Local Solutions in a Global Environment: Facilitating National Strategies in New Zealand*

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How should New Zealand respond to the multiple, intertwined and fast-changing impacts of globalization? What strategies are available to this small South Pacific country and how may these be facilitated? This empirical research frames the facilitation of selected local solutions in a global environment within the theoretical perspective of pluralism and communicative action. The facilitation of aspects of national policies in the domains of science funding, economic development and regional growth is reviewed. Electronic meeting technology was employed. The focus question is: 'Does electronic discourse increase the success of local solutions in a global environment?'

Keywords: *New Zealand, local solutions, global environment, pluralism, communicative action, electronic discourse.*

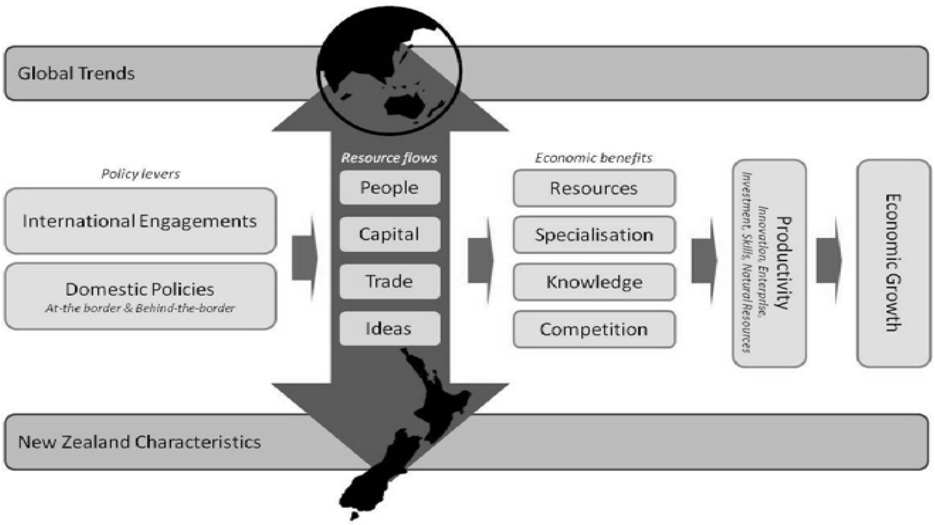
1. A New Zealand Response to Globalization

> Productivity isn't everything, but in the long run, it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker.
>
> Krugman 1997

Raising productivity is the core economic challenge for New Zealand over the medium term. Small, high-productivity economies rely heavily on international connections – the flows of people, capital, trade and ideas between countries around the world (New Zealand Government 2009). In the current era of globalization, New Zealand's combined lack of any major home market effect, small population and lack of major agglomeration effects, and the extreme geographical isolation, breaks the usual link between entrepreneurship, innovation and growth (McCann 2009). Domestic policy settings in science funding, economic development, and regional planning are critical to making the most of international opportunities. A well-funded science sector encourages entrepreneurial and innovative activity to be located in New Zealand and facilitates international knowledge transfer. Economic development improves competitiveness in global markets, including those in the Asia-Pacific region. Regional planning in Auckland, New Zealand's major growth area, attracts skilled migrants and reduces the loss of New Zealand-born citizens to Australia and other countries (Cheshire 2012) (Fig. 1).

* This article was first published in *Journal of Globalization Studies*, Vol. 4, Num. 2, 2013, pp. 104–128.

Fig. 1. Some aspects of a New Zealand response to globalization



Source: New Zealand Government (2009).

This article reviews the facilitation of aspects of national policies in the domains of science funding, economic development and regional planning (Table 1). Electronic meeting technology was employed. The focus question is: 'Does electronic discourse increase the success of local solutions in a global environment?' The remainder of the article is structured as follows. Section 2 develops a theoretical framework. Section 3 describes the methodology for gathering empirical evidence. Sections 4–6 review the facilitation cases. Section 7 discusses the findings in the light of the theoretical framework. Section 8, which considers the lessons learned, concludes the article.

Table 1. Facilitating national strategies in New Zealand

Science funding *Sponsor*: New Zealand Ministry of Research, Science and Technology. *Task:* Allocation of the US (2012) $2 Billion Public Good Science Fund across all 40 areas of NZ science. *Role/process/group*: Design of a 5-day group decision process for a 5-year planning and budgeting period. Implementation of the process with the national Science and Technology Expert Panel. *Goal*: Legitimacy in science governance. A national consensus on priorities and transparency in funding.
Economic development *Sponsor*: New Zealand Trade Development Board. *Task*: To upgrade New Zealand's competitive position in global markets. *Role/process/group*: Design of 70 industry-wide strategic planning interventions conducted with the assistance of Harvard's Michael Porter. Implementation with 1,000+ industry leaders. *Goal*: Improved relationships among industry stakeholders and formation of joint action groups

Regional planning

Sponsor: Auckland Regional Council.

Task: Strategic evaluation of long-term plans for the Auckland region, NZ's main growth area.

Role/process/group: Design of a group decision process to close out a 7-year planning cycle. Implementation with representatives of the 7 territorial authorities and the Auckland Regional Council.

Goal: Improved trust and understanding among decision makers. Support for a consensus spatial plan.

2. Theory Development

Facilitating national policies required extensive consultation among a large number of stakeholders in different organizations. The context was pluralistic – the objectives of social actors were divergent and power was diffused (Jarzabkowski and Fenton 2006; Denis *et al.* 2007). A modern information and communication technology – electronic meeting systems – has been found useful in supporting organizational groups engaged in strategic planning activities within an established power structure (Fjermestad and Hiltz 2001; Shaw *et al.* 2003). Yet research on electronic support in the context of pluralism and inter-organizational meetings suggests that the role of electronic meeting systems is unclear. For example, if electronic technology is employed in a meeting sponsored by one organization but attended by members of other organizations, whose interpretation of the ends served by the electronically-supported meeting should determine success? Who is the client? (Ackermann *et al.* 2005.) What roles and responsibilities will be recognized? (Franco 2008) Is it sensible to expect powerful stakeholders to use collaborative technologies when these introduce unwanted accountability and make the exercise of power more difficult? (Schultze and Leidner 2002; Lewis *et al.* 2007) What type of model should drive the facilitation process? (Morton *et al.* 2003.) By what concept(s) of rationality or validity should the facilitator be held accountable for a positive outcome? (Kolfschoten *et al.* 2007) Inter-organizational meetings require the surfacing and testing of assumptions from opposing perspectives (Mitroff and Linstone 1993). *In dialectical terms a pair of opposing perspectives is seen as a Hegelian thesis and antithesis (Millet and Gogan 2006). Ignorance is reduced via active engagement with the conflict and confusion that accompany surfacing and reconciling opposing (multiple or pluralistic) perspectives, and giving birth to a new, more current synthesis.*

Habermas (1984) provides a theory about how claims to pluralistic knowledge should best emerge from the communicative process. In Habermas' theory of communicative action, an ideal speech situation is defined as one in which all participants are free to question any utterance on the basis of its claims to objective truth, rightness for the context, and sincerity of the speaker. The speaker must be open to hearing and rationally responding to the questions that are asked. Power relations, that in other circumstances might allow some participants to ignore the perspectives of others, are set aside in favour of genuine dialogue.

In the theory of communicative action, knowledge is evaluated from three perspectives (Habermas 1984: 100):

- *Personal perspective ('why I feel, and would be')*. The personal or subjective world that is the totality of the experiences to which the speaker or actor has privileged access (because it is the speaker or actor that experienced them). Claims to subjective truth are evaluated in terms of the sincerity of the speaker or actor.
- *Interpersonal perspective ('what we say, and should be')*. The totality of interpersonal relations legitimately regulated by contextual expectations or norms. Claims to interpersonal norms are evaluated in terms of the rightness of the speakers or actors.
- *Technical Perspective ('how it is, and could be')*. The technical world of material fact that is the totality of all entities about which objectively true statements are possible, or could be brought about by purposeful intervention. Claims to facts and technical expertise are evaluated in terms of objective truth.

The ideal speech situation provides a standard of excellence for the reflective communicative action undertaken by two or more stakeholders in order to stabilize mutual understanding. Similarly group decision is considered as a collaborative process that seeks 'rightness' in the fit (coherence) between personal values, interpersonal objectives and technical decision criteria (Shakun 2003). This requires participants to develop and integrate perspectives from generic roles that Churchman terms *system designer* (more technical / task oriented), *decision maker* (more interpersonal / consensus oriented) and *client* (more subjective / value oriented) (Churchman 1971: 200). Five facilitation principles based on pluralism and communicative action are presented in Table 2.

Table 2. Five facilitation principles based on pluralism and communicative action. Adapted from Churchman 1971; Habermas 1984

Principle 1. Personal commitment Express claims to *sincerity* by free and open disclosure of participants' subjectivity (identity, experience and values). Ensure that participants give voice to their personal commitments and multiple identities and that the periods of silence are provided as an aid to ethical self-reflection. The procedure for evaluating the evidence should be validated by expressing beliefs and aspirations, voices and images ('story telling') that are unconstrained by technical issues and unrestrained by the interpersonal context.
Principle 2. Interpersonal agreement Enact claims to *rightness* via discussion among all those who are entitled to be represented. Ensure that the discussion addresses the role-based needs of stakeholders. The procedure for evaluating the evidence should be validated by full participation in a debate conducted under the norms of established legitimate interpersonal relationships.
Principle 3. Technical excellence Present claims to *objective truth* via research evidence. Ensure that the findings by technical experts are examined critically and the findings documented. The procedure for evaluating the evidence should be validated by a willingness to adopt a cognitive, objectivating attitude towards the facts. *Listen to the evidence, look at the facts – avoid partisan delusions*.

Principle 4. Coherence

Assuming that claims for valid personal, interpersonal and technical knowledge have been surfaced, ensure that they are *coherent*. An apparent contradiction (thesis and antithesis) should serve as a precursor to a *Hegelian* synthesis. *Oh my God, I was wrong! We were all wrong!*

The procedure for evaluating coherence should be validated by a willingness to probe the evidence from all three perspectives, to identify strengths and weaknesses in the evidence, and to identify tradeoffs.

Principle 5. Overall Success

Success is conceptualized in *Churchmanian* terms as a meeting of the minds about intertwined relational and task issues that creates the capability of choosing the right means for one's desired ends.

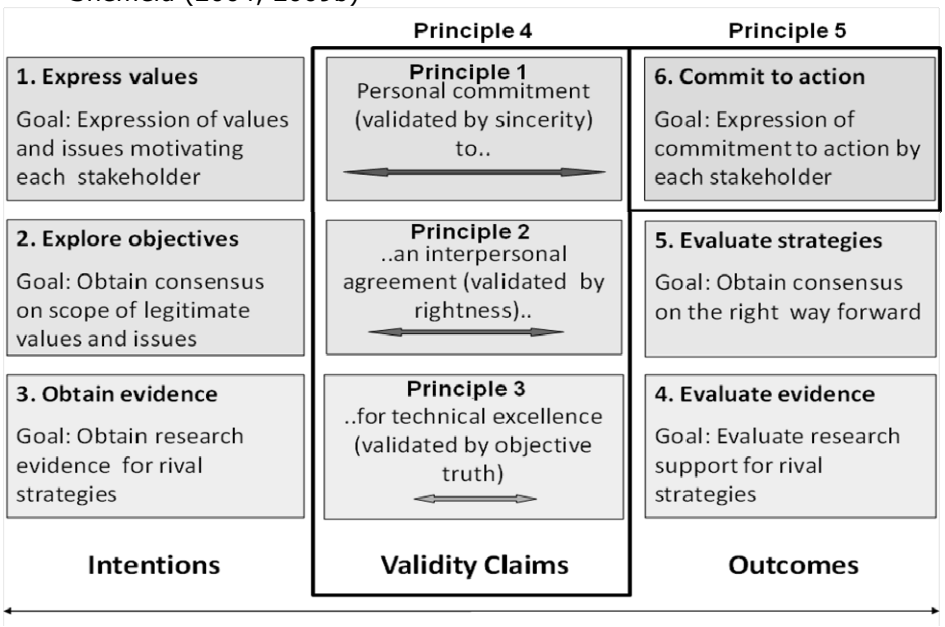
This requires participants to develop and integrate perspectives from generic roles that Churchman terms *system designer* (more technical / task oriented), *decision maker* (more interpersonal / consensus oriented) and *client* (more subjective / value oriented).

More specifically, success is indicated by insight leading to a consensus model that provides decision makers with a rationale for action.

Integration of the Habermasian perspectives on knowledge is an exercise in sense-making (Weick 1979). Themes are detected both prospectively and retrospectively and emerge from communicative acts in a somewhat unpredictable manner. Nevertheless, it is common for discourse on *intentions* to proceed from the personal to the technical, followed by discourse on *outcomes* that proceed from the technical to the personal (Shakun 2003). Each pair of discourses (intention and outcome) in the same knowledge perspective develops mutual understanding via one of the principles in Table 2 and evaluates rationality via the relevant Habermasian knowledge claim (Sheffield 2005). *The standard of excellence for communicative action can be stated as follows: personal commitment (validated by sincerity) to an interpersonal consensus (validated by rightness) for technical excellence (validated by objective truth)*. Each aspect of excellence is associated with Principle 1, 2 or 3, and the collective value of all three principles is evaluated in terms of Principle 4 and Principle 5 (Table 2). In the current research pluralism and electronic discourse are evaluated via qualitative measures of the impact on overall success of the facilitation principles and associated framework (Fig. 2).

Pluralism is a notable feature not only of communicative action but of research in areas as diverse as neuroscience (Lehrer 2009), knowledge management (Sheffield and Guo 2007a, 2007b; Sheffield 2008b), organizational sense-making (Weick 1979; Snowden and Boone 2007) and systemic development (Sheffield 2008a, 2009a; Midgley and Pinzón 2011). Recent advances in neuroscience ground pluralism in the biology of decision behaviour (Lehrer 2009; Sheffield 2012). Various scanning devices reveal that the brain is an argument between neural regions dealing with emotion, morality and reason. *Seen through the perspective of neuroscience the standard of excellence in group decision making becomes the pursuit of success through emotional commitment to a moral agreement for reasoned excellence.*

Fig. 2. A framework for facilitating national strategies in New Zealand based on pluralism and communicative action (Habermas 1984). Adapted from Sheffield (2004, 2009b)



Pluralism can be viewed as a consequence of intertwined relationship and task issues, and intertwined divergent and convergent thinking. The electronic discourse and supporting technology employed in the current research supported pluralism via two key attributes. Firstly, the technology provided a degree of anonymity that reduced the anxiety about surfacing opposing perspectives. This reduced participants' conflict about personal (emotional) commitments and interpersonal (moral) issues. Secondly, the technology reduced confusion by providing automatic recording of all electronic discourse ('group memory'). This enhanced participants' technical (reasoning) capabilities. Together these attributes allowed procedures for idea generation (divergent thinking) to be separated in time from procedures for information analysis (convergent thinking). This in turn enabled a separate focus on interlocked issues about relationships (trust) and cognition (understanding). In the current research all of these concepts are included in the evaluation of satisfaction with electronic discourse (Fig. 3).

Fig. 3. Evaluation of participant's satisfaction with electronic discourse

Local solutions in a global environment Focus	Procedure Divergent	 Convergent
Personal and interpersonal knowledge Relationship issues ➢Reduce conflict ➢Increase trust	1. Absence of perceived conflict	4. Consensus for cooperative action
Technical knowledge Task issues ➢Reduce confusion ➢Increase understanding	2. Participation	3. Information exchange

3. Methodology

A multiple case study approach was adopted. The unit of analysis was a meeting (or series of meetings) facilitated by a leader in the domain of either science funding, economic development or regional planning. The facilitator was not part of the research team. The research team consisted of two academics and two assistants. The role of the research team was primarily one of data gathering and analysis. The data gathering techniques that were used included direct observation, interviews with the facilitator and his staff, interviews with meeting participants, analysis of meeting reports and computer files, and a questionnaire that was administered to participants at the end of their meeting.

All meetings were conducted in an electronic meeting facility at the University of Auckland. This facility, called the Decision Support Centre (DSC), consists of a large room containing 20 computers set out on an elongated table. In addition, the DSC contains a set of four large, moveable whiteboards for more traditional methods of recording the group's activities. The purpose of the computer facilities is to run Ventana Corporation's GroupSystems, a text-based electronic meeting support system (Sheffield and Gallupe 1994; Fjermestad and Hiltz 2001; Ackermann *et al.* 2005). GroupSystems supports processes that include the anonymous and simultaneous individual generation of ideas and the prioritization and brief discussion of key findings (Van de Ven and Delbecq 1971). GroupSystems also supports the anonymous and simultaneous individual allocation of budget amounts and the amalgamation and analysis of a group budget (Fig. 4). In the following three sections the facilitation cases are reviewed.

Fig. 4. Electronic meeting technology

Source: Sheffield 1993.

4. Facilitating Science Funding

> The clashing point of two subjects, two disciplines, two cultures of two galaxies, so far as that goes ought to produce creative chances.
>
> (Snow 1959: 16)

> There was such a huge diversity of people on the panel, from 'pure research' oriented scientists to hard-headed business people, that significant political differences were inevitable. '(Electronic discourse) put the politics in a black box, to be dealt with later'.
>
> (Participant in a science funding meeting)

Bednarek (2011) analyses the strategizing process in New Zealand's science sector. She found that the context was pluralistic – the objectives of social actors were divergent and power was diffused. In this context institutions found legitimacy to be a powerful determinant of success. Legitimacy was found to comprise aspects which included the cognitive, normative/moral/regulative and socio-political. Organizations in New Zealand's science sector were characterized by multiple embedded tensions and complex diffused power structures. The author's analysis demonstrated both the creative potential and challenges in strategizing for legitimacy amidst pluralism.

The facilitation of aspects of science funding starts with the theoretical perspective that objective facts, societal norms, and personal values are intertwined. Objectivism, social constructionism and subjectivism are viewed as emergent perspectives in a broader and more critical discourse. The chief scientist of New Zealand, Sir Peter Gluckman, emphasizes that science is no longer linear, authoritative and definitive, provided only by a domain-specific expert. Rather science is increasingly characterized by complexity, where multiple perspectives on knowledge are required to address the asymmetric payoffs associated with various policy options (Gluckman 2011).

The chief executive of New Zealand's Ministry of Research, Science and Technology (MORST) and staff spent four days in the Decision Support Centre at the University of Auckland (Fig. 4) with the panel appointed to allocate the Public Good Science Fund. The panel distributed US(2012)$ 2 billion across all 40 areas of New Zealand science. This is by far the largest contestable fund in New Zealand and funding decisions directly or indirectly impact most of the New Zealand economy. The technical (cognitive) issues were complex – each of the twenty panel members had received approximately 1,000 pages of briefing papers. A group memory device would clearly be required to support deliberation. The personal and interpersonal (socio-political) issues were perhaps more difficult to ignore – many of the panel were scientists, and nobody wanted reductions in areas dear to them. The decision process was designed to reduce politics about divergent objectives to a manageable level, so that attention could be directed to the more technical, task-oriented aspects of the decision process.

One member of the panel was the chief executive of the New Zealand Trade Development Board, Rick Christie. He reported that electronic discourse 'tends to be fairer – more objective – it draws on a different range of skills. But there's no question of not being heard – which can be a problem in meetings where there's just verbal interaction… If you are seeking ideas on something not identified with the contributor, then it's a great leveller…' (Sheffield 1993) Another member of the panel was John Butcher, director of the

Forest Research Institute's Wood Technology Division. He reported that there was such a huge diversity of people on the panel, from 'pure research' oriented scientists to hard-headed business people, that significant political differences were inevitable, and that '(electronic discourse) put the politics in a black box, to be dealt with later' (*Ibid.*).

Quantitative evidence on the efficiency and effectiveness of facilitating science funding was obtained via a survey instrument (see Appendix). The instrument was administered to all participants at the end of the final day of the electronically-supported meetings. Participants' satisfaction with electronic discourse averaged 5.9 on a 7 point scale (1 = low satisfaction, 7 = high satisfaction). Participants were satisfied with the focus on personal and interpersonal knowledge and the management of relationship issues – absence of perceived conflict (6.1) and consensus for cooperative action (6.0) received the highest ratings. Participants were also satisfied with the focus on technical knowledge – ratings for participation (5.9) and information exchange (5.8) were also high (Fig. 5).

Fig. 5. Science funding. Participants' satisfaction with electronic discourse averaged 5.9 (1 = Low satisfaction; 7 = High satisfaction)

Science funding Focus	Procedure Divergent	 Convergent
Personal and interpersonal knowledge Relationship issues ➢Reduce conflict ➢Increase trust	1. Absence of perceived conflict 6.1	4. Consensus for cooperative action 6.0
Technical knowledge Task issues ➢Reduce confusion ➢Increase understanding	2. Participation 5.9	3. Information exchange 5.8

5. Facilitating Economic Development

Sheffield and Gallupe (1994, 1995) describe an application of electronic meeting technology to a series of economic policy-making meetings sponsored by the New Zealand Trade Development Board. The meetings were part of a national study aiming to upgrade New Zealand's competitive position in global markets. They were held in Auckland, the main economic region of New Zealand, and were branded 'Advantage Auckland'. The aim of the research was to determine if electronic meeting technology could support an economic development process where participants came from a variety of backgrounds (*e.g.*, business competitors, different ethnic groups) and where meeting urgency and efficiency were of prime importance.

The national study was implemented with the assistance of Harvard's Michael Porter and was framed by his book *The Competitive Advantage of Nations* (Porter 1990). It started with the application of Porter's Diamond Model of industry-based competitiveness to analyze the New Zealand economy and to develop recommendations for improvement. Case studies were completed on 20 economic sectors which in total comprised 85 per cent of New Zealand's exports. The results were published in an influential book entitled *Upgrading New Zealand's Competitive Advantage* (Crocombe *et al.* 1991). It was intended to serve as a basis for positive action by individuals, companies, unions, industry groups, and government. It sought to explain why New Zealand needed:

- a new, more comprehensive economic framework;
- a fundamental re-engineering of attitudes, strategies and institutions;
- systematic upgrading of sources of competitive advantage.

At the time of the study, however, the New Zealand economy was in recession. Most businesses were dependent on the shrinking local market and as a consequence faced severe competition on price and high levels of business failure. Growth in export earnings became the primary goal of government economic policy. Cooperative efforts to upgrade competitive advantage were urgently required – yet were expected to be difficult to arrange.

The Advantage Auckland meetings had four key objectives:

1. to involve a large number of business leaders with a variety of backgrounds in sector and enterprise planning;
2. to assist those who were business competitors to move beyond price completion in local markets and seek opportunities for joint action to upgrade industry competitiveness in world markets;
3. to develop business opportunities for ethnic groups such as Maori who were suffering from high rates of unemployment;
4. to develop a collaborative action plan containing five initiatives that the meeting participants were committed to implement.

The final design of the meetings reflected the assumptions of the research team and facilitator:

- that some participants would require 'unfreezing' from their initial viewpoints (Lewin 1947; Schein 1993);
- that anonymous brainstorming on carefully selected topics would build opportunities for collaborative action although brief oral discussions would be required for agreement on key ideas;
- that building commitment to implement the action plans was primarily a social process that could best be supported in a rich communication medium (Daft and Lengel 1986; Sheffield 1995a).

There were five stages in each meeting. The purpose was to obtain working agreement on: meeting objectives, industry competitive advantages and disadvantages, actions to enhance competitive advantage, detailed action plans, and commitment to implementation. Earlier stages featured anonymous brainstorming within a strong organizing structure. In the last two stages, structure was not imposed – it emerged largely from the direct face-to-face interaction of the participants. In these stages the facilitator served primarily as coach and the electronic support served primarily as a memory aid. The design and evaluation of meeting discourse reflected elements of the task (Porter's Diamond Model) and four recommendations for 'unfreezing' (Lewin 1947):

1) participants feel psychologically safe;
2) participants step outside existing cultural norms;
3) participants (especially the leaders) learn something new;
4) a formal change process is implemented.

A series of 12 meetings were attended by 250 business leaders with a variety of backgrounds (Sheffield and Gallupe 1994). The primary result for each participant from their meeting was a 50- to 80-page bound transcript. Quantitative evidence about meeting effec-

tiveness and participant satisfaction was obtained via a survey instrument administered at the end of each meeting. The results of the questionnaire (see Appendix) indicated that participants felt that the meetings were both very effective and efficient. Answers to questionnaire item 1 indicated that participants felt that if the meetings were held using conventional meeting support, each would have taken three times as long. Average effectiveness (measured via the average of items 3b-24) was 6.1 (1 = Low satisfaction; 7 = High satisfaction). Participants felt that the way the session was run by the facilitator was excellent (6.3) and the technology was very easy and fun to use (6.3).

Participants' satisfaction with electronic discourse was measured via four measures that are numbered so as to match the four recommendations for unfreezing:

1) absence of perceived conflict;
2) participation;
3) information exchange;
4) consensus for cooperative action.

As demonstrated in Fig. 6, these measures of the meeting process are conceptually related to procedure (either divergent or convergent) and focus (either relationship or task). For the 12 Advantage Auckland meetings, the average of these four measures was 6.1 (1 = Low satisfaction; 7 = High satisfaction) (Fig. 6).

Fig. 6. Economic development. Participants' satisfaction with electronic discourse averaged 6.1 (1 = Low satisfaction; 7 = High satisfaction)

Economic development Focus	Procedure Divergent	 Convergent
Personal and interpersonal knowledge Relationship issues ➢Reduce conflict ➢Increase trust	1. Absence of perceived conflict 6.4	4. Consensus for cooperative action 6.2
Technical knowledge Task issues ➢Reduce confusion ➢Increase understanding	2. Participation 5.9	3. Information exchange 5.7

Source: Sheffield and Gallupe (1994, 1995).

The follow-up study two years after the meetings revealed that the success of the action plans varied considerably. Some were discontinued within months. Others such as the Marine Exporters Group (Marex) remain in existence and have become central to their industries. The most successful action plans were those in industries where previous meetings had been marked by dysfunctional conflict. Individuals in these meetings collectively possessed resources which, when shared and focused in the absence of perceived conflict, were sufficient to support successful initiatives. Subsequently, further 58 meetings were held in Auckland that were attended by approximately 1,000 business leaders. The Advantage Auckland meetings led directly to the establishment of a group support facility at Victoria University in the capital city of Wellington. The Wellington facility has supported many campaigns, most of which are sponsored by national government, some with the goal of upgrading New Zealand's competitive position in global markets.

6. Facilitating Regional Planning

6.1. Introduction

At the time of this research study, the governance of the Auckland region was characterized by divergent objectives (politics) and diffuse power structures (decentralized governance) (Healey 1997). Planners from seven territorial authorities met on occasion with the planning team from the regional council to develop comprehensive urban growth plans. They negotiated a shared meaning about facts (attributes of Auckland), norms (mutual expectations), and personal commitments (to one's own visions – and how they should be funded). Comprehensive scenarios for rival strategies were iteratively developed and evaluated throughout lengthy planning cycles. The process was complex and politics, confusion, and conflict were accepted as the norm.

Political differences in the Auckland region had been exacerbated by a combination of limited resources and population growth from internal and external migration. The politics around transportation were particularly difficult. Trip times were increasing and transportation costs, which included lost productivity, were increasing. While transportation modelling had been extensively used, issues of governance, funding, and collaborative planning remained. In the absence of a robust and responsive governance structure, deliberations about managing population growth were marked by political differences (Royal Commission on Auckland Governance 2007; New Zealand Council for Infrastructure Development 2008).

Confusion arose from the limited role of a single decision maker and the complexity of the substantive factual issues. For example, multiple organizations were involved in transportation governance – their roles were specialized and included control, participation, planning, funding, and operation/management. While each organization managed *part* of the transport system, none was responsible for the system as a whole. Region-wide or comprehensive urban planning necessitated a critical evaluation of conflicting claims about intertwined criteria related to transportation, housing, workplaces, amenities, *etc.*, by individuals primarily situated within organizations with divergent objectives. To a greater or lesser extent, all social actors suffered from confusion.

Conflict arose from the complexity of the power relationships among decision makers. Local Government legislation conferred powers on the regional council to plan for the region 'in consultation with' territorial authorities. Each authority maintained a planning office responsible to its own council. Each was empowered to serve its own constituency and expected the comprehensive urban plan to serve its own interest. To a greater or lesser extent, all social actors were embroiled in power conflicts.

In Table 2 overall success required participants to develop and integrate perspectives from generic roles that Churchman terms system designer (more technical / task oriented), decision maker (more interpersonal / consensus oriented) and client (more subjective / value oriented). In the regional planning meeting, each participant was primarily a designer of an urban area for which the elected council was the decision maker, and those who lived in the area were clients (Churchman 1971: 200).

The current research explores the practical value of electronic discourse in regional governance and comprehensive urban planning (see Tables 1 and 2, Fig. 2). Because of the complexity of the issues, and the importance of power relations, and the emergent nature of their interactions, and the historical context a non-positivist method of inquiry was adopted. The aim was to describe the general nature of the phenomena observed and to

interpret actions, events, and consequences. The evolution of quality measures (validity claims) during the pre-meeting, meeting, and post-meeting phases of decision making was observed. Data was gathered before, during, and after an electronically-supported meeting.

The purpose of the facilitated electronically-supported meeting was the strategic evaluation of a comprehensive 30-year plan for the Auckland region. This plan, known as the Auckland Strategic Planning Model, had been constructed over a seven-year period. The plan described two strategies for an increase in population from 1 to 1.5 million. Consolidation drove strategy one. More controls, particularly environmental controls, would be imposed to limit the spread of population into rural areas. The result would be higher population density and increased use of passenger transportation (buses, light rail). Expansion drove strategy two. Planning controls would be relaxed, allowing the spread of population into rural areas. The result would be lower population density and increased use of private transport (cars, freeways) (Sheffield 2009b).

In summary regional planning in Auckland, New Zealand was subject to political differences, confusion, and conflict. Regional planning was informed not by a search for a purely technical solution but by communication within a diffuse power structure about divergent objectives. *Interorganizational planning meetings were the exercise of technical skills on behalf of constituencies with a history of conflict, confusion, and the exercise of power*. An open dialogue across planning organizations was required to resolve contradictions among competing perspectives. Facilitating such a dialogue presents conceptual and practical difficulties that motivated the research reviewed below.

6.2. Before the meeting

The evidence gathered in the pre-meeting phase revealed that the 16 participants in the electronically supported regional planning meeting were there to represent seven territorial authorities (four cities and three districts) and the Auckland Regional Council (ARC). Each was a professional planner responsible for advising his/her own (elected) council. Each territorial authority constituted one part of the whole of the Auckland region. The issues associated with embedding 'one part' of an urban region in 'the whole' were complex. The chief planner for the ARC advised that most participants had been involved in prior consultations marked to some degree by politics, confusion, and conflict. Participants recognized the difficulties in achieving the goals of their respective councils and engaging in consultations about comprehensive region-wide plans with planners from other councils. Perceptions of costs and benefits varied with the allegiance of the participant and the history of his or her interactions. As the day of the focal electronically-supported meeting approached, it became apparent that considerable difficulties were being experienced by ARC planners, and that these were directly related to unresolved technical, interpersonal and personal issues.

Technical perspective. Technical difficulties were encountered in discovering an analytically sound method of combining knowledge from the acknowledged experts. Urban planning is a pluralistic area that Banville and Landry (1989) would describe as 'lacking conceptual integration'. For example, traffic engineers focused on access and transportation and developed estimates of trip times under each strategy. Biologists studied coastal water quality and developed estimates of pollutants in parts per million. Financial analysts focusing on economic values developed quantitative estimates of costs. Other planning consultants developed qualitative assessments of amenity, landscape values and housing choice. Scientific methods were applied by the experts who developed submodels in sub-

disciplines embedded within urban planning. *Yet, measures such as trip times, pollutants and implementation costs were, by themselves, conceptually unrelated and could not rigorously be compared*. Claims to objective truth were diminished by the lack of an analytically sound method of combining knowledge from different subspecialties.

Interpersonal perspective. The traditional urban planning triple-bottom-line categories of economic, social and environmental concerns appeared to be interlinked in a way that made the separate evaluation of any one category or subcategory impossible. It became clear that there were complex, dynamic and recursive ('chicken and egg') or self-referential (Müller *et al.* 2005) interdependencies among stakeholder's beliefs, potentially right strategies and available objective facts. These emergent properties of regional planning could only be resolved by discourse.

Personal perspective. The third set of problems was associated with personal commitments. Planners from one major territorial authority (a city of 300,000) were reluctant to attend because they were committed to a city plan based on presuppositions that differed from those of the regional council.

Summary. Analysis from the perspective of pluralism and communicative action (Table 2, Fig. 2) provides qualitative evidence suggesting that the observed levels of guarantors (objective truth, rightness and sincerity) immediately before the focal electronically-supported meeting were low.

6.3. During the meeting

To evaluate rival strategies for the Auckland region, the facilitator of the focal electronically-supported meeting chose to apply the five facilitation principles (Table 2) and framework (Fig. 2). The first part of the meeting focused on the expression of concerns and issues motivating each stakeholder. The last part of the meeting focused on expressions of degrees of commitment to action, for and against, rival strategies. More than half of the agenda items were devoted to electronically-supported discourse about a decision matrix. Two strategies (columns) were evaluated against five classes of criteria (rows) – cost, amenity and landscape, housing choice, access and transportation, and water quality. Each row of the decision matrix was the subject of a 50-minute session that included the anonymous individual generation of ideas and the prioritization and brief discussion of key findings (Sheffield 2004). This 50-minute session included the private ordering by each participant of his or her preference for each strategy (Dias and Climaco 2005). In the following subsections evidence is presented about participant satisfaction with electronic discourse and claims to emergent personal, interpersonal and technical knowledge.

Participant satisfaction with electronic discourse. Participants' satisfaction with electronic discourse averaged 6.0 on a 7 point scale (1 = low satisfaction; 7 = high satisfaction) (Fig. 7). Participants (some of whom were initially unwilling to attend the meeting) were particularly satisfied with participation (6.2) and the management of relationship issues – absence of perceived conflict (6.1) and consensus for cooperative action (6.1) also received high ratings. The relatively lower rating for information exchange (5.5) reflects most participants' familiarity with the issues. Unstructured comments were collected anonymously from participants by means of the GroupSystems software. The responses were overwhelmingly positive. Participants remarked that the meeting generated intense participation, goodwill and momentum. Many people expressed surprise that the technology existed and stated that the meeting outcomes would not have been possible without electronic support.

Fig. 7. Regional planning. Participants' satisfaction with electronic discourse averaged 6.0 (1 = Low satisfaction; 7 = High satisfaction)

Regional planning Focus	Procedure Divergent	 Convergent
Personal and interpersonal knowledge Relationship issues ➢Reduce conflict ➢Increase trust	1. Absence of perceived conflict 6.1	4. Consensus for cooperative action 6.1
Technical knowledge Task issues ➢Reduce confusion ➢Increase understanding	2. Participation 6.2	3. Information exchange 5.5

Source: Sheffield (2004, 2009b).

*Evaluation of claims to objective truth***.** Through the use of the electronic meetings technology participants produced ten pages of text on each of the five criteria (Sheffield 2004). This text or 'frozen discourse' includes key issues that were prioritized via a weighted voting procedure (Van de Ven and Delbecq 1971). Participants cast a total of 240 votes for each criterion. *The key issues were expressed in a manner that was exploratory rather than evaluative. For example, the issue of the extent to which population density must increase to make public transportation sufficiently viable is central to the choice between strategy one (consolidation) and strategy two (expansion). Yet, at the end of a seven-year planning exercise that included extensive traffic modeling, the issue was raised as a question rather than as the evaluation of a factual proposition supported by expert analysis.* This supports the conclusion that under the norms of a cognitive, objectivating attitude towards the facts, the 'truth' was that neither strategy was superior.

*Evaluation of claims to rightness***.** At the end of the discourse on a criterion, each participant privately recorded how well each strategy performed against the five criteria in Table 1. This enabled participants to interpret technical findings from the perspective of their own organization's norms and values. Each of the 16 participants anonymously rated the two strategies on each of the 5 criterion. The aggregated ratings for each strategy and criterion were made accessible to each participant. On one criterion (housing choice), strategy one and strategy two were rated equally. On the remaining four criteria (cost, amenity and landscape, access and transportation, and water quality) strategy one performed distinctly better than strategy two. The strategies and criteria had been developed through a consultative process over a seven-year period. This supports the conclusion that under the norms of established legitimate interpersonal relationships, strategy one is more 'right' than strategy two.

*Evaluation of claims to sincerity***.** Electronic meeting technology supported sharing personal visions prompted by the question '*What is it like to live in Auckland under strategies 1 and 2?*' From the perspective of Churchman's inquiring system, participants were asked to drop their usual role of designer and adopt the role of client (Churchman 1971: 200). The goal was disclosure of speaker's subjectivity, unconstrained by the (technical) structure of the model and unrestrained by the interpersonal context. The strategy was to get each individual to: (a) write a personalized account of what it would be like to live in Auckland 30 years hence under each of strategies 1 and 2; (b) read the accounts of others

to identify the most valuable visions. The procedure was a 60-minute silent envisioning exercise in which each account was identified only by a code. Anonymity was almost complete. The most valued visions of what it would be like to live in Auckland 30 years hence showed intense personal support for strategy one, and a willingness to work against strategy two. This supports the conclusion that under the norms of disclosure of speakers' subjectivity, 14 of the 16 participants would, in all sincerity, only have supported strategy one.

Summary. The positive results obtained from the meeting are in strong contrast to the confusion and conflict that existed at the end of the pre-meeting phase. While some participants had been reluctant to attend the focal meeting, and expressed negative views at the beginning of the meeting, all participants provided positive evaluations at the end of the meeting. The functionality of the electronic meeting technology was supportive of an overall positive result. Participation by all participants was intense. By the end of the meeting, electronic discourse produced 80 pages of text. Intense participation in electronic discourse resulted in extensive documentation of claims to objective truth, rightness, and sincerity. The data gathered during the focal meeting support the claim that electronic discourse had successfully reduced conflict and confusion. It is not clear, however, that the decision outcomes integrated the technical, interpersonal, and personal perspectives into a consensus model that provided a rationale for action.

6.4. After the meeting

We have yet to consider the degree of coherence among the three perspectives. Participants found no difference between the strategies on the basis of technical knowledge. Moderate claims in favour of strategy one were made based on interpersonal knowledge. Strong claims in favour of strategy one were made based on personal knowledge.

The degree of coherence among the decision outcomes at different levels was poor. There was a major discrepancy in preferences at various stages of the decision process. The 80-page report generated by electronic meeting technology (from which the findings were extracted) was circulated to all participants immediately after the meeting. *The introductory section of the report highlighted the fact that the participants were strongly supportive of a strategy that lacked factual support*. The report became subject to intense scrutiny. Regional planners repeatedly met among themselves about the report and consulted other meeting participants. Support grew for the interpretation that the strategic options were not extreme enough. In Hegelian terms, the dialectical logic (synthesis) of this interpretation was initially lost on the regional planners because they were so firmly wedded to their decision framework (thesis) that they experienced profound difficulty in recognizing that the framework was flawed (antithesis). An abbreviated planning round was subsequently undertaken with more extreme versions of strategies one and two (based on a hundred percent increase in population). Support that integrated the technical, interpersonal and personal levels of the facilitation framework was then found for strategy one.

6.5. Summary of findings

The results showed that the pre-meeting phase was fraught with technical, interpersonal and personal problems. Both the observations during the meeting and the satisfaction reported by participants (Fig. 7) demonstrated that the facilitated electronically-supported meeting had increased participant's trust and understanding. During the meeting participants found no difference between the strategies on the basis of technical knowledge, a moderate preference for scenario one on the basis of interpersonal knowledge, and a strong

preference for scenario one on the basis of personal knowledge. Reflection after the meeting produced sudden insights that dissolved the perceived lack of coherence. The final analysis integrated technical, interpersonal, and personal perspectives into a consensus model that provided a rationale for action. Empirical evidence was therefore found for the importance of the facilitation framework (Fig. 2) and all five principles (Table 2).

7. Discussion

> The meeting made it easy to lay your thoughts out without putting your neck on the line.
> (Participant in an economic development meeting)

The current research described local solutions implemented as part of New Zealand response to impacts of globalization. Inter-organizational meetings were conducted in the domains of science funding, economic development and regional planning. The importance of pluralism and electronic discourse to the successful facilitation of these meetings was evaluated via quantitative and qualitative measures. Evidence from the quantitative measures indicated that participants found the meetings very efficient and effective and were very satisfied with electronic discourse. Averages across all three cases are reported in Fig. 8. Evidence from the qualitative measures indicated that the facilitation principles (Table 2) and framework (Fig. 2) were closely associated with overall success. These findings are briefly discussed.

Fig. 8. All three cases. Participants' satisfaction with electronic discourse averaged 6.0 (1 = Low satisfaction; 7 = High satisfaction)

All three cases Focus	Divergent	Procedure Convergent
Personal and interpersonal knowledge Relationship issues ➢Reduce conflict ➢Increase trust	1. Absence of perceived conflict 6.2	4. Consensus for cooperative action 6.1
Technical knowledge Task issues ➢Reduce confusion ➢Increase understanding	2. Participation 6.0	3. Information exchange 5.7

The strategies implemented were developed in inter-organizational meetings attended by a large number of stakeholders with divergent objectives. Since each participant was very busy meeting the demands of their own organization it was imperative that the inter-organizational meetings were efficient and effective. In traditional inter-organizational meetings, even when participants desire to work in a relatively democratic way, the limited airtime creates conflict. In a one-hour meeting of 15 people, each must compete to get more than four minutes of airtime. Quite literally it is the sender not the message that is visible. Critical analysis invites interpersonal conflict. But in an electronic meeting all participants can input and read information at the same time (Sheffield 1995b).

As everyone can ‘talk’ at once and still be heard, the work was completed two to three times faster. Because it was difficult to identify who has proposed a particular idea, rank and personality differences among participants were less pronounced. Advocacy, coali-

tions and infighting were less necessary. According to participants, facilitated electronically-supported meetings provided an efficient and effective method of generating informed consensus for action (Fig. 8).

The quantitative evidence indicated that participants were particularly satisfied with the focus on personal and interpersonal knowledge and the management of relationship issues – across all three cases absence of perceived conflict (6.2) and consensus for cooperative action (6.1) received the highest ratings. Participants were also satisfied with the focus on technical knowledge – ratings for participation (6.0) and information exchange (5.7) were also high. This suggests that the anonymity provided by electronic meeting technology was perceived as more important than the raw power associated with the simultaneous use of keyboards. This was particularly apparent in the economic development meetings.

In the 12 Advantage Auckland economic development meetings the absence of perceived conflict (6.4) and consensus for cooperative action (6.2) received the highest ratings. The electronically supported meetings were held when the economy was in recession. Because the level of pain was high and some participants were business competitors, the potential for conflict was high. In many industry sectors diminished disposable income and deregulation had led to oversupply, competition on price, heavy discounting, and persistent infighting. Participants indicated that the meeting created a dialogue, and the exchange of valuable information fostered openness and trust. Interviews conducted one to two years afterwards as part of a follow-up study (Sheffield and Gallupe 1995) confirmed that the meetings had been a catalyst for industry wide change. Participants commented that the anonymous and simultaneous use of the keyboards aided creativity and allowed everybody's comments to be treated fairly.

‘Our ideas were stimulated, shared and focused’.

‘Domination by individuals whose solutions were not of great quality had often destroyed meetings in the past. Anonymity was essential to get rid of personality clashes. The (electronically-supported) meeting was memorable for the variety of participants, its quietness and structure – nobody dominated. It delivered an action plan that was solid enough to cope with the infighting’.

‘Before the meeting a lot of us didn't believe in talking to the opposition. There's a lot more talking together, pulling together now’.

‘The meeting was definitely the catalyst. Absolutely! Why? Because the computer medium allowed people to feel that their contributions were being treated fairly’.

‘The meeting made it easy to lay your thoughts out without putting your neck on the line’.

Empirical support was found for the facilitation framework and all five principles (Table 2, Fig. 2). This suggests that, in facilitating local solutions in a global environment, the benefits of electronic discourse are three-fold:

Technical perspective. Electronic discourse provided support for the development and documentation of validity claims about objective truth, rightness and sincerity, and the degree of coherence among them.

Interpersonal perspective. Electronic discourse provided support for discourse that interweaves evidence (experience and reflection, decision and action, theory and practice, individual feeling and objective fact) from multiple, intertwined, conflicting yet mutually supportive evaluative frames.

Personal perspective. Electronic discourse provided support for the 'psychological safety' and 'trust' needed for direct and unreserved expressions of multiple, conflicting individual perspectives.

In totality, the empirical evidence enables the focus question 'Does electronic discourse increase the success of local solutions in a global environment?' to be answered in the affirmative.

8. Conclusion

Several lessons have been learnt. Firstly, facilitating local solutions in a global environment was a pluralistic endeavour – the objectives of social actors were divergent and power was diffused. Often the goal was a legitimate consensus among diverse stakeholders so that scarce resources could be combined / leveraged for national advantage. Secondly, the theoretical perspective of communicative action was useful in separating out intertwined but quite different types of knowledge. The standard of excellence in communicative action can be stated as follows: personal commitment (validated by sincerity) to an interpersonal consensus (validated by rightness) for technical excellence (validated by objective truth). Thirdly, individual and institutional knowledge was inherently mediated and situated, provisional and pragmatic, aspirational and contested. In an environment of diffuse power relationships, inter-organizational meetings were essential in gaining legitimacy. Fourthly, electronic meeting technology has a raw power that leads to efficient and effective inter-organizational meetings. Excellent performance was observed in the application of electronic meeting technology in science funding, economic development, and regional planning meetings. Fifthly, the findings reported in the current research suggested that the facilitation principles and framework developed in this article may be routinely applied in various other domains. Seen from a Hegelian perspective, the power of pluralism and communicative action lies not in achievement of enlightenment, but in appreciation of the nature of three types of ignorance and the practical consequences of belief.

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Appendix

Session Evaluation Questionnaire*

Decision Support Centre session for _____ (group) on _____ (date)

*Efficiency (Q1-2), effectiveness (Q3a-5), facilitator (Q6-7), technology (Q8-11), reduced barriers to communication (Q12-14), participation (Q15-17), information exchange (Q18-21), meeting outcomes (Q22-24).

Directions: Your opinions are important to us! Please take the time to answer the questions on the front of this sheet. We will use your responses to this questionnaire to upgrade future workshops in the Decision Support Centre. Thank you! Jim Sheffield, Research Director, Decision Support Centre.

1. You spent _____ hours in the Decision Support Centre to achieve this result. How many hours would you expect to spend to achieve the same result by conventional means? _____ hours

2. Using conventional means the process would most likely have spread over _____ days

3a. In the next three months I expect to use/study the report of this session for a total of _____hours

For questions 3b through 24 indicate your level of agreement with the statement using the following scheme:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Strongly Disagree	Mostly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Mostly Agree	Strongly Agree

All questions are answered by circling a number. There are no right or wrong answers.

3b. Overall, I thought the workshop was excellent: 1 2 3 4 5 6 7

4. I enjoyed being a member of this group: 1 2 3 4 5 6 7

5. The report containing all contributions to this session will be highly valuable: 1 2 3 4 5 6 7

6. The way the session was run by the facilitator was excellent: 1 2 3 4 5 6 7

7. The facilitator's use of the whiteboards was highly effective: 1 2 3 4 5 6 7

8. The computer facilities were easy to use: 1 2 3 4 5 6 7

9. The computer facilities were highly effective: 1 2 3 4 5 6 7

10. Typing enabled me to focus and refine my ideas before going public: 1 2 3 4 5 6 7

11. The Decision Support Centre technology is fun to use: 1 2 3 4 5 6 7

12. Internal politics were largely absent from today's meeting: 1 2 3 4 5 6 7

13. The rank of participants did not inhibit the free flow of ideas: 1 2 3 4 5 6 7

14. The personality of participants did not inhibit the free flow of ideas: 1 2 3 4 5 6 7

15. I felt actively involved throughout the session: 1 2 3 4 5 6 7

16. All group members participated equally: 1 2 3 4 5 6 7

17. Participants, both as individuals and as a group, were creative: 1 2 3 4 5 6 7

18. I was willing to give valuable
information to others in the group: 1 2 3 4 5 6 7
19. I was able to give valuable information
to others in the group: 1 2 3 4 5 6 7
20. I received valuable ideas from others
on issues of significance to me: 1 2 3 4 5 6 7
21. I received support from others
on issues of significance to me: 1 2 3 4 5 6 7
22. The issues surfaced during the
brainstorming are important: 1 2 3 4 5 6 7
22b. I strongly recommend that this and similar groups
use the Decision Support Centre for future planning tasks: 1 2 3 4 5 6 7
23. The summary of key issues developed
on the whiteboards is important: 1 2 3 4 5 6 7
24. Participants, both as individuals and
as a group, were productive: 1 2 3 4 5 6 7
Quotable comment. Please quote me
on the following comment:

Please use the back of the sheet for further comments.