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## **Exploring Language Problems through Q-Sorting**

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### **Introduction**

This chapter discusses a method for researching LPP, Q-sorting (Watts and Stenner 2012), which in my work I link to deliberation conferencing (Lo Bianco and Aliani 2013). Q is highly adaptable to the different circumstances, settings, and needs of agencies commissioning policy advice, and also illuminating when applied to research. For novice researchers, PhD students, and early career language planners, Q offers the prospect of a sharp focus on key questions in LPP, especially the centrally important question of exploring, defining, and analyzing language problems. While not all language policymaking is a search for solutions to communication problems, much of it is, and the character and determination of what counts as a language problem and how it will be treated is a central and ongoing challenge for the discipline.

The main focus of this discussion is the novice researcher, the PhD student, or the experienced researcher wishing to explore the possibilities that Q offers LPP. I should stress that addition of deliberation conferences, or facilitated dialogues, linking the findings of Q method to solution-seeking discussions, moves beyond academic analysis of LPP into the realm of assisting various authorities to devise, implement, and evaluate language policies. The key aim here is to foster a participatory, democratic, and dialogue-based means for agreeing which language problems will be selected for policy treatment (Lo Bianco 2010), how to conduct the policy writing and planning work that addressing these language problems requires, and how to study and document the processes and outcomes (see also Canagarajah, this volume).

It is commonly the case that researchers develop research proposals and topics to pursue questions important to them for reasons of personal background or prior experience, or which link to their professional activities, or in response to questions of political engagement. Q-sorting offers a systematic and empirical basis for the selection of topics, for making precise the limits and scope of a research question, for exploring its links to related fields, for elucidating dimensions, ideologies, and histories hidden within the way the problem is typically debated or presented in the public sphere. As a result of utilizing Q, researchers, both novices and experienced and established scholars, can map out the field of arguments, positions, and the underlying discourses in debate about problematic questions linked to language in a highly focused way allowing research to pursue coherent lines of investigation on even quite complex language problems.

Ethnographic and text-based LPP research approaches are typically less systematic and structured in their selection of research focus and their mapping of arguments that comprise an issue being disputed and prepared for policy attention. However, as already mentioned, Q-sorting is important as a method for engaging in actual problem-solving, i.e. for participation in projects of real-world language policy-writing. As such, novice researchers, and even experienced language-planning scholars, can link their academic and scholarly work on language planning much more closely to engagement with concrete language policymaking.

### **Developing Research Questions**

Beyond assisting in topic selection for dissertation-writing, Q-sorting is valuable in LPP research in defining the nature and complexity of communication problems that lie at the heart of practical language planning, a process commonly known as "problem definition."

The archetypal method of LPP generated from within the language sciences of the 1960s and 1970s,

and especially from within the academic categories and research practices of sociolinguistics and applied linguistics, is the sociolinguistic survey (Lo Bianco 2010). Key early theoreticians of LPP then engaged with the formal policy sciences to devise a general language-planning matrix analogous to the dominant paradigm of general policy analysis, especially its attachment to notions of "rational choice," a central idea in the contemporary policy sciences (Rubin and Jernudd 1971; Lo Bianco 2010). The LPP meta-method that resulted shadows the formal procedures of public administration and human resource management, broadly involving the following sequence of activities:

- 1 Identification of problem (gathering facts).
- 2 Specification of goals (policy writing).
- 3 Cost-benefit analysis (rational demonstration of alternatives, return on investment).
- 4 Implementation (enactment of policy).
- 5 Evaluation ((comparing predicted to actual outcomes).

This sequence of formalized procedures for the conduct and understanding of LPP was subjected to relentless criticism (Ricento 2000) as part of a critical turn in LPP scholarship, influenced by neo-Marxist, poststructural, and postmodern reasoning. Critics alleged that such procedures masquerade as neutral information-collecting, or open consideration of alternatives, when in fact they involve intrusion into private language worlds, produce the means for bureaucratic and technocratic management of the lives of minority communities, and privilege the interests and agendas of a class of professional language planners more than ordinary citizens (see Lo Bianco 2004 for a discussion of criticisms).

In other branches of LPP, theorizing the nature of interests, and the character of language problems, was approached in a radically different way. Writing about language policy in India, Hans R. Dua claimed in 1985 that the "characterization and systematic account of language problems of a speech community is a prerequisite to an adequate theory of policy formulation, language planning and language treatment" (1985, 3). There are many ways to characterize and understand language or communication problems, and some scholars (Nahir 1984), and Dua himself in later reflections (2008a and 2008b), prefer to speak of language goals, language management (Spolsky 2009), or social change (Cooper 1989), as the motivating force and conceptual paradigm for language-planning activity.

In an elaborate typology of language problems, reflecting the multi-lingual and multi-script sociolinguistics of India, Dua (1985) focuses on the *definers* of language problems, whether they are insiders or outsiders, politicians or bureaucrats, researchers or professionals and "the people." These perspectives are in turn linked to four social needs, which Dua identifies as *normative* (needs in which professionals or experts dominate); *felt* (in which affected groups or individuals prevail in the process of defining); *expressed* (referring to those felt needs that are converted into action); and, finally, *comparative* (which are social needs in language established through contrast with other needs faced by the community). Dua's scheme is further elaborated as a series of oppositions in relation to how language problems are ultimately handled in policy: *broadly or narrowly; deeply or superficially; precisely or vaguely; rationally or irrationally*.

Another pioneer of modern LPP theory, Joan Rubin (1986), drew on general public policy concepts to distinguish between "tame" and "wicked" problems, with language problems invariably classified as wicked, invested with symbolic and material interests for different speaker groups. This is of course a crucial fact about the character of language problems, which requires LPP theory and policymaking, and its analysis, to be distinguished from less wicked policy problems. In democratic states the ideological preferences of social groups involve struggle about which problems, or rather "whose" problems, will be allocated resources and become the focus of policy attention. This is evident in the struggle in the United States to produce constitutional amendments granting English the official status it currently lacks. The precise problem involved in political struggles about the status of English in the United States cannot be quarantined from a wide range of material questions about employment, immigration, citizenship, and education and symbolic questions about belonging, representation, and nation-making (Lo Bianco 2007).

It follows from this that the idea that language problems pre-exist LPP, or that they are objectively discernible and uncontentious, much less "scientific" problems, defined prior to the activity of language planning, is an untenable basis for LPP activity, either its analysis or its practice. Definitions

of language problems, as suggested by Dua, is a key part of the process of language planning itself and the question of how language problems are defined and addressed poses deep conceptual challenges for analysis. Q-methodology is a practical research instrument for emerging scholars developing research questions, and for established scholars conducting analysis of longstanding, intractable issues of language policy dispute.

### **Choosing Contexts**

The research methods proposed here vary in relation to their demands regarding access to research participants, time required of participants, materials, and other resources. Much of the process of assembling a Q-study involves desk and library research; Q-method is highly flexible, as described below, and can be conducted with small N-sizes and great intensity or with larger N-sizes while retaining its level of intensity.

Contexts for Q-research are also highly variable, though deliberation practices of various kinds generally require access to personnel involved in a dispute or contest around a language-planning question, and for novice researchers and PhD research projects such might not always be feasible.

Various kinds of facilitated dialogue, and especially deliberation conferences, emerge from theories of deliberative democracy which have become an important feature on the agenda of research into collective problem-solving and democratic practice in several social science disciplines. As a result there has in recent years been a surge in theory of deliberation and interest in its practice as "discursive" democracy.

Approaches to practical problem-solving inspired by communicative theory and argument-mapping techniques have expanded exponentially to encompass insights from activity theory, communicative theory, argument mapping, critical thinking, applied epistemology, intelligence augmentation, collective wisdom, hive minds, and so on (Blackler 2011; Engestrom 2011). This surge in activity is part of an effort to devise new modes of discursive policymaking, concerned about the barriers between professionalized managerialism, which prevails in formal policy, and the world of citizen democracy.

In Australia this work is now widespread, influenced by ideas of political philosopher John Dryzek, whose 1990 volume, *Discursive Democracy*, led to expanded interest and possibly the definitive work, John Uhr's *Deliberative Democracy in Australia* (1998).

A unique dimension of the use of these two methods in LPP involves addressing what counts as language planning. Both Q and deliberation ask language scholars to immerse themselves in the phase of problem definition, producing accounts of the dynamic processes of contestation, compromise, and agreement that characterize public discussion of policymaking. These processes of language planning precede formalized procedures for determining what policy goals will be supported within a particular context and therefore involve multiple contexts, actors, and claims. In this approach we will be required to discard the notion that language policy is the enactment of technical procedures to bring about solutions to problems that *pre-exist* language planning itself, and the related assumption that language planners can be thought of as neutral technicians capable of entering a context in which, through some process independent of their presence, they are presented with a remit for solving a problem. Language planners are of course a professional class of skilled people, and novice researchers are engaged in the process of gaining and polishing such skills, but from their entry into the field as novices, PhD candidates, or initiate scholars, all the way through to a mature professional presence as analysts, they are also individuals with interests, ideological inclinations, and theoretical predispositions.

The role of research, and of researchers, and ultimately of course of research knowledge, in the dynamic, iterated processes of language planning and the more formalized activity of language policymaking, needs to be conceptualized and include actors and agents with influence, rather than outside technicians. However, the inclination of some critical scholars to reject language policymaking altogether because some of its practices are deficient, or politically naive, and some of the purposes of language policy are contestable, leaves officials, community members, and authorities of various kinds without the guidance of professional language planning, with its body of concepts, experiences, and reflections over many decades. The accumulated knowledge of the discipline of language

planning and policy is in response to a vast expansion in examples of real-world language policymaking in the wake of globalization and population mobility in the contemporary world. It is likely that there will be rapid growth in the application of LPP concepts and methods, and recognition of the distinctive subdiscipline of language-planning expertise, and of its potentially powerful contribution to and support of agencies attempting to solve real-world language problems with knowledge generated through LPP-informed research.

### **Methods for Data Collection and Analysis**

The method of Q-sorting, commonly called Q-methodology, consists of scrutiny of attitudes, studied via the mathematical process of inverted factor analysis. The inaugurator of Q was the British physicist and psychologist William Stephenson (1902-1989). Rejecting dualist notions of mind and behavior, in 1953 Stephenson argued against any distinction between internal and external frames of reference. These insights underlie his design of Q as a "dynamic psychology" aiming to elucidate links between knowledge and action. Stephenson was interested in an approach to the study of subjectivity that was practicable for researchers. His understanding of subjectivity was also straightforward: "what one can converse about, to others, or to oneself" (1968, 501), and he proposed that subjectivity should be studied empirically by accepting a respondent's construction of their world, rather than imposing researcher-defined categories onto it.

Ultimately, as a researcher, Stephenson wanted to see subjectivity studied "operantly," i.e. behaviorally, and to achieve this he set aside the process of defining consciousness and self which had preoccupied his professional discipline and opted for a method of practical investigation that required researchers to accept the frames of reference provided by their respondents. Always motivated by this preference for gaining knowledge rather than engaging in philosophical speculation about phenomena, Stephenson devoted almost 20 years to refining what ultimately emerged as Q-sorting, laying the foundation for what is today a steadily expanding method of reliable, easily implementable, and richly productive investigations.

Unlike most attitude testing or opinion sampling, Q-sorting explores the subjective disposition of actors (deep attitudes) and the identity and sense of self of respondents. Many studies have shown Q to be a reliable method (Watts and Stenner 2012), an approach which provides a "systematic and rigorously quantitative means for examining human subjectivity" (McKeown and Thomas 2013, 7) where subjectivity is simply accepted as "a person's communication of his or her point of view" (1986, 12).

I have used Q-methodology for more than 20 years, supervised several PhD projects which have relied on Q, and have adapted it for practical language policy advising in Australia, Malaysia, Myanmar, Scotland, Sri Lanka, Thailand, Timor Leste, and the United States. I have always found it to be highly reliable and convincing to participants, especially to those actively involved in public debate about the language problem being addressed in specific cases. I selected Q because it minimizes outsider characterization of an actor's experience, an especially risky endeavor in relation to people's language and communication practices. That Q retains empirical/scientific form (inverted factor analysis with an individual's understanding of their world the key variable) aids acceptance of its results in policymaking circles (Brown 1986, 1996).

Broadly speaking there are four phases in a Q-study:

- First, public argument around language problems is extensively sampled.
- Second, the sample is culled.
- Third, participants are invited to rank and evaluate the collected sample.
- Fourth, these evaluations are statistically analyzed.

Sampling involves collecting critical and emblematic statements made on the language problem or issue being debated. Statements vary in length from a slogan of a few words, sourced from radio debates or campaign stickers, through advocacy material and excerpts from newspaper commentary, to policy reports. Statements are selected because they distil or capture claims and points that encapsulate the particular problem (e.g. "Native children should be taught in their mother tongue" or "Australian schools should prioritize Asian languages"). In Q-sorting methodology the totality of what

is said about the issue being researched is called a "concourse" and its sampling involves immersion in public debate. Topics include arguments for making English the official language in the United States, disputes in Australian public policy circles about the role of indigenous languages in the education of Aboriginal children in public schools, or, say, parental demands for the introduction of Chinese into a British Columbia school offering French immersion. A key aim and outcome of Q is to identify the powerful "discourses" within a concourse that give the particular argument its distinctive contours, alliances, and differences.

Collecting a rich and representative body of statements that captures the range of positions taken by various participants in a concourse is the critically important first phase of Q-sorting. A representative and accurate sampling provides enhanced credibility through the entire process of analysis. The researcher continues collecting statements until there is repetition in the sample, indicating that the concourse is being exhausted. In my experience such redundancy is usually reached after 80-100 statements; occasionally it has been necessary to collect as many as 250 (Lo Bianco 2001) to gain confidence that the breadth of claims/arguments on the disputed issue has been sampled.

However, this large number is beyond what is needed for the third phase, when participants rank and evaluate the statements, so a second step involves culling the initial sample to reduce it. A popular Q-set size is 40-50 statements, the precise number influenced by how controversial the issue being researched is, and the inverted factor calculations (Watts and Stenner 2012), using a quasi-normal distribution ranking explained in this video: [http://www.youtube.com/watch?feature=player\\_embedded&v=0AejeH6jw2c](http://www.youtube.com/watch?feature=player_embedded&v=0AejeH6jw2c).

There are diverse approaches to culling, some formal and some informal, depending on the resources available to the researcher, the physical setting in which the research is taking place, and the particular problem involved. Essentially, culling involves studying each statement individually with great attention and discarding repetitious, marginal, idiosyncratic, or ephemeral statements. This process can be aided by the application of analytical tools; one which I have used involves deciding what are the argumentative and rhetorical features of statements, specifically a "political discourse analytic matrix" (Dryzek and Berejikian 1993). This matrix is an extension of the Toulmin method, a form of reasoning devised by Cambridge University political philosopher, Stephen Toulmin (2003), in which data, claim, and warrant are sequences in the construction of arguments. My preference for using this is influenced by its link to deliberation conferencing (Dryzek 1990; Uhr 1998; Dryzek and Niemeyer 2006), which aims to resolve or ameliorate language problems, i.e. to move from language-planning analysis to language policy writing, which is assisted if the Q-analysis is already informed by knowledge of the rhetorical features of the argument. Many novice researchers, PhD students, or experienced researchers under pressure of time, do simpler culling, removing repetition and opting for statements that are emblematic of positions in the debate or which crystallize key points. If sophisticated culling is used, the statements are classified according to their rhetorical features. Whether a sophisticated or a straightforward culling is used the final set of statements is then placed on individual printed cards or a computer program.

Participants are drawn from the constituency debating the issue, by purposeful rather than random selection. In some cases participants will be the authors of the statements being ranked, the key criterion being that individual's relevance to the question, usually in the form of recent and active participation in debate, research, or policymaking on the particular language problem. This third part of the process can appear time-consuming and is sometimes delicate, requiring considerable negotiation, partly because administration of a 40-50-statement Q-sort takes more than 60 minutes. However, Q has the advantage of being entirely valid with small or large respondent numbers, making it feasible for PhD projects and novice researchers. The number of participants can range from a single critical individual, a sufficient size when the focus of the research involves deep understanding of a critical informant's point of view; however, it is typical to have 20-30 respondents drawn from a speech community, advocacy groups, civil service organizations, policymakers or political party nominees, professional organizations, media representatives, and school, university, and researcher interests.

Researchers can complement Q-method with interviews or focus groups with the participants. These can precede the Q-sorting (to generate statements) or follow it (to assist in interpreting the discourses embedded within the overall concourse), and can be done with some or all participants. These forms of supplementation are not essential because Q-sorting generates extensive and rich data.

Each participant is asked to evaluate every statement, ranking them on a distribution scale from -5 to +5 (i.e. 4 ranks of +5 and -5 votes; 5 ranks of +3 and -3 votes; 6 ranks of +2 and -2 votes; 7 ranks of +1 and -1 votes; and 8 ranks of 0, or neutral/ no view votes). These "votes" or scores are in response to a prompt question (e.g. *Rank these statements according to your level of agreement/disagreement; or Rank these according to your view of Prime Minister Mahathir's proposal that Malaysia should teach science, technology, and mathematics subjects in English*).

After recording each individual's ranking the resulting sorts (i.e. the ranks) are analyzed statistically using specialist Q-software, seeking overall correlations, individual statement weights, and scores for groups of statements and for groups of respondents. Most often a concourse contains between three and five structuring "discourses"; usually two or three are particularly strong. After analysis of the sorts I have found it useful to prepare a plain-language "Issue Brief" for the particular area. The Issue Brief reports findings, and assists in moving to organize facilitation intervention on the language problem. It is also useful to ask participants to contribute to writing the Issue Brief as a kind of narrative exercise fostering greater understanding of rivals' positions and a deepening of one's own.

Q-analysis yields reliable data about ideological and action-oriented views of key participants, and using the political discourse matrix as the basis for culling statements allows the researcher to do very fine-grained analysis of the underlying features of the total argument and of its component discourses. With this preparation the researcher might then be well informed for analysis of the language-planning context. The two are therefore a sequence of fact-finding, a mainly scholarly or academic orientation in language planning, linked to problem-solving, a mainly practitioner-based orientation in language policy determination.

Introduction of new methods into language policy and planning such as Q-methodology aims to redress the field's historic overreliance on self-report attitude surveys.

It is useful to keep in mind that in real-world language policymaking, applied linguistics in general, trained professional language planners, and even the body of knowledge that might be called language-planning theory, are rarely included. As Joshua Fishman noted in 1994, in an observation which broadly remains true today: "very little language planning practice has actually been informed by language planning theory" (1994: 97).

Technically oriented views of the role of LPP analysis, from the beginning of PhD research, through novice engagement with the field, all the way to expert practitioner, are all involved in generating knowledge about language policy, which is never an apolitical act. A possible extreme expression of this can be gleaned from Calvet (1998), who poses the problem in a very forthright way describing the "complicity" of linguists in "language wars" he studied in Africa and elsewhere. His definition of the field foregrounds the politics of language planning, which he sees as *in vitro* manipulation of language away from the *in vivo* context within which languages compete for space and power:

All planning presupposes a policy, the policy of those in power ... by intervening in languages, [the linguist] becomes part of the powergame ... usually the linguist is to be found on ... the side of power, even if he only considers himself as a technician or adviser. (Calvet 1998: 203)

Calver goes on to locate the "social responsibility" of the linguist as language planner in the obligations of common citizenship and not in any professional or scholarly inheritance. Q-method, and dialogues which follow the generation of data with the interested parties, whether or not they adhere to formal deliberation principles, provide a well-studied approach to citizen-centered action on language problems which can serve a professional role and provide input for the conceptual preparation and investigations of linguists, sociolinguists, language educators, and language planners.

## **Case Study**

Q-methodology was used over a period of five years in four schools in the suburbs of Melbourne, Australia (described in Lo Bianco and Aliani 2013). Students in these high-immigrant, high-refugee,

low-SES schools were compelled to study Italian and Japanese, the former a language traditionally present in the particular localities, the latter a foreign language, but a beneficiary of national and state-level language education policies. The research was commissioned by the state education ministry with the express aim of understanding better the high attrition rate for students taught the two languages. Fifty students in junior high school, Years 8 and 9 in Australian terminology, were nominated by their teachers according to whether they were "waverers" or "committed" to continuing with language study in the post-compulsory Year 10, with 20 from the Italian course and 28 taking Japanese eventually participating in the full Q-sorting of statements, with extended time allowed for discussion, and even repeat sorting.

The Q-statements were drawn from a prior and extended period of focus group discussions with students, a process that yielded some 65 potentially usable statements, culled to a selection of 25 for each language. The topics, or concourse, covered teaching, learning the language, "relevance" of the curriculum, the value of learning the language, classroom control, and organizational aspects of language provision. The 25 statements were transcribed onto cards, preserving the original form of expression of the students, and the 48 participants made choices about how strongly they agreed or disagreed with each one. To facilitate the activity, they were given a blank grid with a predetermined pattern on which they placed their cards as follows: three cards in the +3 column (most like their point of view), three in the -3 column (least like their point of view), the same number of cards in the +2 and -2 columns; four cards each in the +1 and -1 columns and five cards in the central O column. The researchers were present at all times during the exercise. The sorts were analyzed using PCQ, a dedicated Q-method software, seeking correlation, computation, and factor analysis. The main points of view and shared belief were reliably identified.

Results were organized into overall "discourses," three for each language, valency of particular statements, or groups of statements, and the kinds of argument or issue these represent, differences and similarities between the discourses within each and across both languages. The results for the first Italian and first Japanese discourse are reproduced in Tables 7.1 and 7.2, using the paradigmatic form of a Q-sort result, then discussed in depth for each statement, discourse, and cluster of discourses or statements.

The results have been highly informative of the main causes of attrition, which, it transpires, are mostly within the ability of the individual schools to address, and are only partly attributable to the wider context of policy. However, the research also provided considerable critique of the unrealistic expectations of policy not informed by the actual experience of learners. Deliberation activities with schools and teachers followed the research process, and teachers and students were active participants in all phases of the research. The outcomes of the study focused all policymakers, school-, district-, and department-based, on the need to explore the underlying language problems exposed by the study.

*Table 7.1 Italian - Perspective 1: Fix it, but ask us!*

-3	-2	-1	0	+1	+2	+3	<i>Consensus and distinguishing statements</i>
4	8	7	3	1	6	17	3 consensus statements # 1, 2, 3
15	13	12	5	2	16	18	0 distinguishing statements
24	25	19	10	9	23	20	No items distinguish Factor 1
		22	11	14			
			21				

*Source:* Lo Bianco and Aliani 2013, table 4.4 (p. 101).

Table 7.2 Japanese - Perspective 1: Let's use it much more!

-3	-2	-1	0	+1	+2	+3	Consensus and distinguishing statements
12	9	3	2	4	5	1	6 consensus statements # 2; 15; 17;19;
14	11	15	7	8	6	16	22; 25
23	13	20	17	10	19	22	2 distinguishing statements # 14; 23
		24	21	18			
			25				

Source: Lo Bianco and Aliani 2013, table 4.10 (p. 112).

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