sharing of different meanings. An inclusive translation will therefore be needed and will add new ideas to all participants. For collective learning, any translation will need to recognise the importance of traducture.

A collective language can be carried by multiple channels to reach its diverse audience: text, voice, actions, social media, stories, symbols, agendas and any of the arts. Any one channel may be the appropriate one for any one culture. For many cultures of the world, their basic understanding of the world is already inclusive. Ubuntu is an African concept that rests on the twin principles ‘a person is a person through others’ and ‘the left hand washes the right hand and the opposite is true.’ No individual is seen as, or regards oneself

as, separate from others (Wa Goro 2007). In a research project in Zimbabwe, the western ethical rule that an interview should be held in private was anathema to the community members. Even on such a sensitive subject as infection with AIDS, they wished to speak publicly to the investigator under the public 'tree of talking' (Chinouya 2007).

Australian Aboriginal people also think collectively, although their languages express the spirit of their collective quite differently. The land itself is the speaker. Particular people responsible for listening to the land are recognised by everyone as having both the right and the duty to speak. Others will remain silent rather than intrude on those rights. Each community is bound together by their Tjukurpa or dreaming story, which establishes their relationships among each other and with the land. With no written language and as migratory people with few possessions, Tjukurpa is conveyed through dances, songs and body and rock painting (Lynette Liddle, indigenous PhD student, ANU, personal communication, 2010).

Across many cultures, a pattern language is being designed to build on diverse interpretations of the same theme. Originated by architect Christopher Alexander for community-based town planning (Alexander *et al*. 1977), pattern languages have been developed for engineering, information technology, education, governance and social action (Schuler 2002). According to Alexander, a successful pattern language has a strong focus and fluid boundaries, forms a pattern through identifying regular variations in its theme and emphasises interconnections rather than differences (Alexander 2002). The structure takes a particular issue and flows from title to context and on to the issue and its resolution, and it ends with examples of the solution in action.

Alliancing is an inclusive process employed in major engineering projects. One alliance award-winning project is RIAMP (Reliability Improvement and Modernisation Programme) in Sydney, Australia. The citation for the alliance award described RIAMP as successfully carrying out A$75 million of upgrade work on an underground sewage treatment plant in operation 24 hours a day, 7 days a week. The project was completed safely and on time. A legacy for the client organisation, Sydney Water, was improved reliability and worker amenities. There were savings of 3 million litres per day of potable water and an 80% reduction of rubble to landfill. This professional, environmental and financial success rested on an alliance based on open dialogue among project managers, continually engaging with all the interest groups, and an emphasis on transparency and teamwork (Russell Greene, personal communication, project manager RIAMP, 16 October 2010).

Our last example is the online discussion group Knowledge Management for Development (KM4Dev), a partner to this journal. The stated aim for the group is 'a community of international development practitioners . . .who seek to share ideas and experiences in this domain'. With 800 participants and the flow of emails rising over 10 years, the network is developing its own version of a collective language (Ferreira 2009). From time to time a member asks for advice on a seminal issue. In the 20-plus emails that follow, a pattern emerges of individual practitioners seeking to advance their skills and share their experiences, practitioners working at the interface with their communities, specialists in knowledge management and representatives seeking to reorient their organisations. A group of creative thinkers lets loose some fresh ideas from time to time. All five of the languages for decision-making are contributing actively.

Earlier in this article we quoted research findings that suggested that collective management of complex issues requires individual commitment to the collective task, a community of practice that respects different pathways to the same goal, enhanced capacity to manage change and re-orientation of organisations to include integrative structures (Kelly *et al*. 2008). The examples described in the course of this article suggest that these conditions

are being met, although in widely separated fields of practice. There is the hope, although not yet a comprehensive capacity, for combining all the voices concerned with a complex issue in a fruitful synergy.

Several lessons from this discussion are relevant to international development agencies, their clients and their clients' communities. There is a need to respect and protect each community's own endogenous language. Furthermore, community members need the skills to be able to contribute to a collective language without endangering their own. Special consideration is needed when the carrier language is English. All participants need to take remedial action to rebalance the differentials in power among the languages of the decision-making interests: individual, community, specialised, organisational and holistic.

To return to our original questions, first, does working with multiple knowledges require hearing all the voices of their multiple languages? The answer appears to be yes, with the proviso that linking the multiple languages requires an inclusive vehicle. The second question was whether the limits of a language also meant the limits of the speaker's world? The many examples of inclusive languages confirm that the answer to that question is no. Different interests are already working together across the multiple knowledge boundaries at all scales and at all levels of management. Whether we can look forward to a world that is fully capable of collective learning will depend on our capacity to hear all the voices.

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Note

1. www.ikmemergent.net

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