MAKING SILENCE TOGETHER: COLLABORATION IN THE SILENT GATHERINGS OF QUAKERS

A DISSERTATION SUBMITTED TO THE SCHOOL OF EDUCATION AND THE COMMITTEE ON GRADUATE STUDIES OF STANFORD UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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ABSTRACT

The central phenomenon of interest in this text is silence, specifically *group silence in social interaction*. I offer insights gained from a mixed-method, multi-year ethnographic investigation among the Religious Society of Friends, commonly known as Quakers. For more than three and a half centuries, Quakers have practiced group silence. It forms the very core of their collective approach to religious life and a mystical experience they call 'unity.' Part of what makes Quakers' long, deliberate silences compelling and worthy of study is how strikingly they contrast to situations of silence outside the Quaker Meetinghouse. In Anglo-American culture, group silence is often experienced as uncomfortable, sometimes painfully so: the 'awkward silence,' scrupulously avoided in conversation among people who have just met, or that hangs in the classroom air after a teacher's question, or that falls inexplicably and contagiously over a room full (now suddenly empty) of conversation. Silence has developed a reputation for being an uncomfortable void, empty of words and thus empty of sense. Compounding this reputation, scholars have been relatively quiet on the subject of silence compared to the attention given linguistic phenomena.

The Quaker community I describe, Pacific Friends Meeting (PFM), is a contemporary instance of a centuries-old religious movement, organized around weekly leaderless gatherings as occasions for shared spiritual experience. The gathering is called "Meeting for Worship." The most distinctive aspect of a Quaker worship gathering is that it is conducted almost entirely in silence, punctuated by brief, occasional speech acts by participants moved to share an insight that has just occurred to them during worship.

Contemporary Quakers are not well-represented in the social science literature. This dissertation contributes one of the few ethnographic studies of contemporary Quaker worship practice, conducted over four years, and is the first to introduce video recordings of Quaker worship into the scholarly record. I developed custom software to analyze these videos and my analysis shows that Quakers demonstrate *synchrony* in their embodied practice of silence: the tiny body movements and sounds that Quakers make (coughs, fidgets, sniffles, scratches) become coordinated in the silence into waves of synchronous activity. The empirical evidence suggests that Quakers tune into one another's bodily presence in the silence. The experiential evidence, drawn from Quakers' own accounts, confirms this and indicates that the co-presence of others provides social support to participants in their religious practice. My mixed-method approach lends support for the dissertation's central thesis that Quaker group silence is: embodied (multisensory), collaborative (multi-body), and a means for mystical experience.

MAKING SILENCE TOGETHER

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DANIEL STEINBOCK

For my Mothers and Fathers

Painters have painted their swarming groups and the centre-figure of all,

From the head of the centre-figure spreading a nimbus of gold-color'd light,

But I paint myriads of heads, but paint no head without its nimbus of gold-color'd light

- Walt Whitman1

¹ From "To You, Whoever You Are" (Whitman, 2009/1860, p. 391)

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We poets struggle with Non-Being to force it to yield Being We knock upon silence for an answering music

— Lu Ji (261–303 A.D.)²

² (MacLeish, 1961)

1 LISTENING TO SILENCE

This dissertation is a product of my fascination with how individual persons become a group of people, gathered into a common experience, on common ground. The experience in this case is *silence*, specifically *group silence in social interaction*. Drawing on insights gained from a multi-year ethnographic investigation among the Religious Society of Friends (commonly known as Quakers or Friends), I analyze and describe how group silence is made and experienced in a variety of social situations, Quaker and otherwise.

For more than three and a half centuries, Quakers have practiced group silence. It forms the very core of their collective approach to religious life and a mystical experience they call 'unity.' Part of what makes Quakers' long, deliberate silences compelling and worthy of study is how strikingly they contrast to situations of silence outside the Quaker Meetinghouse.¹

In Anglo-American culture, social silence is often experienced as uncomfortable, sometimes painfully so. Think of the notorious 'awkward silence,' scrupulously avoided in conversation among people who have just met, or that hangs in the classroom air after a teacher's question, or that falls inexplicably and contagiously over a room full (now suddenly empty) of conversation. Silences like these often appear to those present to be failures in the otherwise continuous flow of communication. When they happen, avoidance strategies are quickly brought to bear: in conversation, the ongoing back-of-mind manufacture of trivialities for 'small talk'; in the classroom, overly short wait-times for questions; in groups, coughing and other rhetorical noise, "...so anyway...". These popular perceptions of, and responses to, occasions where no one is speaking have given silence a reputation for being a discomfiting void, empty of meaning.

Compounding this reputation, scholars have been relatively quiet on the subject of silence compared to the attention given linguistic phenomena. If we are tempted to make a joke about the

¹ See the Glossary for explanations of this and other Quaker terms. Where I do not define terms in the text, they can generally be found in the Glossary.

² For small talk, see Goffman (1967, p. 120); for classroom wait-times, see Rowe (1974); for noise-making to mask group silence, see McLaughlin & Cody (1982).

appropriateness of this fact — two hundred blank pages for a book about nothing! — we would be forgiven. It is the popular perception that silence is nothing at all that is precisely the point.

That this view prevails as commonsense is clear. That it marches in lockstep with the perception that sense and meaning are found only in words is certain. That the reality of silence is far more complex, meaningful and consequential than has been acknowledged is what I promise to show. If, by the end of this dissertation, we come to appreciate silence as articulate, embodied activity — that we do all day, every day, in several distinct ways, in interaction with others — then the promise will be kept.

How group silence can be potently experienced in one setting as unnerving emptiness and in another as mystical union is a question I shed light on in these pages. As we'll see, each is a different response to a common silential relation: individual persons gathered suddenly and temporarily into intimate interaction with one another.³ My overall goal is to articulate the relationship between silence and group interaction, a connection that has remained underappreciated given the potency with which silence is experienced in everyday life.

Quaker Silence

The Quaker community I describe, Pacific Friends Meeting (PFM), is a contemporary instance of a centuries-old religious movement, organized around weekly leaderless gatherings as occasions for shared spiritual experience. The practice is called "Meeting for Worship" and Friends refer to their community in general as "the Meeting," which is symbolic of the practice's centrality. The most distinctive aspect of a Quaker worship gathering is that it is conducted almost entirely in silence, punctuated by brief, occasional speech acts by participants moved to share an insight that has just occurred to them during worship. The community is an informal learning environment, where participants learn to become spiritual practitioners: accomplished in group meditation, non-judgmental listening, and, for some, public speaking of religious insights within the community and social justice work outside it.

The religious practice of Quaker silence has remained difficult for scholars to record. This is partly a problem of access. Quaker silence occurs in a sacred context that members are resistant to making available to outside observation (see Chapters 2 and 4). But it is also indicative of a more general epistemological problem, more due to biases in the practice of social science than any intrinsic impenetrability of silence or mystical experience. Foremost among these biases is social scientists' chronic emphasis on language and talk, which has left the tools for studying silence relatively undeveloped. For instance, we tend to think of silence, like speech, as an auditory phenomenon, and yet one cannot record the sound of silence or quote it in a transcript.

³ For a different kind of silential relation, that between a text and its silences, see Becker (1984).

With no *words* conveniently provided to locate the sense of a social situation, what is a social scientist to do? To instruments suited to talk and text, silence appears to be unremarkably empty. As a result, the phenomenal landscape of social silence has remained largely unexplored.

By necessity, I have taken a new approach. My results show that, when given the right sort of attention, silence yields a remarkably rich set of insights about human behavior and interaction that deserve to be reported. I also show that the 'right sort of attention' is not easy to conjure. How do we describe experiences for which silence is more articulate than words? How do we penetrate the famous ineffability of mystical experience? To do so, I have made new instruments for mapping this territory — new ways of looking at and listening to silence — that show it to be comparable in importance to talk as a medium for social interaction.

Using this approach, I have articulated silence and its varieties in the practices developed by Quakers over three and a half centuries, revealing a landscape of experience that has remained uncharted, until now.

Key Contributions

Contemporary Quakers, an Under-Investigated Group

Contemporary Quakers are not well-represented in the social science literature, most Quakers studies being historical. This dissertation contributes one of the few ethnographic studies of contemporary Quaker worship practice, conducted over four years, and is the first to introduce video recordings of Quaker worship into the scholarly record.

Ecologically-Valid Ethnographic Methods

My methods of inquiry build on methods native to the community I am studying. How I do this and why it means my conclusions are on firmer ground is a subject I take up in the chapter on methods (Chapter 4). One contribution of this dissertation is a set of principles for developing ecologically appropriate methods. The essential suggestion is to locate within the community's repertoire of routines those practices that can be adapted as methods for scholarly use. In my own case, I adapted a Quaker practice called a 'Clearness Committee,' a small group of volunteers from the community, to co-design with me a research study they deemed culturally-appropriate. The committee then sought the community's permission on my behalf. The result was a series of small group worship gatherings over six weeks, recorded on video, and open for any community member to participate. If I had simply presented this final study design to the community as an outsider, it would almost certainly have been rejected. The journey of participation I took in co-developing the methods with community members was essential to their success and validity.

Group Silence in Social Interaction

A Quaker worship gathering forms a natural laboratory for the study of group silence in social interaction. The systematic subordination of talk to silence makes interactional features of silence more salient to observation and description than is otherwise available. Silence has been analyzed to some degree in the context of interaction and conversation analysis (see Chapter 3), but its narrow conception as an acoustic phenomenon of non-talk has arguably dulled appreciation for what embodied persons are accountably doing with one another on occasions of silence. As I recast it in this dissertation, silence *per se* is shorthand for a multi-sensory experience, situated in time and environment, requiring attention to whole bodies in interaction. Engaging with the ecology of silence in this way reveals that (1) group silence is not a void, but a well-organized, intelligible social practice, and (2) the emergence of group silence evidences not failure but a collaborative achievement.

Quaker Silence, Embodied Synchrony, and Religious Experience

Chapter 5 contributes a temporal analysis of Quakers' embodied practice of silence. I find that the tiny body noises all living persons make (coughs, fidgets, sniffles, scratches) occur in temporally synchronized 'waves' in Quaker worship, rather than the arbitrary distribution we might reasonably expect of independent persons. This synchrony, in all likelihood unconscious, nevertheless supports Quakers' conscious goal of deliberate group silence: for a group who arranges to make noises together arranges to make silences together. Chapter 6 builds on these findings to hypothesize that such synchronous waves of sound and silence are not only evidence that Quakers tune into one another's bodily presence, but that the co-presence of others is consequential for their religious experiences in the gathering. I show that at virtually every point of a worship gathering, even in their innermost subjective experiences, Friends make use of each other's presence as a resource. These analyses lend support for the assertion that *Quaker religious experience is a collaborative achievement and the embodied practice of group silence is the medium for that achievement*.

Outline of the Dissertation Chapters

The remainder of this introductory chapter introduces the 'problem' of Quaker silence, using my earliest fieldnotes to display how a newcomer experiences Meeting for Worship. Chapter 2 offers some history and theology of the Religious Society of Friends, including a look at prior ethnographic work on contemporary Quakers. Chapter 3 presents a review of how silence has been conceptualized in scholarly analyses of social interaction; I offer a new conceptual framework for categorizing human silences, including a working definition for group silence, the

phenomenon of interest in this dissertation. Chapter 4 describes the methods I used to conduct an ecologically-valid ethnographic investigation of Quaker silence in worship gatherings, with some generalizable lessons about their development.

Chapters 5 and 6 form the analytic core of the dissertation. Quantitative analyses in Chapter 5 focus on the publicly observable, embodied practices of Quakers in silent worship. These form an empirical basis for Chapter 6, which turns to the subjective side of worship, presenting and interpreting transcripts of Quakers describing their religious experiences to each other. I identify and elaborate three distinct kinds of Quaker silence, each offering cumulative evidence for this dissertation's central thesis: *Quaker group silence is embodied (multi-sensory), collaborative (multi-body), and a means for mystical experience.* Chapter 7 summarizes the dissertation, offers considerations for practice, and suggests directions for future work.

The 'Problem' of Quaker Silence

By way of introduction to an ethnographic account of Quaker silence, I describe the 'problem' that Quaker silence presents for the analyst of culture and social interaction. I go about this by taking the reader through my own journey from a naïve to nuanced understanding of silence and its significance to Friends. I use my earliest fieldnotes from Pacific Friends Meeting to exhibit how I first encountered and perceived silence as a newcomer in Quaker Meeting. Those first impressions give what I assume is a typical naïve perception that silence is empty. I then describe how my informants re-educated me, pointing me emphatically to silence as the central practice and experience of Quaker culture.

Clifford Geertz famously articulated a way of understanding culture in general, and religion in specific, as

an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which people communicate, perpetuate, and develop their knowledge about and attitudes toward life. (Geertz, 1966)

If cultural systems depend on consistent symbols — words, codes, protocols, rituals, narratives, talk, and the like — as material for cultural reproduction, then the primacy of silence in Quaker religious practice appears to present a problem. How can *silence*, seemingly empty of symbolic content, generate the common ground and collective meaning necessary for cultural reproduction?

Quakerism is a persistent culture that has been consistently reproduced, with few bifurcations, for over three and a half centuries. Its historical coherency suggests that Quaker silence is not as devoid of symbolic structure as pre-ethnographic commonsense would have us believe. As social scientists grown so used to words as the principal source of symbolic sense, where can the symbolic sense of silence be found and how might we decode it?

Two approaches suggest themselves. One sidesteps the problem by retreating to the comfort of words. The other dives straight in.

First, an historical analysis could look at how silence is written about and discussed in exegeses of Quaker theology and religious life. One could also conduct sociological interviews of contemporary Quakers to elicit verbal representations of the experience of group silence. These approaches might uncover a constellation of words that consistently join to the concept of silence, and so provide a way of understanding what Quaker silence *coherently symbolizes* for Quakers. On the other hand, Quaker silence is not just an abstract concept to be located in the currents of Quaker thought and description; it is a *concrete experience*, generated in particular places at particular moments in time. Narrow attention to writings and self-reports would be a focus on derivative, secondary sources — the conceptual traces left behind by direct experience.

There is another way in. Whereas historical/sociological analysis lends itself to *concepts*, a realtime/micro-ethnographic analysis lends itself to *practices* (Streeck & Mehus, 2003). My methods in this dissertation are ethnographic and ecological in approach, focusing on the primary source material to be found in the realtime, embodied practice of Quaker silence. Geertz anticipates this insight, observing that we may locate the sense of symbolic systems in their *use*.

Cultural acts, the construction, apprehension, and utilization of symbolic forms, are social events like any other; they are as public as marriage and as observable as agriculture. (Geertz, 1966)

The concrete problem of silence — which this chapter introduces and later chapters address — asks how silence is actually performed, moment-to-moment, by a group of Quakers gathered into each other's bodily presence. My approach is to uncover the symbolic structure of silence that is *relevant to its practitioners* in the present moment. I show that narrow attention to the acoustic dimension of silence leaves out the bulk of its symbolic (and thus communicative) features. Silence is multi-sensory, implicating the whole body and environment. Though it is not my focus in this dissertation, a realtime analysis of silence may, in turn, shed light on the historical-symbolic question of cultural reproduction. We need only keep in mind a truism: the present moment is the abiding origin of history.

The Primacy of Quaker Silence

This section serves a dual purpose: (1) to introduce readers to the experience of a typical Sunday morning Meeting for Worship at Pacific Friends Meeting (PFM), and (2) to showcase my earliest naïve fieldnotes as evidence for what is and isn't salient to a newcomer to Meeting. This leads to the discovery that Friends give primacy to silence over talk. As a composite description of typical practice in Quaker worship gatherings, this section provides ethnographic context for the major analyses in Chapters 5 and 6.

February 10, 2008

Will and I carpool to the Meeting on this Sunday morning and park on the street out front. It is 10:29am, one minute before the scheduled start of the Quaker Meeting for Worship. As we walk up the drive, we pass and greet a few Friends heading into the Old Meetinghouse, where the children, youth and teens attend First Day School. We enter the New Meetinghouse along with several other just-arriving Friends and grab our name tags from the rack on the left. The Greeter, a woman in her seventies, stands by the open Meeting room door and smiles as I walk through it. (Fieldnotes, 10-Feb-2008)

Participants (members, attenders and visitors) arrive in advance of the regular Meeting time (10:30AM) and enter the New Meetinghouse. The Old Meetinghouse houses First Day School, where children, youth and teens work with adult volunteers on religious education and art activities while adults attend Meeting for Worship. When attendees enter the New Meetinghouse foyer, a Friend appointed to be Greeter for the day quietly greets them. If the new arrival is a newcomer, he or she is given a disposable name tag to write on and affix to the chest. The Greeter inquires if the newcomer has been to a Friends Meeting before. If not, an informational card is offered, illustrated with an image of the New Meetinghouse, and including information on the conduct of Meeting for Worship. Members and regular attenders retrieve reusable name-tags, if they have them, from a swivel rack just inside the doorway. The door to the room where Meeting for Worship is held stands open to the foyer for attendees to enter once they are prepared.

The seats of the Meeting room are about eighty-percent full and I look around for a place to sit. Seeing a stretch of open seats on the right, two rows from the back, I walk around the outside to get to it. My friend, Will, follows. There's one woman sitting at the end of the row of five seats, and I make a snap decision to sit right next to her, rather than leaving a gap. I recall this being the norm at Central Coast Meeting, where I was first introduced to Quakerism. Once seated I look around to confirm my intuition about the

⁴ I have never witnessed the youth side of the Meeting community. I have only experienced their participation when they join the Meeting near the end of the hour-long worship.

social distance norm but actually see quite a number of gaps, some in the act of being created as other arrivals seat themselves. Will sits two seats over, leaving a gap between us. The Greeter unstops the double door and lets it close quietly. The Meeting has officially begun. (Fieldnotes, 10-Feb-2008)

The seats of the Meeting room are arranged in concentric semi-circles facing each other around a common center. The chairs are well-padded compared to the hardwood pews of old Meetinghouses on the East Coast of the United States and in England.

I look around the room and see that the vast majority have their eyes closed.... My eyes roam around the perimeter of the room and note a painting of a leaf in one corner in violet and yellow; it looks like the aura of a leaf. In the other corner is a small, upright piano. On both sides of the room, high windows let in the morning sunlight. On the wall opposite the entryway, there is a large fireplace and mantle. To both sides of the fireplace is a large sliding glass door, letting out into a rock-covered garden. (Fieldnotes, 10-Feb-2008)

The physical arrangement of chairs and their persons represent in physical visual space the social structure of a Meeting: a common center, devoid of ornament or leader. Meetinghouses elsewhere may have a table with flowers, a bible, or other simple centerpiece, but PFM has none.

Meeting for Worship is said to begin when the first Friend arrives in the room, though there is sometimes singing beforehand and a transition period when the door is still open and hushed conversations can be heard. At 10:30AM sharp, the Greeter closes the door, marking the official start of Meeting. Conversation stops as participants take their seats and begin the practice of group worship by settling into silence.

Those who arrive late to Meeting may not be allowed in immediately by the Greeter; he or she keeps an eye on the parking lot to see if other latecomers are close behind. When a batch of latecomers is queued up and prepared to enter the Meeting room with their name tags affixed, the Greeter opens the door to admit them. In this, the Greeter is fulfilling her duty to minimize interruptions to the Meeting now underway but not keep late arrivers too long from joining in. The longest I have seen latecomers delayed is a couple of minutes while the Greeter waits for someone to walk from the far side of the parking lot.

Friends already seated in Meeting for Worship can't help but notice the arrival of latecomers entering the room for latecomers can't help but make a little ruckus as they locate open seats, sit down, deposit purses, car keys, sunglasses, look around, and settle in as participants to worship. This may take up to a minute for large batches of latecomers. Seated Friends may look up and take note of who is arriving; but even if their eyes are closed, the sound of the door swinging open and people moving into the room is conspicuous against the silence of the Meeting. This

recurrent event perturbs the quiet, making the room temporarily louder than it was before the door opened.

Once latecomers are settled, the room again becomes quiet, seeming to turn collective attention back to the task of worship as the distraction of newcomers disappears. The silence seems to ever so gently suppress the usual fusses that people outside of a worship gathering make almost constantly with their bodies. Instead, the body is held quite still, in whatever position one finds fitting. Some have heads raised high, back erect; some are more at ease, slightly reclined. Some have hands folded formally in the center like a Buddhist practitioner, some open on the thighs, some with a hand under the chin. Some have legs crossed informally, as if waiting in a dentist's office, some are uncrossed and, with eyes closed, give the appearance of meditation; some are bent over with elbows on knees and hands clasped to the forehead like a prayer. Some have their eyes open and seem to look across the room at no one in particular, or out the windows above the heads of Friends, windows which run the length of two opposite walls. There are endless varieties of how people organize their bodies in Meeting for Worship, so long as they remain seated, still and don't make noise.

After about fifteen minutes of duty, the Greeter joins the Meeting from the foyer. Up until this point, the Greeter has been the only one to open and close the Meeting room door, regulating the ingress of others. The wooden door is well-oiled so it opens quietly, though gives a soft creak as it falls against the buffer of its hydraulic closer. With the closer, it needn't be closed manually, though those who arrive after the Greeter has left her post often do, in deference to the Meeting. This also affords them a moment to survey the room for an open seat.

There are no assigned ministers in Quaker Meetings, no priests, abbots or other persons assigned liturgical duties. If, during the deep silence of a Meeting, someone feels moved strongly enough to break that silence and speak, he or she stands and speaks for a minute or a few; for the moment, the speaker functions as minister. At least fifteen minutes typically pass between the official start of Meeting and the first speaker, often much longer.

As a creative act, speaking is merely the observable product of a process that is for the most part silent, still, and seemingly unobservable. Only a handful of people speak in any given hour of worship and long stretches of silence pass between speakers. Those who offer ministry to the congregation do not, as a rule, come to Meeting planning to speak. Neither do they plan ahead *not* to speak. Ministers speak extemporaneously, without rehearsal, some insight that has occurred to them during the course of worship. While Friends may quote an existing text such as the Christian Bible or a poem, the bulk of the message is to be created spontaneously in the Meeting. That said, a common 'thread' often runs through the several messages given as different Friends are moved to speak on an emergent theme, metaphor or concern. In terms of public speaking

performance, speakers stand, if they are able, and address the group with a speaking volume such that all may hear.

Wesley, sitting in the front row, facing me, stands to speak. He has a long grey pony-tail and beard. The small sounds of his clothing moving against the deep silence of the Meeting announce his intent. Similar sounds are heard all around the room suddenly as people relax and subtly readjust themselves to listen. It's about twenty minutes into the Meeting.

Wesley says he's been sitting here thinking about events that were going on almost exactly forty years ago, in 1968. He recounts the pivotal events of that election year: the announcement of RFK's candidacy, the assassination of Martin Luther King Jr. and subsequent assassination of RFK, the bloody police riots outside the Democratic National Convention in Chicago, IL. He tells the story of Julian Bond, an African American man who, after delivering an articulate speech at the convention, was unexpectedly proposed as a candidate for Vice-President. At 28 years old, he cited the Constitutional requirement of being 35, and politely declined. Wesley shared that Bond attended a Quaker school in Pennsylvania through high school and that he'd later cited it great influence on his beliefs and practices. Later on, Bond was one of six students of Dr. MLK Jr. in 1961, when the Dr. held a brief lectureship at Fisk University. Wesley recounts a story of a chance encounter between the two on campus one day. MLK is disturbed by a nightmare from the night before, and Bond helps the Dr. cope by encouraging him to re-conceive it as a dream. According to Wesley, this event inspired the "I Have a Dream" speech, MLK is so famous for. He says that, in daily life, in our interactions with others, we sow seeds by communicating the convictions we hold. Some fall on hard ground and don't grow. Some fall in the weeds and grow stunted. Others fall on fertile ground and blossom. As Friends living in the world, we never know where or with whom the seeds of our convictions may grow and flourish.

Wesley sits and the room settles back into silence for ten minutes or so.

A woman on the opposite side of the room from Wesley stands to speak.... She asks, "How do we stop dreaming? How do we put things into action?" She relates how Friends funded a project to help replenish the agricultural soil washed away in Haiti's hurricanes. "We can make the ground fertile, but how to plant seeds to grow?" She sits.

After a long silence [about 20 minutes], a woman stands to share a story about her time at Quaker boarding school in Pennsylvania during the 1960s. She says that her roommate was the first black student admitted to that particular school. (Fieldnotes, 10-Feb-2008)

The Problem of Learning From Silence

The sustained silence of Meeting for Worship can prove disorienting to a newcomer who may get the idea that others are privy to an unspoken experience that cannot be observed outright. This presents a challenge for newcomers seeking to learn to participate in the community. In the non-Quaker contexts that newcomers tend to be familiar with, silence and stillness are not generally considered as learning resources in the way that texts, sermons and discussions are. In the 'communities of practice' model of culturally-situated learning (Lave & Wenger, 1991), apprenticeship to community oldtimers depends on opportunities to participate in visible, emulatable practice. Such opportunities appear to be scarce in the silence of Meeting for Worship.

Given the Western emphasis on talk and text as the primary media for communication, a newcomer to Quaker Meeting may naturally focus on the vocal ministry and consider the silence as empty waiting between speakers. Likewise, a newcomer may spend the time of silence thinking of something worth saying. Occasionally, the hour of worship at PFM elapses without anyone speaking. When this occurred at one PFM Meeting for Worship I attended, a Friend remarked that it occurs "about two or three times a year." Such occasions offer no obvious resources to a newcomer for whom talk is the only solid ground in a sea of silence. The following fieldnote shares my own inward observation as a newcomer confronted by this silent practice.

I close my eyes and consider what it is I am doing here. Friends often describe the attitude one adopts in Meeting as 'expectant waiting.' What is it we are waiting for? What is it we expect to discover? I find my thoughts wandering to other times and situations, homework I have to complete, emails I must reply to, relationships that need repair. When I notice my distraction from the present moment I silently chide myself and try to concentrate on the real situation in which I'm participating. I open my eyes and look at other Friends. Are they wandering off in thought or are they present? Those who have their eyes open stare blankly into space over the assembly's heads. One man reads from a book.

Once again, I close my eyes and listen to my thoughts. I search for something wise or profound to speak, and several ideas occur to me, all related in one way or another to my personal struggles this week. It's helpful advice for myself, but not anything that seems worth breaking the deep silence in a room full of people to say. I imagine myself standing and speaking in front of all those people and feel a nervous tension in my body. I imagine saying something utterly mundane, comical, or even offensive. There are no rules against doing so, but there would no doubt be repercussions as Friends would come to me after the Meeting to discuss what I'd said. I decide to sit quietly. (Fieldnotes, 10-Feb-2008)

While there are plenty of opportunities for newcomers to learn what Quaker ministry sounds like, access to the silent inward practices of Friends is less available. This is problematic given that the majority, if not entirety, of a Meeting for Worship consists of silent practice. How can newcomers gain access to and learn from an unvoiced practice? Conversely, how can oldtimers give feedback on a newcomer's silent practice?

My feeling that I was lacking guidance in the practice of silence is corroborated by a study on contemporary Quakers conducted by (Plüss, 2007), showing that a lack of guidance led to a lack of engagement by newcomers. According to Plüss' survey of 288 American Quakers, thirty percent of the sample recalled that they received no information about Friends when they started participating in the community. According to fieldwork in the same research project,

Novices who wish to receive explanations of the meaning of institutional conduct need to self-appoint themselves into the role of learners... Friends 'were very helpful if asked – but I always had to ask.' ...[N]ewcomers discontinued group involvement because they found members were ignoring them. (Plüss, 2007)

Yet despite the apparent lack of access by newcomers to the inward practice of silence, the Quaker movement has persisted for three and a half centuries. Clearly there are other processes at work. This dissertation is partly the result of my determination to investigate what those 'other processes' might be.

After another long silence [about 15 minutes], the sound of movement and voices stirs me to open my eyes. Friends are greeting their neighbors on all sides with handshakes and a uniform "good morning." A man in the front row, Phil, stands and introduces himself as the representative of Worship [and Ministry] committee tasked with facilitating announcements this morning. He invites newcomers, visitors and occasional attenders to stand and introduce themselves to the Meeting; several people do so. For some, this is their first time attending a Meeting. For others, they are members of distant Meetings who are in town temporarily. After these introductions, Phil invites those with birthdays in the month of February to "re-introduce themselves to the Meeting." A woman tells us it's her 54th birthday and relates how she first came to the Quakers. After reading announcements of various upcoming events and workshops, Phil adjourns the Meeting by asking for two minutes of silence, after which all rise and exit the room to the outdoors where snacks and drinks are served. (Fieldnotes, 10-Feb-2008)

The fieldnotes above reflect the experience of a newcomer in Meeting and the puzzle that silence presents to someone accustomed to talk as the familiar method for attaining understanding. This perspective assumes that, because no words are spoken in the silences

between speakers, the practice of silent worship must be locked up in the heads of participants, invisible to observation.

When I first set out to study Quaker practice, I saw the silence of Meeting for Worship only as an empty background upon which the figure of vocal ministry was drawn. Accordingly, my initial analytic focus was on the performance of ministry. The main research question in my dissertation proposal was, "How is the Quaker practice of group worship organized into a social occasion for the spoken revelation of new religious knowledge?" It took several years of participant-observation before a sudden figure/ground switch overcame my inherited biases and I began to take account of Quaker silence as an observable practice.

Conceptual Turnaround

Silence is primary over talk in the Quaker community. I did not know this when I began studying Quaker Meetings. I *still* hadn't realized it several years into my ethnographic fieldwork, despite having been exposed to the idea in many different forms over the years. I mis-interpreted silences as times intended only for *preparing to speak* and *reflecting on what was said*. I inherited these assumptions from my cultural environment — a talk-obsessed West and social science scholarship — that delivers a clear hierarchy of words over other communicational phenomena. Operating with this perspective, the Word, often treated as pure logical propositional content, is the sole visible object against a background of paralinguistic behavior rendered so faint as to be only partially available to articulation.

Perhaps I was imperceptive. Or perhaps I was a typical inheritor of commonsense ideas about the status of talk vis à vis everything else a body does in the course of communication. It may also be that the centrality of silence is *implied* by the practices of Friends more than it is touted as an organizing principle. This is consistent with Quakers' resistance to authoritatively defining their religious life. It is in their *practices* that Quakers have, since the mid-17th century, established an alternate hierarchy that raises silence above words. This is not overtly announced at Meeting as much as it is implied in the choreography of every kind of gathering Quakers convene among themselves. It is seen, for instance, in the several minutes of silence that begin and end Quaker committee meetings, those bodies that conduct the Meeting's business affairs, including the community-wide Meeting for Business.

My conceptual turnaround came one Sunday in the Fall of 2010, a couple of weeks before the video study that forms the core of this dissertation. A small conference of Quakers from across the West Coast of the United States was hosted by Pacific Friends Meeting that weekend, so Friends from other Quaker communities were attending the Meeting for Worship on this particular Sunday. In the post-worship announcement time, I stood and announced I was still recruiting volunteers for my upcoming study. A few minutes later, during the informal fellowship

time after the rise of Meeting, one of the visiting Friends came up and asked me about my research project. I told him I was studying vocal ministry and the Meeting for Worship as an occasion for collaborative creativity. He replied pointedly, "What about the silence?" I explained my embryonic theory at the time: that the silence created a psychologically-safe space (Edmondson, 1999) for people to speak without fear of criticism, debate, or direct response.

My answer was unsatisfactory to the visiting Friend. He insisted that silence held far more significance than this for Quakers, and that the work Friends do in and with silence is valuable for its own sake, *independent of vocal ministry*. He gently chided me for giving undue importance to vocal ministry and firmly suggested I listen more closely to the silence.

The words of the visiting Friend struck me. I had little concept of silence performed as an activity for its own sake, let alone that work could be done *with* silence as a resource. My concept of what people were doing in the silence was limited to 'thinking up something to say', 'waiting for someone else to speak,' and 'listening without criticism.' In the following weeks I thought often of the visiting Friend's words. What struck me was not the earnestness with which they were spoken, but that they put a new frame on the experiences I'd had over the years participating in Friends Meeting. I found that my understanding of past experience was being reorganized by the simple idea that, for Quakers, the silence in Meeting was more important than the words people spoke. I saw that my focus on vocal ministry was due to assumptions I had brought into the Quaker Meeting with me. As an ethnographer, I had a commitment to overcome this bias and try to understand Quaker practice as Quakers themselves do. I yielded to the words of the visiting Friend and allowed my conceptual framework to be reorganized by this unshakable insight.

I had already decided to record video footage of Quaker worship and had secured permission to do so, but it wasn't until my encounter with the visiting Friend that I realized how important and fortunate a decision that had been. With a new focus on the silences between utterances, video records of the embodied activity of Quaker worship equipped me with the materials to analyze Quaker religious practice with the same set of priorities as Quakers themselves, giving primacy to silence over words.

Listening to Silence

After my conceptual turnaround thanks to the visiting Friend, my participant-observations started to adopt a new focus on silence. Each Sunday, I deliberately paid close attention to the practice of silence in Meeting for Worship.

At first I heard what I assumed I would: nothing — unremarkable emptiness. The unwritten 'rules' for worship I had learned over the years were that participants are expected to remain still and silent. Consequently, I heard what I expected to hear. Every ethnographer carries assumptions

and formative hypotheses into the field. These are the first things one experiences. They are what stand between sensitive observation and a world less veiled by preconception. I listened closer.

A newcomer to Quaker worship may be struck by the rare experience of a group of people deliberately being silent together. Given a little time, and the opportunity to learn more about what silence signifies for Friends, the newcomer (or ethnographer) may come to notice that the silence of Quaker worship is not actually empty of sound. When I listened closely to the acoustic landscape of a Meeting for Worship, I found it not at all what a static conception of silence might suggest.⁵

Quaker silence consists of the sounds that living bodies make: rustling posture shifts, coughs, sniffles, inhalations and exhalations, and so on. It is not possible for a living person to remain perfectly quiet and motionless for long periods of time. Whenever you have living bodies gathered together, sound is happening. "Until I die, there will be sounds," remarked John Cage, the composer, after trying to observe absolute silence in a soundproof room. Instead he heard the normally inaudible sound of his own blood and nerves (Cage, 1961, p. 8).

Given the inevitable presence of embodied sound and movement, what sort of 'soundscape' should we expect to find in the deliberate silence of the Quaker Meeting? If sound emanates independently from each individual in the room, then we would expect to find a kind of constant susurration, a uniformly distributed shuffle, sometimes a little louder, sometimes softer, as chance would have our independent physiologies align in time. Overall we would expect a persistent, low level rustle.

This is a reasonable expectation but it is not what I found in the silence of a Quaker Meeting. The soundscape of Quaker silence has a different sort of terrain. Instead of a gently rolling plain, I hear mountains. Out of a deep silence erupts at times a sudden jut of sound, a cough perhaps. Following so closely, as to be nearly simultaneous, is a cascade of tiny sounds around the room; the cough is the initial boulder that precipitates an avalanche as people join in with the event, already underway. At other times it is not so sudden of a beginning. Out of the valley of silence rises a rugged slope of sound as, once again, several people make sound together. After the event has run its course, the gathering moves once again from shared sound to shared silence.

This pattern is markedly different than the one we might expect produced by independent actors making sound on their own schedule. Instead, the sounds I heard almost always occurred as *group* occasions, clustered together. These clusters gave the impression of being distinct events, separated from each other by stretches of quietude.

⁵ Sitting with my eyes closed in Meeting, listening to silence, *sound* was the most salient sensory trace of participants' embodied activity. For this reason, I emphasize the auditory dimension of silence, keeping in mind that it is only one component of whole-bodied activity.

This consistent pattern of ebb and flow can first of all be heard in the waves of rustling that emerge whenever the Greeter admits a batch of latecomers. Early in my observations, latecomers' noisy arrival to worship seemed to me to be a disruption. It appeared that the sounds they made broke the silence established by those already present in the minutes after the official start of Meeting. After all, we are accustomed to viewing those who arrive late to other kinds of meetings as inappropriately fitting into the agenda. Latecomers to a business meeting may need to have information repeated to them to get 'brought up to speed' on what the group has achieved thus far in their absence. It is plausible that the same should apply to a Quaker worship gathering. In fact, a Quaker latecomer's arrival would seem to be *more* disruptive because it is all but impossible to enter a silent room without anyone noticing, as opposed to one where constant talk provides a cover for the sound of entrance. (On the other hand, there is no information that needs to be relayed to Quaker latecomers to catch them up so it could be viewed as less disruptive.)

Two consistent observations called into question my formative hypothesis that latecomers disrupted the Meeting's silence in an unwanted way.

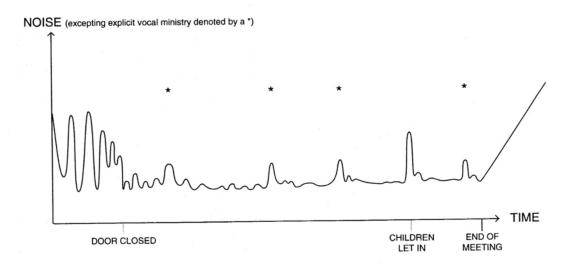
First, not only latecomers make noise when latecomers enter. Friends who are already present take the opportunity to make a little noise, perhaps to change posture and get more comfortably situated. The Meeting room door, managed by the Greeter, seems to play a key role in regulating the timing of these collective noise making events. The rules of thumb, described earlier, that govern the Greeter's management of the door show that Quakers are consciously aware of the possibly disruptive effect of latecomers: deliberately organizing them into a smaller number of large disruptions, preferring that to a larger number of small disruptions. The effect of this organization is a series of waves of sound, then silence, generated by opening and closing the door. The door opens and a wave of sound 'washes' over the room as late-arrivers and those already present move about. The door closes as everyone settles (or re-settles) in their seats and the wave of sound subsides into silence.

The second counter-example to the supposition that latecomers' wave of noise is a disruption is that the first twenty minutes or so of a Meeting contains waves of rustling and re-settling whether or not there are any latecomers. That is, waves emerge spontaneously 'from within' the room, without any external stimulus like late arrivals. It is as if participants hold to the same rule as the Greeter, preferring to produce their rustles in large batches rather than little rustles more frequently.

This phenomenon — which I will refer to as 'embodied waves' — was not lost on Dandelion (1996), who hand-sketched a diagram of the soundscape in a typical Meeting for Worship.

The people came in in stages. Whilst the door was still open, people were silent but smiling at each other, greeting each other silently. Gradually, they adopted 'worship

positions' which were held whilst latecomers were let in a few minutes later. At each ministry, there was a general shuffle, coughs, and the blowing of a nose.... [Figure 1.1] illustrates how noise levels rise when accompanying breaks in the liturgical ritual of silence occur. Thus, when one person breaks the silence to minister, leave, or enter, others take the opportunity to make themselves comfortable for the subsequent return to silence.... (Dandelion, 1996)



XLIII). Ambient Noise Levels in a Typical Meeting for Worship.

Figure 1.1: Dandelion's (1996) hand-drawn sketch of the acoustic dynamics of a typical Quaker Meeting for Worship.

Dandelion is the only scholar I have found who acknowledges that Quakers cluster the timing of their body noises. He also notes that vocal ministry is another occasion when participants produce a wave of embodied sound. My own observations confirmed this. However, Dandelion only describes waves of rustling that are initiated by overt stimulus, "when one person breaks the silence to minister, leave, or enter," and his diagram emphasizes only these. No mention is made of the waves of body noise that emerge spontaneously from the silence of Meeting.

This is a phenomenon that warrants attention. It appears to be a case of *embodied synchrony* (Condon & Ogston, 1966) — self-organized collaborative action, coordinated through sound and embodiment, without words or central direction. If so, their synchrony suggests that participants are perhaps more aware of each others' bodily presence than their taciturn, closed-eyed, meditations seem to indicate. This would suggest that Quaker silence, constituted of embodied signals by participants, could function as a kind of communications medium for coordination.

These are the initial hypotheses that this dissertation aims to investigate. The observations in this chapter are corroborated in Chapter 5 by algorithmic analyses of video of Quaker worship gatherings. These provide rigorous, quantitative evidence for the 'embodied waves' phenomenon, and produce a data-based version of Dandelion's sketch. In Chapter 6, I build on this empirical basis to offer interpretive analyses of Quakers' embodied practice of silence. I argue that it is not only significant as a case of embodied group synchrony, but integral to the religious practices and concerns of Quakers themselves.

The Lord showed me, so that I did see clearly, that he did not dwell in these temples which men had commanded and set up, but in people's hearts... [H]is people were his temple, and he dwelt in them.

— George Fox¹

¹ (Fox, 1694/1973)

2 QUAKERS

Having presented an ethnographic snapshot of a typical Quaker Meeting, this chapter reintroduces the Quaker community with a brief tour through its history, theology, and contemporary practice. This will serve as background for readers unfamiliar with the Religious Society of Friends and for those better acquainted with its popular misconceptions than its facts. This tour will prove useful in later chapters for situating Quaker practice in its historical context. I also review recent ethnographic studies of contemporary Quakers and identify the scholarly need that this dissertation fulfills, namely, a study of realtime Quaker practice using video records.

The Early Quaker Movement

The Religious Society of Friends, commonly known as Quakers or Friends, is a contemporary religious group with historical roots in mid-17th century England. It began as a countercultural movement in opposition to what was then seen as an over-reliance on Christian houses of worship as the only legitimate environments for religious experience and Christian ministers as the sole authorities on religious knowledge, wisdom and morality.²

The early Quaker movement was one Christian sect in the larger Puritan movement of the time, which generally espoused a return to 'purity' in religious practice, eschewing the stylized rituals and rites of the church establishment. Widespread distribution over the previous century of printing-pressed English translations of the New Testament had contributed enormously to democratized access to religious discourse. No longer were Latin-educated priests the necessary middlemen between ordinary people and their religion's central text. The Quaker movement was distinctive among other Puritan groups for taking this democratizing impulse to an extreme by disavowing the privileged status of the priesthood and ennobling the status of ordinary people. For taking this position, Quakers became frequent victims of religious persecution, especially by other Puritan sects. Quakers, especially those traveling and preaching their faith, suffered imprisonment, fines, violence and assassination.

² This chapter's brief history of Quakerism draws mainly from (Brinton, 1952), written by a Quaker scholar and famous Quaker. It is generally regarded by 20th and 21st century Friends as the authoritative history.

The Quaker movement espoused principles that were viewed as radical. Central among them: that religious knowledge could be discerned by *anyone*, no matter their training, gender, or social status, through direct inner experience. (This chapter's epigraph illustrates early Friends' urgent call for spiritual democracy, drawn from the *Journal* of George Fox, the movement's founding figure.) Early Quaker preachers traveled the countryside, preaching their countercultural position in public places, on church steps after Sunday services, sometimes *during* services from the back of the church, announcing to listeners that institutional intermediaries — priests, texts, doctrines — were subordinate to direct spiritual experience. Preachers invited receptive listeners to local gatherings, to participate in Quakers' own newly-developed democratic form of religious service, known as *Meeting for Worship*. These early Meetings took place in peoples' homes, barns and other informal spaces.

Despite the fact that Quakers' rejection of church establishments and their obedience to conscience over institutions caused them much persecution, the movement spread rapidly. Within four years of its start in 1652, Quaker Meetings had sprung up across England, and spread to Ireland, Holland, Germany, France and the American colonies. In America, whenever a new Quaker Meetinghouse was built, it was accompanied by an adjacent burial grounds and school. (To this day, Quakers are known for their schools, counting Haverford, Swarthmore, Earlham, Guilford, and Whittier colleges among many.) The Act of Toleration in 1689 brought legal protection from persecution in England and its American colonies, though Quakers still suffered at the hands and words of their contemporaries, especially Puritans in the colonies. The Province of Pennsylvania, founded in 1681 by William Penn, a Quaker, established a safe haven from religious persecution for all 'monotheists.'

Contemporary Quakers

Contemporary Quakers number around 360,000 registered members worldwide, not counting children and unregistered attenders. There are Quaker congregations on all major continents, with memberships larger than 1,000 in the United Kingdom, United States, Southwest Africa (Kenya, Burundi, Uganda, Tanzania, Rwanda), Latin America (Bolivia, Guatemala, Honduras, Peru), Eastern Europe (Hungary, Romania, Albania), and Southeast Asia (Taiwan, Indonesia, Cambodia). (Friends World Committee for Consultation, 2007)

Over the past three and a half centuries, there have been many branchings in the international Quaker community, resulting in different styles of religious worship practice. The three major branches are the so-called Evangelical Quakers, Conservative Friends and Liberal Friends (Dandelion, 2008). Some have programmed Meetings for Worship led by pastors. Others hold leaderless 'unprogrammed' Meetings for Worship in much the same format as did early Friends.

Depending on the ideological leanings of its participants, a Meeting may place more emphasis on the authority of Christian scripture than another Meeting that has more 'universalist' tendencies. Among American Friends, styles of worship tend to vary by region (i.e. Christo-centrism, pastoral vs. unprogrammed), but it's not unusual to find a conservative Friends Church in the same town as a liberal Unprogrammed Friends Meeting. The American Quaker community I investigated for this dissertation, Pacific Friends Meeting (PFM), practices in the unprogrammed tradition and is on the universalist end of the Christo-centric spectrum. For descriptive economy, unqualified statements in this dissertation about Quakers should be construed as referring to communities in the Unprogrammed tradition, except as where noted.

PFM is an affiliate of Pacific Yearly Meeting, which includes Quaker communities in California, Hawaii, Nevada, Guatemala and Mexico. Pacific Yearly Meeting is one of thirty-three Yearly Meetings in North America, among fifty worldwide. The first gathering of Pacific Yearly Meeting took place at Palo Alto Friends Meeting in California in the summer of 1947, with twelve member Meetings attending. Pacific Yearly Meeting sends annual Epistles to all Yearly Meetings in the world and receives similar communications from Friends around the globe. (Faith and Practice, 2001)

Meeting for Worship

While particular historical lineages and divisions have led to differentiation among Friends worldwide, the principle that has remained consistent through time and across Quaker communities is the faith that every person (Quaker or not) has, in potential, direct access to wisdom and moral insight. In the Unprogrammed tradition, this principle is given form in the community's central practice of Meeting for Worship. In this regular gathering, traditionally held on Sunday mornings and sometimes additional times during the week, all participants are recognized as having equal access to the role of 'minister,' that is, speaking before the assembled congregation.

Contemporary Friends practice Meeting for Worship in more or less the same style that the first Quakers did in the mid-17th century. At a typical (Unprogrammed) Meeting for Worship, participants sit in a rough circle in meditative silence. There are no priests, no ordained ministers, nor religious texts to be read. Instead, if at any point over the course of an hour or so, someone in the room feels moved to speak, he or she stands and speaks. For the moment, that person functions as the minister. Long periods of silence pass between speakers. Occasionally Meetings transpire with no speakers. When offered, ministry is addressed to the group as a whole. While speakers don't respond directly to other speakers, it is typically the case that what is said by one person will be thematically related to what is said by another, generating one or more 'threads' that link sequential utterances (Bauman, 1974).

Friends emphasize the collective experience of worship as essential to Quaker spirituality. Meeting for Worship is not merely a set of individuals who happen to be worshiping in the same room. At its core, it is an interactive practice that supports each participant's experience and that of the group as a whole.

Meeting for Worship is different from solitary prayer. The strength and focus of the community draw one who is distracted back toward the Center. In the embrace of the Meeting, an individual may be more willing to be searched by the Light that exposes weaknesses and shortcomings, and challenges the worshiper to transformation. Together, we can more clearly see Truth; we can better receive and understand continuing revelation. (Faith and Practice, 2001 – a handbook written and published by each Yearly Meeting³ for use and reference by its members)

'Continuing revelation' is a theological stance with respect to authority and belief, the position that religious truth is not static and based solely on received texts but continuously revealed by willing participants. This explicitly frames speaking in Meeting as a creative act. Instead of reciting received texts, speakers are expected to say something that has never been said before. Lacking formal leaders or recognized ministers, anyone present in the Meeting is expected to speak if strongly impelled to do so.

Due to the emphasis on continuing revelation and a resistance to authoritative definitions of belief, Friends have an ambivalent relationship to formal doctrine. Officially, there is no Quaker creed. In many contemporary Quaker communities, this position has developed into 'universalism,' which means that similarity or difference in how different Friends conceptualize their religious experiences is of little relevance to their ability to jointly participate in Meeting.

From its inception the Quaker movement has offered critiques of many accepted manifestations of Christianity while at the same time empathizing with people of other faiths. (Faith & Practice, 2001)

Contemporary Quakers may identify as Christian, Jewish, Buddhist, Atheist or otherwise. Participants may conceptualize their inner source of insight in any number of ways: as God, the creator of the universe; as a transcendent higher self; as a non-theistic conscience or Jungian subconscious. For the practical purposes of Meeting, participants are invited to speak the truth as they see it. How they specifically conceptualize their inner source holds makes no demands of

³ Local Quaker Meetings are affiliated with a regional Quarterly Meeting, which gather participants and representatives from local Meetings four times a year. Participants and representatives from Quarterly Meetings gather for an annual Yearly Meeting, which encompasses Meetings from a much larger region.

others. The authority of the speaker doesn't depend on them subscribing to a received orthodoxy, as all people are considered to have authoritative access (in potential) to true knowledge.

The devaluing of received belief systems in deference to direct experience was what distinguished early Quakers from the authoritarian, belief-centric religious mainstream of their time. Early Quakers spoke of gaining religious knowledge 'experimentally,' a word which meant the same to early Friends that 'experientially' means to us. To Quakers, learning to become a religious person means *learning by doing*. In his biography of Robert Barclay, an early and influential Quaker philosopher, Trueblood (1968) describes early Friends' emphasis on the "authority of experience" over the authority of formal convention:

In a mood strikingly akin to that of the natural sciences, which were becoming firmly established in his lifetime [1648-1690], Barclay cut across fruitless argument to point to what had occurred or was occurring. A good illustration of this method is his discussion of the ministry of women. Regardless of the arguments pro and con, he directed his readers to the objective fact that women do minister [in Quaker Meetings] and do so effectively. "And lastly," he wrote, "it hath been observed, that God hath effectually in this day converted many souls by the ministry of women; and by them also frequently comforted the souls of his children; which manifest experience puts the thing beyond all controversy. (Trueblood, 1968)

Because of their pluralistic orientation and resistance to authoritative definitions of a Quaker belief system, Quakerism has been called non-doctrinal (e.g. Plüss, 2007). This raises the question: how is a shared sense of meaning generated in a religious community lacking a codified creed? Dandelion's (1996) monograph reveals the complexity and diversity of Quaker belief, showing that 'non-doctrinal' is an oversimplification. He points out that shared *meaning* among Friends emerges primarily from the shared *experience* of practicing silent group worship together, rather than transmission of an ideology. Dandelion calls this praxis-oriented belief a *behavioral creed*. The doctrine Quakers can be said to share is a belief in the form and practice of Meeting for Worship: that it is worth doing and that what is spoken there is worth attending to. While it continues to be transmitted through time by tradition, the practice of worship retains its authority by its continued efficacy for participants.⁴

⁴ My analytic approach in this dissertation takes its cue partly from Quakers' own hierarchy of practice over belief. I take descriptions drawn from authentic contexts of Quaker practice to be authoritative, as opposed to abstract statements of belief gathered outside of authentic practice (e.g. a researcher interview). See Chapter 4 for methods.

Contemporary Quaker Studies

Contemporary Quakers are not well-represented in the social science literature. The vast majority of scholarly Quaker studies are historical, focusing on the culture, faith and practice of Friends in previous centuries; for example, their role in the early Puritan movement and the antislavery movement. This state of affairs is fortunately in active development as there is now a journal of *Quaker Studies* (1996-) and a research center in the U.K.⁵ providing venues for both historical and contemporary Quaker studies. The few studies of contemporary Friends are, by and large, broadly sociological in scope, looking at, for example, Quaker theology and liturgy (Dandelion, 1996, 2005) and the Society of Friends in relation to contemporary society (e.g. Frith, 2009). Only a handful have used ethnographic methods (Collins, 1998; Davies, 1988).

Dandelion's (1996) sociological analysis of Quaker theology uncovers the complexity of Quaker belief and its reproduction in contemporary Quaker practice in the United Kingdom. Dandelion proposes a model for understanding and distinguishing the multiple layers that coconstitute the 'Quaker religion.' These include (1) religious 'orthodoxy' as established by historical tradition in the Society of Friends and institutionalized in a local Quaker community, (2) 'popular religion,' as produced by members themselves in participatory worship gatherings like Meeting for Worship and Quaker Dialogues, and (3) 'personal religion' as developed by individual members outside the context of Quaker Meeting. Quakers are distinctive for the great extent to which personal and popular religion re-interpret and re-define institutional orthodoxy. The obvious example is vocal ministry, where an expression of personal religious views intersects the realm of popular religion through performative participation. In Quaker history there have been celebrated cases where personal religious convictions eventually became Quaker orthodoxy. John Woolman's traveling testimony against slavery is, perhaps, the best example, where an American Quaker traveled from Meeting to Meeting, convincing fellow Friends to no longer keep slaves. Abolition came to be the key activism of Friends in the 18th and 19th centuries (Brinton, 1952). The ongoing historical adaptation of Quaker orthodoxy at the institutional level reflects the democratic participation structure at the level of Meeting for Worship, always subject to possible transformation through the individual and collective action of members.

For a more ethnographic look at contemporary Quaker practice we can turn to Collins (2008), who conducted anthropological fieldwork in a Quaker Meeting in the North of England and undertook a study of narrative patterns in the community. In (Collins, 2008), framed as addressing "the problem of Quaker identity" he notes that understanding Quaker identity is not

⁵ Centre for Postgraduate Quaker Studies at the University of Birmingham, in cooperation with the Woodbrooke Quaker Study Centre.

merely a scholarly problem, but one that Quakers themselves work with in the course of community life:

...it would appear to be a problem, a *practical* problem one might say, for Quakers themselves. This is so because of the heterogeneity of Quaker belief. Indeed, Quakers seem often to see the problem as a solution or in any case as a cause for celebration (Dandelion 1996). It is a celebration with distinctly post-modern overtones in that a creedless Quakerism allows considerable scope for variation in belief and practice. (Collins, 2008)

There are clear parallels between the research concerns of an ethnographer of Quakerism and the practical concerns of a Quaker. Both have the task of making sense of what others in Meeting have to say. Both construct for themselves a narrative of what the Quaker community is and is becoming. Neither can refer to authoritative texts or rule books which lay out unambiguously the order of the community. It is self-organized by the participants and so must be discovered on the ground, in the thick of it, as a participant in an ambiguous, creative, continuously transformed social order.

In attempting to characterize the 'stories' that people tell as vocal ministry, Collins found a recurrence of narrative 'tensions.' He argues that the tensions provide a resource for ongoing discourse in the community. Because Meeting for Worship is, at heart, a collaborative performance of silence and narrative vocal ministry, it is essential that subject-matter for talk be available. These unresolved tensions provide ever-ready points of departure for giving ministry.

...inward/outward, inclusive/exclusive, sacred/profane, faith/practice, unity/diversity, individuality/corporate, tradition/change, equality/hierarchy.... All talk, I argued could be characterized as an exploration or attempt to resolve these tensions. I argue, further, that these particular tensions have characterized Quaker faith and practice since the beginning of the movement in the 1650s. Although talk may have varied as to precise subject matter, Quakers have always been talking these tensions and it is that, above all else, which determines their identity as Quakers. Quakers are less interested in resolving these tensions than they are in exploring them....

Collins provides important insights into the pattern of Quaker talk in Meetings for Worship. Unfortunately the Quaker Studies literature drops off when we try to get to records of the realtime practice itself. It's not that scholars are unaware of the centrality of realtime practice for Quakers. Dandelion (1996) introduces the analytic concept of 'Quaker-time' to refer to "time which participants spend together on Quaker activity." Quaker-time describes activities that Quakers do together *as* Quakers, in realtime, inside the cultural frame of Quakerism, for instance Sunday Meeting for Worship and the fellowship time that follows it. Dandelion argues persuasively that

an account of Quakerism is incomplete without attention to Quaker-time. Yet despite the centrality of Quaker-time for Quakers and Quaker scholars alike, audio-visual data of realtime Quaker practice are all but non-existent. I have been able to locate only a single paper whose author successfully audio-recorded actual Quaker worship for transcription (Davies, 1988). There are no video records of Quaker practice in the extant literature (P. J. Collins, personal communication, July 22, 2011).

There are practical explanations for the shortage of contemporary Quaker studies that include recorded observation. Despite being officially open to the public, Quaker communities have resisted the interventions of researchers, being understandably concerned that the sense of being observed, let alone recorded, could disrupt the experiences of participants. Virtually all scholars who have studied contemporary Quakers report difficulty gaining permission to access Quaker communities for research purposes, even when they were themselves well-established Quakers (Dandelion, 1996; Davies, 1988).

It is compelling to me as a researcher that Quaker worship, widely acknowledged by scholars and Quakers alike to be foundational to the community, is underrepresented in the literature. Specifically, there is no realtime record of a practice known to be rooted in realtime. This absence goes hand in hand with the absence of embodiment in Quaker studies. In introducing their recent volume on contemporary Quakerism, Dandelion and Collins (2008) make a brief survey of research trajectories on contemporary Quakers and then ask, "What remains to be done?" In addition to suggestions for further work on the relationship between Quakerism and modernity, they observe the lack of attention to the embodied practices of Quakers in silent worship:

While several attempts have been made to interpret the significance of the silence that best characterizes Quaker worship (Bauman, 1983; Bell & Collins, 1998; Dandelion, 2005), less has been written about the stillness of participants. Again, Collins' engagement with the work of Bourdieu (1977 in particular) is perhaps the only attempt to interpret Quaker practice (and especially worship) with reference to theories of embodiment.

While Collins (1998) invokes Bourdieu's *habitus* theory of embodiment (Bourdieu, 1977) in his interpretation of Quaker practice, he does so unable to reference actual recordings of Quakers' embodied practices.

Contributions to the Quaker Studies Literature

This dissertation contributes one of the few ethnographic studies of contemporary Quaker worship, and is the first to collect video records of Quaker worship gatherings. It adds diversity to the generally sociological understanding of contemporary Quakers. In contrast to Dandelion's

studies of macro-scale trends in the organization of Quaker belief, I conduct a close investigation of practices in 'Quaker-time' (against the backdrop of an ethnography) to exhibit belief-stating and belief-making as it is practiced in consequential activity. Friends author their creeds in realtime, with and for each other. This isn't belief abstracted from its practical context, the way an answer to a survey or interview question is abstracted, but belief as the personal testimony one Friend shares with others in a worship gathering.

Regarding the methodological problem of contemporary Quaker studies, the difficulty of accessing the core religious practices of Quakerism underscores a need in ethnographic research generally for fieldwork methods that are ecologically-valid, meaning: appropriate to the local culture's unique situational constraints. In Chapter 4, I give a set of principles for developing ecologically appropriate methods along with the specific choices I made to design a study uniquely suited to a Quaker environment. Developing and following these principles enabled me to gain unprecedented access to Quaker worship. I have no doubt this is what allowed me to succeed where others fell short.

3 SILENCE IN SOCIAL INTERACTION

As a way into the topic of group silence and its varieties in the religious practices of Quakers, this chapter presents a brief review of how silence has been described by social scientists in the context of face-to-face social interaction. Having introduced the 'problem' of Quaker silence in Chapter 1, in this chapter I clarify the subject by giving precise definition to 'group silence' and how my study of *Quaker* group silence fits and contributes to the social interaction literature. This definition — that group silence is a collaborative achievement, irreducible to individuals — bears fruit in Chapters 5 and 6, where it forms the basis for analyzing Quakers' religious use of group silence. Chapter 5 offers temporal analyses of the embodied practice of group silence, preparing empirical ground for descriptions in Chapter 6 of how Quakers subjectively experience their practice. The logic of this analysis delivers, by the end of the dissertation, both empirical and experiential accounts of group silence in Quaker religious practice.

Conceptual Framework for Silence in Interaction

Compared to the attention given talk, text, and other linguistic phenomena, social scientists' attention to silence has been relatively rare.

Perhaps because silence in communicative settings is often taken simply for inaction, or because perceptual bias has led researchers to attend to more readily noticeable behaviors while treating silence as merely background, or because much of the focus of research to date has been on small group and dyadic conversational interaction, the important position of silence in the total framework of human communication has been largely overlooked. (Saville-Troike, 1985)

The bias against silence almost seems warranted (in Anglo-American culture at least) when the English dictionary¹ and common knowledge have led us to believe that silence is akin to nothingness. This view is fundamentally misguided. As pioneers in the scholarship of 'non-verbal' embodied interaction have made clear (Birdwhistell, 1970; Condon & Ogston, 1966),

¹ "absence of sound or noise" (Merriam-Webster, 2004)

there is much more to the world of social interaction than words. Language is only one constituent of face-to-face communication, inseparably co-dependent on the whole communicative ecology of the moment — the body, the environment, and all that is 'unsaid.' In this dissertation, 'silence' should be taken as a shorthand, referring our attention to this unspoken ecology. A study of silence is thus efficacious for generating insights about embodied interaction. When words leave the room, the rest of experience becomes more salient.

More often than not, the social science literature uses the term 'silence' to refer to *metaphorical* silences rather than concrete practices. For example: to describe the oppression of marginalized groups in society ('silence' as powerlessness), or stoic resistance ('silence' as subversion) (Gal, 1991; Mahoney, 1996). My own analytic concerns center on silence as a realtime activity, practiced by embodied persons in face-to-face social situations. Accordingly, I have drawn mainly from the fields of interaction and conversation analysis (Goffman, 1967; Sacks, 1974), and the ethnography of speaking (Bauman & Sherzer, 1989; Hymes, 1962). Even within this domain, the term has been used in multifarious ways. Table 3.1 gives just a taste of this variety, with examples drawn mostly from Tannen & Saville-Troike's broad survey, *Perspectives on Silence (PoS)* (Tannen & Saville-Troike, 1985), except where otherwise cited.

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Silence...
as pausing to think (Goldman-Eisler, 1951)
as hesitation (Maclay & Osgood, 1959; Chafe, PoS)
as boundary-marker on speaking turns
as opening for speaker changes
as interruption
as absence of speech
as rhythmic interaction (Jaffe & Feldstein, 1970)
as structure for talk
as structure for interaction
as communication
as inter-phonemic stop
as lulls in conversation
as rejection of marriage proposal ([Nigeria] Nwoye, PoS)
as gesture
as nonverbal communication (Philips, PoS)
as emotional display (sulking) (Gilmore, PoS)
as tool for classroom control (Gilmore, PoS)
as resistance to authority (Gilmore, PoS)
as emotional management (Saunders, PoS)
as institutional ritual (Nwoye, PoS)
as ostracism (Nwove, PoS)
as signal for cultural stereotyping
as facilitator for divine inspiration
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as obstructor for divine inspiration
as illocutionary act
as locutionary act
as perlocutionary act
as lack of rapport, to be avoided (Tannen, PoS)
as verbal malfunction (Scollon, PoS)
in bilingual talk (Crown & Feldstein, PoS)
in impression formation (Walker, PoS)
in psychotherapy (Cook, 1964)
in law courts (Walker, PoS; Shuy & Shnukal, 1980)
in cognition
in Italy (Saunders, PoS)
in Finnish talk (Lehtonen & Sajavaara, PoS)
in Nigerian Igbo talk (Nwoye, PoS)
in religious practice (Maltz, PoS)
in classrooms (Gilmore, PoS; Shultz, 2009)
in Ouaker talk (Bauman, 1983)
in Apache talk (Basso, 1970)
in Pentecostal worship (Maltz, PoS)
in New York Jewish and Californian non-Jewish talk (Tannen, PoS)
and cross-cultural differences (Samarin, 1965)
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Table 3.1: Different contexts for and ways of doing silence that have been studied by social scientists. Uncited items are drawn from Saville-Troike's (1985) own catalog of silences.

The reader likely has first-hand experience with many of the silences named above and in the coming pages. The number of those to which conscious attention has been paid is likely fewer. In order to more carefully bound the scope of this dissertation's analytic territory — *group silence* — I develop in this chapter a conceptual framework for silence in social interaction. This framework will help clarify what distinguishes Quaker silence vis-à-vis other kinds of interactive silence. The framework distinguishes between three types of silence in social interaction according to the parties that are responsible for producing them. What it means to be *responsible* for silence is a concept I elaborate over the course of this chapter.

- (1) Intra-speaker silences attributable to individual persons (e.g. pauses)
- (2) *Inter-speaker silences* shared or indeterminate responsibility (e.g. lapses, openings for speaker turn-taking)
- (3) *Group silences* irreducible group responsibility, indexical, inter-conversational (e.g. 'contagious' silence, 'falling' silence)

I address type (2) first for it is likely the most familiar and sets the stage for comprehending the other two. I describe the structural features of each type and how these silences are experienced by those who produce them.

When No One Is Speaking

'Silence' is ubiquitous in human communication. Speech itself would be impossible without silence, as all spoken languages require micro-silences for their articulation. Every phoneme in the class known as 'stops' contains a micro-silence, a precisely timed arrest of sound in the vocal tract, on the order of a hundred milliseconds. The word *bat* has two such silences: one bilabial stop [b] at the start and one alveolar stop [t] at the end. To say that speech is only vocal sound production is an oversimplification. It is also vocal silence production. Sound and silence co-constitute intelligible speech, precisely timed in sequential relation to the other.

That said, I do not include such micro-silences in my conceptual framework. I mention them to highlight the oft-overlooked ubiquity of silence in communication and to clarify what I mean by silence *in social interaction*. Micro-silences are always part of individual speech, regardless of circumstances. I am concerned in this dissertation with silences that emerge *contingent on* the circumstances of interaction among multiple persons. That is, I refer specifically to *occasions of interaction when no one is speaking*.

Inter-Speaker Silence

In every society one can contrast occasions and moments for silence and occasions and moments for talk. In our own, one can go on to say that by and large (and especially among the unacquainted) silence is the norm and talk something for which warrant must be present. Silence, after all, is very often the deference we will owe in a social situation to any and all others present... Without such enjoined modesty, there could be no public life, only a babble of childish adults pulling at one another's sleeves for attention. The mother to whom we would be saying, "Look, no hands," could not look or reply for she would be saying, "Look, no hands," to someone else. (Goffman, 1967)

Goffman, a pioneer in the analysis of social interaction, is, for a rare instant, giving description at the level of an individual when he says that "silence is the norm and talk something for which warrant must be present." While it is true that listeners are expected to not speak while speakers speak, this does not constitute *silence in interaction* in the sense being developed here. It is not an occasion when no one is speaking. When he goes on to say that silence is the "deference" listeners owe a speaker, making "public life" possible, Goffman returns to the level of whole interaction where — as conversation analysts have made explicit — continuous talk is the norm and silence something remarkable:

Talk can be continuous or discontinuous. It is continuous when, for a sequence of transition-relevance places, it continues (by another speaker, or by the same continuing) across a transition-relevance place, with a *minimization of gap and overlap*.

Discontinuities occur when, at some transition-relevance place, a current speaker has stopped, no speaker starts (or continues), and the ensuing space of non-talk constitutes itself as more than a gap — not a gap, but a *lapse*... (Sacks, Schegloff & Jefferson, 1974) [emphasis mine]

The field of conversation analysis, closely associated with the work of Harvey Sacks, goes a step beyond Goffman's 'just-so' ethnography to identify a set of formal rules that implicitly govern the temporal organization of conversational turn-taking (Sacks, Schegloff & Jefferson, 1974). In an unpublished manuscript, Sacks defined conversation as no less than one and no greater than one person speaking. This definition appears immediately problematic, for isn't obviously conversation full of pauses, lulls, interruptions and overlaps? Of course. What Sacks' definition does is establish the unremarkable norm against which all conversational dynamics are to be seen as accountable deviations. Any silences (less than one speaker) or overlaps (greater than one) are seen as in need of repair, and local conventions establish ways of doing the repair work. In other words, conversation participants are constantly orienting and tending to occasions when less than one person or more than one person is talking.

Sacks and colleagues describe how the rules for conversational turn-taking, while geared for continuous talk, nevertheless leave open the possibility for occasions when no one is speaking. "Gaps," in the sense of the quote above, are minimal interstitial silences between utterances and between speakers. These ordinary silences are, in unproblematic discourse, not accounted *as* silence. That is, they are not labeled, spoken of or thought of as 'silence' *qua* silence by conversationalists, but rather as unremarkable spaces that help organize the socio-temporal order of interaction. When silence *is* remarkable in ordinary conversation — "a lapse" — we can call such silence 'accountable silence.' By 'accountable' I mean that there is someone in the world who is accounting for its presence or non-presence in a social situation. 'Accountable' asserts the necessity of participating observers, situated in social activity, for whom silence (or sarcasm, agreement, or other situationally-defined social phenomenon) is accountable only if it is mutually recognizable by participants *as* silence.

Uncomfortable Silence

As Sacks and colleagues suggest, accountable silences enter conversation as lapses, for they go against the expected norm of continuous talk — expected, at least, by members of Anglo-American culture in face-to-face conversation. When interstitial silences are over-long, they change from unnoticed structural markers to acutely accountable moments lodged in the foreground of awareness — *uncomfortable silences* — occasions for what Goffman (1967) calls 'interaction-consciousness':

...a participant in talk may become consciously concerned to an improper degree with the way in which the interaction, *qua* interaction, is proceeding, instead of becoming spontaneously involved in the official topic of conversation. (Goffman, 1967 p. 119)

Interaction-consciousness is a consequence of a breakdown in adherence to the tacit rules of ordinary conversation. One such rule is that each party shares responsibility for keeping the talk going — maintaining "a minimization of gap," in the words of (Sacks, Schegloff & Jefferson, 1974). Failure to adhere to this rule may occasion uncomfortable silence (McLaughlin & Cody, 1982): for instance, the silence that falls between two people who just met at a cocktail party — that canonical laboratory for the presentation of self in everyday life (Goffman, 1959). If a moment should arise when both persons run out of supplies for conversational material and a shared silence emerges, it may be construed as an embarrassed or awkward silence², the embarrassment springing from conversationalists' mutually visible inability to keep to the expected rules.

Undue lulls come to be potential signs of having nothing in common, or of being insufficiently self-possessed to create something to say, and hence must be avoided. (Goffman, 1967, p. 36)

Once individuals enter a conversation they are obliged to continue it until they have the kind of basis for withdrawing that will neutralize the potentially offensive implications of taking leave of others. While engaged in the interaction it will be necessary for them to have subjects at hand to talk about that fit the occasion and yet provide content enough to keep the talk going; in other words, safe supplies are needed. What we call "small talk" serves this purpose. When individuals use up their small talk, they find themselves officially lodged in a state of talk but with nothing to talk about; interaction-consciousness experienced as a "painful silence" is the typical consequence. (Goffman, 1967, p. 120)

As readers' first-hand experiences no doubt confirm, discontinuities in talk run counter to the tacit 'rules' of conversation and thus tend to be experienced as improper, awkward or embarrassing. Such discontinuities are often hastily masked or repaired by noise-making (coughing, yawning, drumming fingers), by talk ("anyway...", "ok, so...") (McLaughlin & Cody, 1982; Newman, 1982), or the silence itself may furnish the subject matter to fill the silence.

² Merriam-Webster's definitions for 'awkward' include: "lacking dexterity or skill (as in the use of hands) ... lacking ease or grace (as of movement or expression)... lacking social grace and assurance (an awkward newcomer)... causing embarrassment (an awkward moment)... not easy to handle or deal with: requiring great skill, ingenuity, or care... (an awkward diplomatic situation)... (Merriam-Webster, 2004). Note the dual use of the word to describe both physical and social awkward situations.

Given its apparent conflict with the implicit rules of conversational turn-taking, it is no wonder that silence has come to have uncomfortable connotations. For many, it represents evidence of failure in communications — a breakdown in the otherwise continuous flow of talk. Recognizing this bias may help us to better appreciate why Quakers' *comfort* with interactive silence and their deliberate practice of it, stand in remarkable contrast to the larger societal context.

Intra-Speaker Silence

Consider the silent pause. Brief pauses, ranging in duration from a few to fractions of seconds, delimit clauses and utterances in an individual's stream of speech. As I stated, my focus is silence in interaction. In what sense are individual pauses contingent on the immediate social interaction? The following quote from Mark Twain, on the use of silence in public speaking, gives a vivid account of the subtle social contingencies with which a speaker delivers

the *pause* — that impressive silence, that eloquent silence, that geometrically progressive silence which often achieves a desired effect where no combination of words howsoever felicitous could accomplish it. The pause is not of much use to the man who is reading from a book because he cannot know what the exact length of it ought to be; he is not the one to determine the measurement — the audience must do that for him. He must perceive by their faces when the pause has reached the proper length... For one audience the pause will be short, for another a little longer, for another a shade longer still; the performer must vary the length of the pause to suit the shades of difference between audiences. These variations of measurement are so slight, so delicate, that they may almost be compared with the shadings achieved by Pratt and Whitney's ingenious machine which measures the five-millionth part of an inch. An audience is that machine's twin; it can measure a pause down to that vanishing fraction. (Twain & De Voto, 1940, p. 226)

If even the one-sided pause of an orator is contingent on his interaction with an audience, what of the interactive pause in conversation? A relevant but perhaps unexpected question is: when no one is speaking, whose silence is it? Whereas it is usually trivial to identify the speaker of an utterance as the one who physically produces the talk³, silence would seem to be unattributable. There doesn't appear to be anyone physically 'making' it. This view is vestigial to the naïve notion that silence is merely an empty quiet between utterances. By locating talk and silence in the framework of a temporally unfolding rule system, we have a way of assigning responsibility for this or that silence to particular persons lodged in an interaction.

³ Though even this determination can be problematic when utterances are collaboratively performed. See (Goodwin, 2011). Nevertheless, we can at still identify who the collaborating speakers are.

The notion of 'silence,' then, is the notion of a *responsible silence*. It is by no means very easy to give clear formulation to. Are you talking about what stands as a 'pause' in the talk of the currently speaking person, now not saying anything? Or are you pointing to the silence of the one who should speak now — given that somebody else has finished — but who hasn't started speaking? Within our society both of those are apparently noticeable objects. (Sacks & Jefferson, 1995, v.1:631)

What is being developed here is a way to see silence as communicative activity, with an accountable place and function in the sequential unfolding of social interaction. One kind of silence is made by those who accountably refrain from speaking at moments when the rules of conversation imply that they be speaking. This is a pause. By not speaking with their voices, their silences speak — as Twain's commentary so eloquently illustrated. When we understand silence as communication, we can quite reasonably ask *whose* silence is it?

The organization of turn-taking provides a way (for co-participants and for us as external observers) to say non-trivially that someone in particular is not speaking, when in fact *no one at all* is speaking. It is by virtue of a "rule" or "practice" having been invoked or activated which makes it relevant for that particular "someone" to be talking. Even though no one is talking, it is the relevance introduced by a prior speaker having selected someone as next speaker that makes *that* person be specifically singled out as not talking, even when there is general silence.... We can then speak of it as a "noticeable absence" or an "official absence" or a "relevant absence." (Schegloff, 2007, p. 19-20)

In cases like the pause, the responsible party for a discontinuous silence in conversation is unambiguously given by the silence's sequential position in otherwise continuous talk. A speaker who fails to produce an adequately complete utterance⁴ before falling silent is marked as responsible for the ensuing silence. In cases of adjacency-pairs (Sacks & Jefferson, 1995, v. 2:521), the next speaker is clearly determined. Silence as a response to the first part of an adjacency pair — "How are you today?" — is an accountable absence.

In other cases, the responsible party for a discontinuous silence may be indeterminate:

...[A] pause is an utterly equivocal object. The question is, is it your pause or my pause? Have you not yet finished and you're pausing, or am I supposed to be talking and therefore I'm pausing? (Sacks & Jefferson, Part 3, Lecture 5, p. 310)

⁴ In a two-person conversation, an "adequate complete utterance" is "roughly, such a thing as can be recognized, when it's done, to be finished so that if the other person ought to speak, they can see when that's done, and speak." (Sacks & Jefferson, 1995, v.1:310).

When a completed conversational turn leaves the floor open without providing an assignment for next-speaker, *all parties* can be said to share responsibility for a silence that emerges. This is a *lapse* — an indeterminate silence that, as elaborated earlier, tends to produce interaction-consciousness and discomfort as participants find themselves lodged in a state of conversation with less than one person speaking. The rules of conversation mark this moment as in need of repair and to be avoided.

The simple fact that silences are attributable to persons, this attribution being implicated in the temporal order of conversational turn-taking, marks silence as social behavior. Furthermore, their status as silences may only be accountable by the people involved, and not something we can 'objectively' determine with a measuring device. A wordless moment that arises between two people in the midst of a raucous party may be acutely experienced by them as silence (be it embarrassed or that rarer comfortable kind) despite the fact that an embedded microphone would only report the loud environment. What gives their shared experience its sense *as* silence is *who is doing the silence* and at *what particular moment* they are doing it.

Group Silence

The concept of *responsible silence* shows that, under certain conditions, we can attribute particular silences to particular persons. Awkward silences, lapses, and other equivocal moments show that this responsibility can, under other conditions, be shared by several individuals. As a final layer to my conceptual framework for the practice of silence, I describe a distinctly different class of shared silence: group silence that is irreducible to individual persons.

We have so far considered interactional silences that occur in the course of single conversations when someone stops speaking and no one starts. A different sort of accountable silence is one that extends beyond the bounds of a single conversational system. This type can be seen, once again, in the natural laboratory of the cocktail party, when silence 'falls' suddenly over a room full of people engaged in many parallel conversations.

Perhaps someone has suddenly fainted, or the birthday cake has been brought into the room. Where one moment conversations are in full swing, the next moment they are suddenly ceasing. Conversationalists who keep speaking have their talk suddenly thrust onto 'stage,' exposed to the attention of others who have fallen silent. Since the content of conversation is uniquely tuned to the particulars of its participants, to have the audience privy to one's talk unexpectedly expanded is to be publicly caught out of tune. The typical response of someone caught out of tune is to stop talking and attend to whatever has precipitated the fallen silence.

[W]hen a person is caught out of face because he had not expected to be thrust into interaction... the others may protectively turn away from him or his activity for a moment, to give him time to assemble himself. (Goffman, 1967, p. 18)

Group silence is distinct from the silences we have so far discussed, in several ways:

- (1) Group silence encompasses a context larger than a single turn-taking system, incorporating the behaviors of persons and objects of attention outside the immediate circle of conversation.
- (2) Group silence is *indexical*: it calls attention to something other than itself, unlike an uncomfortable conversational lapse which does the opposite. Indexical group silence indicates to those not currently attending to the newly significant event that their attention is warranted elsewhere.
- (3) Group silence is *contagious*. By arresting talk and joining in, new recruits amplify the recruiting power of the group silence so far gathered. A crowd draws a crowd. Proximate others are *rapidly* recruited into joining in.
- (4) While group silence is social activity for which present persons are responsible, it is more or less irrelevant which particular persons they are. This is strictly unlike responsible silences in conversation. Instead, the *magnitude* of group silence is consequential, based on the proportion of present persons who are participating in its performance.
- (5) Following from the previous two points, such group silence can only be understood as a *group achievement*, irreducible to the actions of individuals.

The attributes above suggest that people performing group silence function like a complex adaptive system (Holland, 1992): a set of agents whose relatively simple interactions self-organize, without central control, group-level dynamics that are irreducible to individuals.⁵ In the case of group silence, individuals make behavior choices based on mutual listening that lead to a feedback loop of mutual causality: I choose my speaking volume based on your speaking volume while you simultaneously do the same. (I discuss this "mutual tuning-in" explanation of emergence in the second half of Chapter 5.) When some one or several speakers suddenly stop speaking, this precipitates a contagious outbreak of which group silence is the emergent outcome.

Listeners attend not only to other individuals but to the emergent soundscape of the group as a whole. 6 Individual perception of group-level behavior-in-aggregate provides indexical

⁵ This way of modeling social groups as systems follows the same intellectual lineage as cybernetics and general systems theory (Bateson, 1996/1971; Bertalanffy, 1971/1968) and more recent descendants in the complexity sciences (Maturana et al, 1973; Kauffman, 2000). Such models are today used to conceptualize and study complex systems in physics, biology, chemistry, economics, sociology and other disciplines. The success of such models across disciplines suggests a deep continuity between the dynamic properties of living systems at the cellular and social levels. Complex adaptive systems lend themselves to computational simulation with agent-based models (Bonabeau, 2002). In the course of this dissertation work I created an agent-based model of the emergence of group silence, but do not report it here.

⁶ Individual perception of group-level behavior adds another layer of feedback to the system, known in complexity science as downward causation (Campbell, 1974). An analogous case is how a new clothing style ceases to be fashionable as soon as it's perceived to have become widely adopted by the population.

information to the group members that is consequential to their next actions. The indexical function of group silence may work in the same way that a group of people staring in a unified direction re-directs the attention of nearby others to look in the same direction (Milgram, Bickman & Berkowitz, 1969). This puts group silence in the same category as laughter and applause: activities we do *as* a coordinated group, made possible through co-presence and mutual monitoring. Applause alerts those not applauding that the performance is ending. Laughter alerts those not laughing that the punchline has been reached. Silence recruits others into taking note of whatever has precipitated the silence. It functions as a social heuristic that indicates, under some circumstances, that something worth attending to has been spoken, displayed, let out of the cage, etc. Like applause and laughter, silence *says something without words* about the context in which it occurs. (Chapter 6 of this dissertation reveals what Quakers *say with silence*.)

Uncomfortable Group Silence

We are now in a position to see how the same circumstances that give rise to uncomfortable silences in pair and small-group conversations — moments of indeterminacy and involuntary complicity — may also precipitate uncomfortable group silences. Given the indexical function that group silence usually provides to those present, when a group silence occurs *without* a clear indexical target for attention, participants are thrust into a double bind. On one hand, with their attentions now gathered by silence into a single interaction system, they find themselves — to repeat Goffman, above — "officially lodged in a state of talk but with nothing to talk about." They cast about for a target to resolve the indexical indeterminacy. On the other hand, participants have no easy way of exiting the system without themselves becoming the target. In the now-silent environment, any talk or behavior that distinguishes an individual from the anonymity of the group will thrust that person onto stage, providing an unwelcome outlet for the group's pent up attention.

One common instance of uncomfortable group silence is especially familiar to classroom teachers at all levels: the frozen silence that follows a teacher's question. Rowe's (1974) seminal work on elementary science teacher 'wait-time' showed that longer wait-times had positive effects on learning outcomes. Her insights led to wide adoption of "three to five seconds" as a pedagogical rule. Nevertheless, teachers who practice the rule are no doubt familiar, as I am, with how uncomfortable its implementation can be, especially when five seconds passes and we continue to wait for a response. Given the foregoing discussion, this discomfort is no surprise. Teachers are unwittingly instigating the conditions for uncomfortable group silence among the student body. With no determinate next-speaker, all parties are potential next-speakers, and the group's attention casts about to resolve the indeterminacy. As if to avoid accidentally taking the floor, my students can be seen suppressing their usually animated body movements. I worry that,

paradoxically, the discomfort of such extended silences leads to *less* thinking about the question asked, as students become overly-occupied with the question of *who will speak*.

Like uncomfortable lapses in conversation, uncomfortable group silences earn their discomfort from (1) their indeterminacy, (2) mutually-visible breakdown in conformance to the 'rule' of continuous talk in interaction, (3) resulting interaction-consciousness.

Summary

I have reviewed how silence has been analyzed in situations of social interaction. I have identified some interactional conditions that avoidably occasion accountable silences in the normal flow of talk. What this review has established is that *silence is activity in a social context*. As activity we can begin to appreciate there being *varieties* of silence as there are varieties of laughter, handwriting, marriage proposal. Where it exists in social interaction, there is someone doing it, inciting it, reacting to it. Pauses, lulls, lapses, memorial moments of silence, awkward silences, and Quaker silent worship are all different ways that silence is practiced. They are occasions when no one is speaking.

I first showed that silence is ubiquitous in human interaction, being first of all foundational to spoken language (intra-phoneme micro-silences, intra-utterance pauses), and part of the basic structure of conversation (inter-speaker pauses, turn-taking). I introduced the concept of accountable silence, marking situations where silence is experienced by participants *as* silence. Two or more people gathered together in a common interaction that each is alive to — this is an occasion where, in Anglo-American society, continuous talk is the expected behavior and discontinuous silences are experienced as breakdowns in need of repair. Finally, I made a distinction between conversational lapses and group silence. Conversational lapses happen when the turn-taking order of interaction positions an individual as next-speaker and the person doesn't speak. The individual is accountably responsible for the ensuing silence. Conversational silence can also occur when no one takes the floor at a transition-relevant moment.

The final kind of silence I described was group silence, which will be the focus of my analysis for the remainder of this dissertation. Group silence is an accountable presence of silence, irreducible to any one person. It is distributed across persons and conversations, contagious, and in many cases functions to direct group attention to an emergent event. When no such resting place is provided for the newly-collected group attention, a state of *uncomfortable* group silence may occur as participants find themselves lodged in an occasion for talk with no one talking. The habitual desire to avoid having oneself thrust onto stage as the object of group attention dissuades participants from doing something other than silence. The only alternative is a high stakes utterance or other behavior.

Once again, here are the broad categories I presented.

- (1) *Intra-speaker silences* attributable to individual persons (e.g. pauses)
- (2) *Inter-speaker silences* shared or indeterminate responsibility (e.g. lapses, openings for speaker turn-taking)
- (3) *Group silences* irreducible group responsibility, indexical, inter-conversational (e.g. 'contagious' silence, 'falling' silence')

Toward Quaker Silence

Conversational lapses and group silences with no object for attention are typically regarded as discontinuities in normal interaction, experienced as uncomfortable, and systematically avoided. This may help explain why silence is not well understood or appreciated in everyday life, just as a fixation on language helps explain why social science has paid relatively little attention to silence as a communicative practice.

The Quaker case is thus remarkable for its break from this pattern. Here is a silence deliberately indulged in. Quakers have a culture of *comfortable* group silence, characterized by engagement, not avoidance. As I will show in Chapters 5 and 6, Quaker silence is not experienced by its participants as a discontinuity in talk but rather as *continuous with* talk as well as a communicative medium in its own right. Centuries of deliberate practice have enabled them to explore this phenomenon at a depth rarely achieved in other settings. Through long deliberate practice, Quakers have developed a sophisticated appreciation for the uses and varieties of silence.

Research Questions

We are now in a position to investigate the practice of Quaker silence, to analyze its form, function and achievement. The first two chapters established that silence is the center of Quaker faith and practice. I have now provided a conceptual framework for situating Quaker group silence with respect to other, better understood forms of interactive silence. The chapters to come present the methods I developed to investigate and analyze Quaker silence, followed by the results of analysis. The research questions that drive this investigation are as follows:

- (1) What are the varieties of Quaker group silence?
- (2) What is the temporal structure of Quaker group silence?
- (3) What is the role of embodiment in Quaker silence?
- (4) How is Quaker group silence collaboratively achieved?
- (5) What is the subjective experience of Quaker group silence?

The answers to all five questions are presented in the analyses of Chapter 5 and 6.

4 METHODS

This chapter describes the methods I used to study and analyze Quaker silence at Pacific Friends Meeting. My study unfolded in two stages. Participant-observation over several years provided an ethnographic foundation for a six-week video study focused on the practice of Quaker silent worship. My investigation did not originally begin with an intent to study silence. I was compelled to do so by an ethnographic commitment to describe the world as experienced by my informants. Originally I set out to study Quakers' style of collaboration. Quakers do virtually everything in groups. Their non-hierarchical, volunteer-based social structure appealed to me as a generative site for research on leaderless, self-organizing communities. In my participation-based investigation, I sought out organizing principles that Quakers themselves deem central to their collaborative practices. As Chapter 1 described, several years of participation led me to conclude that silence is *the* central principle around which the whole of Quaker collaboration and religious life is organized. I was compelled to place silence at the analytic center of this dissertation.

The methods I describe here developed over time in contextual response to my experiences participating in the community. Acting counter to practices common in some social science circles, I did not pre-fabricate methods in the comfort of my university office then go into the field to extract the desired data. Long before I made the decision to record video of Quakers making silence together and long before I wrote software to analyze it, I spent years simply participating as a newcomer in the routine life of the community. Through long immersion, I came to recognize and gradually move beyond some of the ignorance and assumptions that all researchers bring to an initial meeting with their phenomena of interest. I am not embarrassed by my ignorances and, in fact, proudly display them in this text.

This chapter has three methodological topics. First, I present the ecological principles underlying my methods that enabled me to align my practice of research with the practices of the Quaker community, thereby preserving ecological validity. I then describe the data collection methods I developed for my two-stage study: participation-observation, video of Quaker worship. Lastly, I describe the methods I developed to analyze the data, including software I wrote to map the embodied practice of silence in a Quaker worship gathering.

Ecological Concerns

The overall approach of my ethnographic methodology can be described as an attempt to reconcile the conflicting aims of *research practice* with *authentic participation* in a cultural setting. On one hand, fieldwork-based research is about the collection of empirical data from a naturalistic setting. In the anthropological tradition, this work is a diligent attempt to understand and describe lifeworlds "from the native's point of view" (Geertz, 1974). On the other hand, there is the inconvenient fact that data-gathering practices most familiar to social scientists — informant interviews, surveys, video capture, etc. — are foreign to the everyday lives of most communities that interest social scientists. It is a classic observer's paradox. How do we observe what people are ordinarily doing together in a community if the intervention of our research instruments unavoidably creates non-ordinary situations?

I base my approach on methods championed by ethnomethodology (Garfinkel, 1967; Lynch, 1997) and related analysts of social interaction (e.g. Goffman, 1955; Sacks, 1963; McDermott, 1978). The essence of this approach is to seek out occasions where locals must describe *to each other* the local cultural order and capture these descriptions as ethnographic data. Members of communities routinely describe and make visible to each other (especially to newcomers) those practices and conceptual frameworks they consider necessary to be understood by an accomplished participant. These endogenous descriptions are indispensable to a social scientist wishing to build an ethnographically adequate account of how participants conceptualize, transmit and reinforce their own practices:

We can use the ways members have of making clear to each other and to themselves what is going on to locate to our own satisfaction an account of what it is that they are doing with each other. (McDermott, et al., 1978)

The difference between a description of a situation produced by a researcher at an analytic distance versus an account of what a local experiences in the same situation is what Geertz (1974) termed *experience-distant* versus *experience-near*. A critical distinction between the two is that accounts of the latter type are *consequentially embedded* in the social order they describe. They *participate* in it with intended and unintended effects, as members "continually construct their most immediate conditions with each other and for each other," (McDermott & Raley, 2011). Local descriptive 'theories' (of personality, economy, furniture arranging, God) operate as cultural materials in authentic social situations, not separated from their practical uses the way they so often are in scholarly descriptions. A theory of group decision-making described by one member to another has a direct effect on present and future episodes of decision-making.

Endogenous descriptions implicate the authors in their expression, as stances adopted in a discourse, and actively shape the collective life of the community they describe.

Complexity arises when one attempts to build an ethnographic methodology around endogenous descriptions. Despite the availability of accounts produced by locals in the course of 'natural history,' a researcher may have questions that are not adequately addressed by these accounts. It may be the case that there are phenomena so basic and over-familiar that they are blindly taken for granted (Nathan & Petrosino, 2003) and don't explicitly show up in endogenous accounts without intervention. This is almost certainly why many researchers prefer interviews, surveys and other interrogative methods. While these methods raise the risk that our data say more about how informants describe their lives to social scientists than how they actually live them, the risk is often preferred to being left with unanswered research questions.

There is a middle path between the imposition of external research instruments to ask the questions we want answered and the passivity of observing whatever happens to occur. It combines the interventionist disposition of the former with the cultural-appropriateness of the latter. It first of all requires a commitment to maintaining ecological validity as a participant-observer (Locke, 1986) and holds out the promise for research methods that are virtually indistinguishable from authentic local practices.

Extending the idea that endogenous accounts emerge *from within* the community, my approach is to develop a *methodology from within* (what might be called 'endomethodology'). I adapt existing cultural routines *in situ* into research methods that produce ethnographic data while remaining authentic practices in their own right. The success of this adaptation comes partly from finding and employing *local practices for the creation of new practices*. The intervention is itself ecologically-valid because it's modeled on how how members themselves might design a research study about their community. Whereas ethnomethodology *describes* cultural methods that correspond to those of social science, endomethodology *employs* them. This approach extends the ethnomethodological program in an interventionist direction, more akin to design-based research (Brown, 1992) or what has been called 'technomethodology' (Button & Dourish, 1996; Crabtree, 2002).

This approach requires considerable work. At minimum, it compels the researcher to learn to become a full participant in the community, competent in the local repertoire of cultural practices and seen as competent by members. In the course of my own centripetal participation in the Quaker community, I learned to participate in Quaker worship and decision-making meetings, and how member-initiated projects were developed and supported by the community. Without any need to be covert about my scholarly intentions, I learned out how to initiate a research project in a culturally-appropriate manner and seek the community's support in the ways expected of a

member. I successfully aligned my agenda as a researcher with my role as a legitimate participant. Later in this chapter, I summarize the series of ecological choices I made to accomplish this.

Ecological ethnographic methodology, in the sense developed here, involves the following:

- (1) a change in goal from data *collection* to data *production*;
- (2) a change in instrument from research methods developed in abstract isolation from authentic settings to ones developed *in situ* or adapted from those already furnished by the situation;
- (3) locating in the community's existing repertoire of practices those that generate useful ethnographic data;
- (4) locating and employing practices for organizing and adapting the practices from (3) for research purposes.

There are major caveats to this approach. There is less freedom to use a specific method at a particular time, since it must fit the situational constraints of the moment. Even more daunting, adequate preparation for this approach may require years of participation to discover and learn to employ the practices necessary to achieve this level of ecological validity.

Participant-Observation Study

In research that aims for ecological validity, method and context are inseparable. In this chapter, I describe my research methods in the context of their development, over time, through participation-based ethnographic fieldwork. A description merely of the final methods arrived at would abstract away the warrants for their choice.

The most important data collection I performed was to be an attentive observer and learner over years of participation, developing an encompassing sense for Quaker culture, history and practice. I conducted participant-observation in six different Quaker communities in California, Oregon, Washington, and Pennsylvania, beginning in December of 2002 at Central Coast Meeting (nearly ten years ago, as of this writing). Two of these participations involved extended periods of regular attendance: eighteen months at Central Coast Meeting, five years at Pacific Friends Meeting. My early informal fieldwork was an offshoot of my research at the time on computer-supported collaboration as I sought inspiration for a novel approach to collaboration software. Some years later, after my research focus had shifted to ethnographic studies of face-to-face collaboration, I resumed fieldwork. Formal data collection began in early 2008, in the form of ethnographic fieldnotes, audio-recorded semi-structured interviews, and photographs. For cultural-historical immersion, I read journals written by early Quakers, books by 20th century Quaker writers, research by Quaker scholars, and internet blogs by contemporary Friends. Shortly

after starting regular attendance at Pacific Friends Meeting, I enrolled in a six-week course on Quaker history and practice taught by two longtime PFM members (both would later become participants in my video study). I engaged in conversations with members of PFM after Meetings for Worship to ask questions about my developing understanding of Quaker faith and practice. I wrote fieldnotes following many Meetings for Worship (occasionally during the Meeting itself).

For the last five years I have written analytic memos in an ongoing attempt to articulate what I have learned of Quakerism through experience. Along the way I have developed and discarded uncounted hypotheses, theories and frameworks. I've included a glimpse of this developmental process where I have deemed it analytically useful. My inclusion of early fieldnotes in Chapter 1 is an example, representing how a newcomer experiences Meeting for Worship.

The Meeting for Worship is a sacred space, carefully organized to preserve an environment safe for participants' deeply personal revelations. This poses a special challenge for social science. Research activity problematically interjects itself in the situations it aims to describe. It also greatly expands the audience that is privy to these situations. Unlike an astronomer's relationship to distant stars via her telescope or a biochemist's relationship to microorganisms via his microscope, ethnographers and their instruments become implicated in the phenomena they study. I could not simply walk into a Quaker Meeting with a video camera and start recording. Even in a community as tolerant as the Quakers', this would be culturally-inappropriate and damage my credibility as a participant. At the same time, it was clear that the most important things Quakers have to say are said in Quaker worship gatherings. How could I make Quaker worship accessible to social science while respecting its sacred constraints?

When I began to design this study, I didn't yet have an appreciation for the difficulty of this methodological problem. My first attempt at data collection was a telling failure. I spent five days conducting interviews in the historic heart of American Quakerism in Pennsylvania. I did what I could to earn the trust and respect of local Friends by co-participating with them in worship gatherings and educational workshops. In fact, some Friends opened up to me to such a revealing degree that I wasn't able to get their formal consent to use most of the data for research. The concern was that what was described in the interview would get traced back to its speaker through the tight-knit Quaker community. I learned a valuable lesson in this experience: what is, among researchers, a conventional and innocuous ethnographic technique — the interview — can become an inappropriate and even damaging act under certain delicate conditions.

There is no doubt I could have been more careful with my interviewing protocols and technique. Nevertheless, the most ethnographically interesting data were precisely the most sensitive to confidentiality concerns. I resolved to develop an alternative methodology that would unproblematically align appropriate ethnographic practice with appropriate Quaker practice. To

do this, I had to shift frames from methods based on data collection to ones based on data production. Instead of trying to extract data, I sought to locate occasions where Friends were already producing ethnographic accounts that could be adapted for research purposes.

Back at Pacific Friends Meeting, my new methodological project led to a year's worth of preparation and consultation within the community, including the formation of a 'Clearness Committee', whose sole task was to help me design a culturally-appropriate research study on Quaker worship. This one year of setup work leveraged my six years of Quaker experience up to that point, helping me to communicate my intentions to the community understandably, without deception, and in ways that demonstrated my familiarity with, and sensitivity to, Quaker culture. When it came to the moment that I asked the Clearness Committee's permission to video-record Quakers in worship — an unprecedented request — those six years were in the room with me, legitimizing my request as a culturally-appropriate innovation by a community member instead of an inappropriate request by an outsider. When it came time to ask PFM's permission at the monthly community-wide decision making meeting, it was the Clearness Committee asking for permission on my behalf.

Video Study

In this section I give an overview of my video study on Quaker worship gatherings. I review the study design and Quaker Dialogue format through a composite description of a typical Dialogue session.

The study I designed consisted of six video-recorded group discussions. Each discussion was approximately an hour and a half long and was conducted in a format native to the Quaker community, known as 'Quaker Dialogue' or 'worship-sharing.' It was developed by a Quaker named Rachel David DuBois during the 1950s to facilitate community-building within Quaker Meetings (DuBois, 1976). The format is a small-group version of the weekly Meeting for Worship, with two differences. First, instead of being totally unprogrammed, Quaker Dialogue is organized around a discussion prompt, known as a Query. The Query is a question on which participants reflect in their silent worship. The second difference is that each participant is, by default, expected to speak at least once during the course of the gathering. Participants are allowed to pass and not speak, if they wish. Recall that in the Meeting for Worship, the default is for participants to remain silent. In Quaker Dialogue, the default is for each participant to speak

¹ Dandelion's (1996) study included 'group interviews' of Quakers partly modeled on the Quaker Dialogue worship format, where he prepared questions, took notes and asked participants followup questions. In the study described here, the video camera is the only research-oriented deviation from the traditional format.

once. If, after everyone has spoken, some wish to speak again, they are allowed to do so, and the Dialogue transitions into a more informal discussion.

I convened a series of six weekly Quaker Dialogues over six consecutive Monday evenings in Fall of 2010. I advertised the series during the announcement time of Sunday Meeting for Worship for a few weeks leading up to it and one or two weeks into it. This involved submitting a slip of paper to be read by a community member after the close of Meeting for Worship. On at least one occasion, another Friend (a member of my Clearness Committee) stood after the announcement was read and encouraged others to participate. I also advertised the coming session over the PFM email list each week as well as in the monthly newsletter. I originally planned on holding only four sessions but several participants in the third Dialogue session (who had been attending regularly thus far) encouraged me to schedule two more. I announced this continuation over email and in Sunday Meeting for Worship.

Participation was open to anyone with access to the various venues of announcement, which reached most of the regular attenders of Pacific Friends Meeting as well as more peripheral and geographically-distributed participants who monitor the email list and newsletter. There was only one attendee to the Dialogues whom I was not already acquainted with through PFM. Participants were invited to attend as many or as few of the Dialogues as they wished.

I wrote a set of Queries for use during the six Dialogues. These prompted participants to reflect on the practices that are central to the everyday life of the Quaker community, with emphasis on the conduct of the Meeting for Worship, how Friends listen to each other speaking in Meeting, how Friends choose to speak in Meeting, and so forth. I also wrote queries about how Friends have transferred practices from the Meeting to other communities they participate in. I also held one Dialogue with no query, to get a record for open-ended discussion, more in the manner of Meeting for Worship. Table 4.1 below lists the Queries used.

Session 1: October 11, 2010, Unprogrammed Meeting for Worship OUAKER DIALOGUE / WORSHIP SHARING

Each First Day, Friends gather in the New Meetinghouse to sit together in silent worship. During these quiet gatherings, Friends may occasionally be moved to speak and give vocal ministry.

Reflecting on your experiences in Unprogrammed Meeting for Worship, you're invited to ponder on the following queries and share, in worship, your own perspective.

- 1. How does Meeting for Worship differ from solitary prayer or worship? How have you experienced this difference in Meeting?
- 2. What has moved you to speak in Meeting for Worship?

Session 2: October 18, 2010 OUAKER DIALOGUE / WORSHIP SHARING

Friends gather together in silent worship on various occasions. During these quiet times, Friends may occasionally be moved to speak and give vocal ministry.

Reflecting on your own experiences in silent worship, you're invited to ponder on the following queries and share, in worship, your own perspective.

- 1. What moves me to speak in worship?
- 2. How do I practice the art of listening during worship?

Session 3: October 25, 2010 QUAKER DIALOGUE / WORSHIP SHARING

Reflecting on your experiences participating in the Quaker community, you're invited to ponder on the following query and share, in worship, your own perspective.

How have you carried what you've learned in Meeting to other contexts in your life?

Session 4: November 1, 2010

No Query. Unprompted Quaker Dialogue.

Session 5: November 8, 2010, Meeting for Worship on the Occasion of Business QUAKER DIALOGUE / WORSHIP SHARING

Reflecting on your particularly memorable experiences in Meeting for Business, you're invited to ponder on the following query and share, in worship, your own perspective.

In what various ways do we each take our right share of responsibility in the service of the Meeting?

Session 6: November 15, 2010, Leadings OUAKER DIALOGUE / WORSHIP SHARING

Reflecting on your experiences among Friends, you're invited to ponder on the following queries and share, in worship, your own perspective on any of them.

What is a leading? Have you experienced what you would call a leading?

How does the Quaker community support the leadings of its members and attenders?

Table 4.1: Queries I authored for each Quaker Dialogue session.

While I advertised the general theme of the Query ahead of time to potential participants over email and Meeting announcement, I composed the final wording of the Query only a few hours before the Dialogue in which it was used. It usually took between 45 and 60 minutes to compose each Query, though they are each no more than 85 words and sometimes as few as 35 words. The task was unexpectedly time-consuming because it encapsulates the basic tension of ecological ethnography: situating research as authentic cultural activity. The challenge was to craft a Query that a) was more or less certain to generate a discussion of issues pertinent to my research questions, b) was phrased in ecologically-valid Quaker language, and c) was suited to the spiritual function of the Quaker Dialogue activity.

The first criterion addresses my practical needs as a researcher. The third criterion refers to the fact that Quaker Dialogue is essentially a small group format of Meeting for Worship, with all of the same religious significance of the large format. The second criterion, ecologically-valid language, is the means for bridging and encompassing these dual concerns.

The Queries needed to sound 'Quakerly', that is, written in the vernacular style of the Quaker community, which has been known for its distinctive use of language since its 17th century beginnings (Bauman, 1983), e.g. the use of 'First Day' instead of 'Sunday.' I took this ecological approach as opposed to the usual way that researchers compose interview questions which, perhaps contrary to popular academic perception, must be crafted in some vernacular, typically that of unmarked academic speech. In fact, my process for writing a Query was a series of iterations beginning with my research question stated in typical interview fashion, (e.g. "How do you know when it's appropriate to speak in Meeting for Worship?") which I then 'translated' into Quaker speak, ("What has moved you to speak in Meeting for Worship?"). While I retain no record of the early versions, you can see the evidence of my iterations by comparing the Query wording for the first two sessions. Both were on the topic of Meeting for Worship, with one prompt in common because we didn't have time to fully address it in the first session. One revision is a removal of the specificity to Meeting for Worship, after Friends pointed out to me in the first session that worship occurs on many occasions outside of Sunday Meeting for Worship, including Quaker Dialogues. Second, I changed the subject pronoun as I sought to refine the wording for its situated use as prompt for personal reflection. Thus "What has moved you to speak in Meeting for Worship?" became "What moves me to speak in worship?"

There is considerable nuance to virtually every word choice in these Queries, most of which I would be capable of articulating. For reference and inspiration, I sometimes looked at existing Queries collected in the *Faith and Practice* handbook used by PFM, and once in Baltimore Yearly Meeting's *Faith and Practice*. The process of composing these Queries made plain to me that the years I'd spent listening to Friends as a participant-observer had subconsciously developed in me

a competence and feel for the vernacular language. My sense of competence was validated when study participants, on more than one occasion, remarked that the Queries were well-written. I take this as evidence indicating the ecological validity of the study. For example, in the following quote taken from near the end of session #2, Friends comment on the Query's word choice, which I'd modified from a *Faith and Practice* Query on the subject of listening.

Thomas: Well-prepared queries. Thank you.

Julia: Yeah.

Daniel: Thanks. The second one is slightly modified out of Faith and Practice. Most of them are in the form "Do I...?" And it was like "Do I practice the art of listening during worship?"

Sasha: I like those 'how' questions because they imply you're already *doing* it in *some* way, and it's just extracting from you *how* are you doing it? [laughter]

Julia: Besides, yes or no type questions really don't –

August: There's an art to writing the Queries too.

Daniel: Right.

August: And not everybody whose words get put in Faith and Practice had the art.

[laughter]

(Dialogue Session 2, 18-Oct-2010)

On a typical Monday evening during the study, I arrived half an hour early to set up the room and recording equipment. I'd been given access to a key to the Meetinghouse. Once inside I turned on the lights in the Meeting Room. We used the same room where the large Sunday gathering takes place, which I felt lent additional authenticity and gravity to the Dialogues. On the first night I discovered that some banks of lights generate more ambient noise than others so I left those off to improve on the silence. When I arrived, the chairs were always arranged in their default configuration for worship, two crescents facing the center, each about five rows deep. There were four microphones hanging from the ceiling rafters, one for each quadrant of the room. These were connected to a receiver in one corner, which in turn broadcasted wirelessly as an assistive listening device for hearing-impaired attendees. This was a very useful affordance of the space for ecologically-sound data collection as Friends had grown accustomed to the presence of the microphones in the room. (During one Dialogue, one attendee even noticed the microphones for the first time when they were pointed out to him.) I plugged a recording laptop into the receiver and modified the mixer to only draw signal from one microphone. Then I started moving chairs.

Clearing a space beneath the chosen microphone, I placed a panoramic video camera and a second omnidirectional microphone on a small table, centered beneath the hanging microphone. I arranged a circle of about ten chairs, facing inward, centered on the camera. The recording cables

ran from the camera and omni-mic to a second recording laptop which I located under my own chair. (The second microphone gave me a redundant audio recording. This saved me one evening when the video-recording laptop spontaneously restarted twenty minutes into a Dialogue and destroyed the audio and video recorded thus far.)

Friends started to arrive a few minutes before 8 o'clock. Some who had administrative responsibilities in the Meeting, like Phil, the Clerk, often visited the office in the same building. Others typically milled around the building or Meeting room a bit before sitting in the circle of chairs I had arranged. I welcomed them as they arrived, gave consent forms to newcomers, and handed out slips of paper on which I'd printed the evening's Query. Multiple informal conversations would go on, in and outside of the circle. Almost always there were latecomers. Five or so minutes after 8 o'clock, with everyone present seated in the circle and I welcomed the group. I introduced the Dialogue activity, described the study and the equipment, and read the Query. More latecomers arrived and joined in during this time. I answered any questions that were asked. When all questions had been answered and everyone was clear on the choreography of the activity, we began the Quaker Dialogue. This was initiated sometimes with an explicit signal from me, "Let's begin," but this was not always necessary as Friends long familiar with the format simply closed their eyes and began without a verbal signal.

The Quaker Dialogue typically lasted a little over an hour. In order to give maximum speaking time to attendees, I was a non-speaking participant, which I made clear ahead of time to participants. I did speak once during Session 5 which was the least attended of the six sessions. As facilitator I closed each Dialogue verbally with "Thank you, Friends." An informal time of conversation typically ensued, usually an extension of the Dialogue. Participants gradually took their leave during this time.

Over the course of the sessions, I iterated slightly on the format of the Dialogue. For the first two sessions I asked Friends to address two Queries per Dialogue in two rounds, first a discussion of one and then the other, but reduced this to one round (some with multiple, related prompts) after the first two sessions. Those first sessions ran overtime and didn't seem to allow for adequate attention to the second of two prompts. However, even when reducing to one Query, the sessions still ran long. This was in part due to latecomers postponing the start time, but also because Friends continued to share elaborately after the formal close of the Quaker Dialogue.

To capture these sessions on video, I used a panoramic digital video camera. Using a hyperbolic mirror, it captures a complete 360-degree horizontal view of the room (see Figure 4.1). Image processing software is used to 'de-warp' the reflected imagery to produce a wide-aspect ratio video image (1152 x 320 pixel resolution, 15 frames per second) as if the cylindrical view were cut and 'peeled-back' into a flat image (see Figure 4.2). This technology has been used

extensively in video-based learning systems, as well as sports, entertainment, surveillance, and business meetings (Pea, 2006).



Figure 4.1: Original panoramic video image, before 'de-warping.'



Figure 4.2: De-warped panoramic image, ready for algorithmic analysis.

This video instrument was particularly well-suited to capturing Quaker worship. First, it didn't look like an ordinary camera, having no discernible lens, so no one felt like it was pointed at them. Second, in worship, Quakers sit in a circle and speak towards the center. The panoramic camera sat at the center of the circle, making it possible to record every participant with a single camera and a minimum of distraction. A convenient side-effect of this instrument is that it gives every participant a more-or-less equal footing in the resulting video image; everyone is more-or-less equidistant from the camera and facing it. This is a departure from typical video that privileges some positions over others, depending on participants' location in the room relative to the camera. In a way, the camera embodies the Quaker value of equality and equal access, thus

further reducing the camera's interference with the ecological order of Quaker practice. I think it's the sort of camera Quakers would choose for themselves if they felt the need. Also, because Quakers remain seated during worship, this affordance holds.

This study design generated two kinds of data simultaneously. On one level, the verbal content of what people shared in worship constitute self-reported reflections on Quaker practice. These are analyzable using standard methods for coding interviews and other self-report data. On another level, Dialogue sessions were themselves authentic instances of Quaker practice. The video record of these activities allowed me to analyze the embodied practices of Quakers in worship.

Table 4.2 summarizes the attendance during my six-week video study:

Session#	Dialogue Date	# Participants	Recording Duration
1	October 11, 2010	8	1:11:44
2	October 18, 2010	11	1:33:33 (video=1:10:50*
3	October 25, 2010	12	1:50:20
4	November 1, 2010	12	1:36:11
5	November 8, 2010	6	1:57:22
6	November 15, 2010	13	1:40:00

Table 4.2: Summary of Quaker Dialogue participants and durations. *Video recording is shorter than audio recording due to computer error and data loss approximately twenty minutes into the session.

There were several repeat participants in the Dialogues. Twenty different Friends (11 female, 9 male) participated in the six session study in a total of 62 attendee slots.

Ecological Validity

At the outset of this chapter I described my commitment to developing an ecologically-valid research methodology that aligned the needs of ethnographic research with authentic local practice. When practiced with ecological sensitivity, the ethnographic enterprise is one of the best ways we have for instrumenting the laboratories of everyday life. The Quaker Meeting is exceptional as a natural laboratory for silence and the lived experience is available to ethnographic observation if one is committed to maintaining ecological validity all along the way.

The following list summarizes ten key methodological choices I made with the goal of preserving ecological validity, plus one sign of trust:

- (1) Peer Advice. I consistently and repeatedly sought advice from community members as to how to go about initiating my research project, garnering permission etc. Based on advice, I requested the formation of a Clearness Committee through the channels suggested to me.
- (2) *Clearness Committee*. I co-designed my video research study with a committee of longtime Quakers. The committee worked on my behalf to seek permission from PFM Meeting for Business for me to conduct the study we had co-designed.
- (3) Key to the Meetinghouse. I was given access to a key to the Meetinghouse so that I could set up and conduct my study independently. This was a sign of trust. I once witnessed a discussion in PFM Meeting for Business on the topic of how to protect members' privacy when posting the Meeting's contact directory on the internet. One Friend metaphorically described those who have access to the directory as being like those who have a 'key to the Meetinghouse,' i.e. those with access to the Meeting's confidential information.
- (4) Quaker Dialogue. I used a longstanding cultural routine as the format for my research study. Quaker Dialogues have been practiced by that name since the 1950s. Participants were familiar with the practice, having done it before. The Dialogues were authentic activities, not simulations.
- (5) Transcripts Recorded Quakers Describing Quakerism to Quakers. In the Dialogues, participants described to each other their own conceptions of Quaker faith and practice for one another's benefit, not the researcher's alone. This made it authentic description, constitutive of a learning environment for participants and site of cultural reproduction.
- (6) *Authentic Setting*. I conducted my video study in the same room as regular Sunday Meeting for Worship.
- (7) *Endogenous Instrumentation*. I made use of an existing microphone array hanging from the ceiling in the Meeting room, installed to assist hearing impaired community members.
- (8) *Panoramic Camera Fit the Circular Configuration*. Quakers hold worship gatherings seated in circles. The use of a panoramic video camera enabled video capture of every participant, on equal footing, with a single camera.
- (9) Participation Structure. Like all Quaker worship gatherings, my Quaker Dialogue series was opt-in, with no commitment required from session to session. Participants attended as their schedules and desires permitted.

- (10) *Quakerly Query Language*. I adapted many of the Queries used as Dialogue prompts from existing Quaker writings, primarily the *Faith & Practice* handbook (Faith and Practice, 2001), which contains a section on "Advices and Queries."
- (11) Consequential to Community Needs. Because participants were finding them useful for their own religious practice, I was asked to extend the Quaker Dialogue series from the originally-planned four sessions to a total of six. It was said, "we need more of this" in the PFM community.

Analysis Methods

In this section I describe the analysis methods I developed to answer my research questions. There are two basic categories of analysis, applied to video and transcript data, respectively. I describe each analytic category in turn.

Recall my research questions presented at the end of Chapter 3:

- (1) What are the varieties of Quaker group silence?
- (2) What is the temporal structure of Quaker group silence?
- (3) What is the role of embodiment in Quaker silence?
- (4) How is Quaker group silence collaboratively achieved?
- (5) What is the subjective experience of Quaker group silence?

Video analyses target questions 2-5 and are reported in Chapter 5. Transcript analyses build on the results of video analyses and address all five questions, reported in Chapter 6.

Video Analysis

With video materials in hand, I developed custom software to analyze the embodied practices of my study participants. The overall aim was to triangulate a rigorous computational analysis of Quaker practice with the participation-based experiences I had accumulated over years. Specifically, I set out to see if my anecdotal observations of embodied synchrony in Quaker silence (see end of Chapter 1) were supported, or not, by rigorous temporal analysis of the video data. In keeping with the theme of ecological validity, the choices I made in developing the analysis software were guided at every step by my best understanding of how Quakers themselves understand Quaker situations.

From a nearly-infinite field of sensible phenomena, a measurement device selects a tiny subset of data and records it for later review by the researcher. Video recording involves a

² The analysis software was developed in the Processing environment (Fry & Reas, 2011), and accompanies this dissertation as a supplement in the Stanford digital archive. Documentation and latest version can be found at (Steinbock, 2012).

selection stage which is an integral part of the inquiry even before the recording is made (Derry, Pea et al., 2010). Decisions, for instance, about the physical placement of a video camera for ethnographic study can lead to drastically different results for different choices. The device itself, regardless of orientation, is selective. A video camera is only sensitive within a certain dynamic range of visible light that is far narrower than the human eye. If the camera is set to expose properly for a brightly lit table, events happening in shadow may be invisible. If you expose for the shadows, brightly-lit areas wash out into invisibility. Choices must be made. Potential data must be left uncollected.

The material of analysis is not the original lived experience but passed through the medium of a video recording. It is imperfect, blurry, with video compression artifacts, weird lighting and auto-focus issues. My video recording even cut out once in the middle of a Dialogue, losing the first twenty minutes of footage. For analysis, I treat the video artifact on its own terms as digital data, a phenomenon in its own right, as well as a window onto the reality of a Quaker worship gathering. I could not ignore either without undermining the ecological validity of the analysis.

The algorithmic analysis I developed to analyze Quakers' embodied practice of silence is a 5-stage process. I give its outline here. In Chapter 5, where the analysis results are reported, I walk through each of these steps in detail, accompanied by data visualizations.

- (1) *Bounding*. I manually mark the boundary between each participant in the video frame. (Since participants remain seated, their position is fixed for the duration of a Dialogue).
- (2) Frame Differencing. For each participant's area of the video image, the algorithm counts the number of pixels that differ between each successive video frame. This produces continuous time series data (pixel-differences) as a measurement of each participant's movement in each frame of video.³
- (3) *Movement Detection*. For each participant in each frame of video, the algorithm makes a decision. If that participant's pixel-difference (number of pixels that changed from the previous frame) is greater than 50 pixels, the algorithm marks the frame as 'moving.' If below that threshold, it marks it as 'not-moving.' This reduces the continuous time series (pixel-differences) to a binary time series (moving or not moving).⁴

³ Pixels are counted as 'different' as follows: Each pixel's 3 color components (red, green, blue) are compared to those of the previous frame. If the sum of the differences between each color value is greater than a minimum threshold, the pixel is counted as 'different.' The threshold is set at the lowest level that isn't triggered by noise due to video compression artifacts.

⁴ The threshold of 50 pixels is a modifiable parameter in the analysis software. This was the value most often used. It was chosen as it produced results that most closely mimicked a manual visual detection of body movement.

- (4) *Group Movement Modeling*. For each frame of video, the algorithm counts the number of participants who were marked as 'moving' in close temporal proximity. ⁵ This produces a model of group movement a time series of the number of people moving in any given video frame.
- (5) *Inventory of Group Movement Events*. The algorithm counts the size of all group movement events in a Session. Movement event size is calculated as the peak number of simultaneously moving persons detected between two frames when no one was moving.

I graphed the resulting model of group movement in order to do analysis of the group movement dynamics by inspection. For instance, it was possible to see when people moved in relation to the when someone was speaking, similar to the analyses performed by (Condon & Ogston, 1966). Furthermore, I made probability calculations as a measure of embodied synchrony, comparing the frequency of movement events of size 1 to events of size greater than 1. In other words, when one person begins to move, what is the probability that one or more persons will also start moving? The results of these analyses are given in Chapter 5.

Transcript Analysis

The algorithmic video analysis methods were designed to test the observation (described at the end of Chapter 1) that Quakers' practice of silence is characterized by recurrent waves of embodied group activity, synchronous in time. My approach in analyzing the transcripts was to build on this temporal analysis of Quaker practice by locating the practices and experiences Quakers describe in the temporal order of a worship gathering. This produced a timeline-like sequence of a typical worship gathering. I then sought out, based on Quakers' descriptions and observation in Quaker worship, thematic links between descriptions of practices located at similar points on the timeline in order to determine from the materials themselves an appropriate way to segment the timeline. Based on thematic clusters in the ways Quakers described their practices and experiences in the unfolding temporal order of worship, I was able to distill a minimal set of categories that seemed to adequately account for all the major, differing ways of 'doing' silence in Quaker worship. These thematically-derived temporal categories are reported in Chapter 6 as five distinct ways that Quakers 'do' silence in worship, three of which I focus on in depth: *settling*, *ministering*, *gathered*.

The algorithmic temporal analyses of Chapter 5 combine with the thematic temporal analyses of Chapter 6 to yield a mixed-method, quantitative and qualitative perspective on the Quaker practice of silence.

⁵ Operationally, movements are considered to occur 'in close temporal proximity' if they occur within 6 seconds of each other. This value, too, was settled on as most adequately mimicking my own manual visual coding.

5 MAKING SILENCE TOGETHER

This dissertation began with a gentle scolding. I described how I came to be disabused by Quakers of my misconception that silence is nothing at all. Quaker Meetings provide a peculiarly effective learning environment for discovering the meanings and uses of silence, which led me to make it the central phenomenon of interest in this dissertation. I am certainly not alone in having harbored my misconception about silence; it is rather typical of social science and, arguably, contemporary Western culture, to emphasize talk and text to such a degree that silence is excluded as a non-phenomenon. When even a cursory glance at the function of silence in everyday life reveals a wide assortment of familiar experiences (see Chapter 3), such exclusion may reflect our uncomfortable familiarity with silence more than our ignorance.

Chapter 3 categorized some of the ways silence is used and experienced in everyday social interaction, setting the stage for showing how Quaker silence differs or is consistent with common genres. Using the methods I developed and described in Chapter 4, this chapter presents an analysis of Quaker group silence. Specifically, my goal is to test whether my observations of group synchrony, described at the end of Chapter 1, have empirical support.

This chapter and the one that follows form the analytic core of the dissertation. The chapters are distinguished by primary data source and analytic focus. The approach in this chapter is empirical, mostly relying for evidence on direct observation and video recordings of Quaker worship. The analysis notably pays little attention to talk; that will be a focus next chapter. The analytic focus here is the landscape of embodied activity, populated by sounds and silences, quakes and rustles, shiftings and fidgeting, that Quaker bodies make in the course of silent group worship. Using software I wrote for the task, I perform a time-based quantitative analysis of embodied practice in Quaker worship gatherings. I discover patterns that suggest Quaker silence is characterized by embodied synchrony, explainable as a collaborative achievement.

This chapter creates conditions for a more interpretive analysis in the chapter to follow. Having established some empirical basis for viewing Quaker silence as a collaborative achievement, the next chapter will further develop this idea by introducing as data transcribed talk from Quaker worship gatherings. The talk is drawn from authentic Quaker worship. It is what Quakers say to each other during worship *about* what they do during worship. This will serve two

goals: (1) to demonstrate that Quakers themselves experience the silence as a collaborative practice, and (2) to illuminate Quakers' subjective experiences of group silence as an occasion for creative insight and mystical union.

Silence and Embodiment

It is a recurring theme in this dissertation to emphasize the *embodied* practice of silence, as opposed to a merely *acoustic* characterization. That said, acoustic aspects of the embodied practice of silence are often the most salient to those present. When I listen to what the silence of a worship gathering sounds like, I hear the sounds that living bodies make, some of which are very subtle indeed: the sound of breathing, the sound of slight shiftings of weight in chairs, a sniffle, a scratch, uncrossing and re-crossing legs, parting lips, opening and closing eyelids. All living bodies constantly make sound, if only the beating of the heart. I will often in these pages use terms that seem to emphasize the salient acoustic aspects of silence. It should be borne in mind, however, that 'silence' remains a shorthand for the whole, multi-sensory communicative ecology of the moment. Emphasizing different sensory modalities brings different features of embodied practice into the foreground.

The analysis of the embodied practice of silence in this chapter uses video data. As a result, the *visual* aspects of the practice are emphasized. This approach provides a number of affordances that better serve the analysis compared to an audio analysis. First, measuring pixel-level differences from frame to frame is far more accurate than audio-recording for detecting the extremely subtle movements that constitute the embodied practice of silence. I had two microphones recording audio of the Quaker Dialogues, one under the panoramic camera and one hung from the ceiling above it. While adequate for hearing and comprehending Quaker talk, they were inadequate to capture tiny sounds and movements. These occur below the accuracy threshold of the microphones, otherwise known as the 'noise floor,' but, importantly, *above* the threshold of human hearing. So while those present were privy to the subtler acoustic aspects of silence, (e.g. with eyes closed), the microphones unfortunately were not. The video camera, however, picks up even very small differences from frame to frame as people make subtle movements in the silence.

Another affordance of the visual analysis of silence is the ability to accurately localize movement, and attribute it to particular persons. Two microphones alone are inadequate for locating the source of any sound and it was key to my analysis to be able to attribute movements.

There are limitations to the visual approach: (1) Some large visual movements don't make much sound and so are misrepresentative of the soundscape of silence (e.g. tipping one's head from left to right). (2) Some loud sounds are made by small movements and so may go

undetected (e.g. a loud, voiced sigh). It is important to bear these limitations in mind lest we place too much emphasis on any one data point in isolation.

Before presenting this chapter's analysis, I'd like to briefly share some sensitivities from an emerging scientific field that links acoustic and ecological aspects of an environment. I believe it's useful here for clarifying the intimate relationship between sound, silence, embodiment and the immediate environment.

Hearing arguably fixes us in time, space and our own bodies more than the other senses do.... We can shut our eyes at will, but not our ears, and what we hear is penetrating and physical — a wave entering our head. Even the deaf perceive internal jangling and external sonic feedback. The tactile nature of sound — the way it bounces back to us from other surfaces — helps us locate ourselves in relation to our surroundings and to know what's behind us or around a corner. (Tingley, 2012)

The emerging field of soundscape ecology (Pijanowski, et al, 2011) records and studies the acoustic landscapes of wilderness and urban ecosystems, sometimes in order to make determinations about the health of animals and/or people who inhabit the landscape. Tingley (2012), a journalist, joined soundscape ecologists for fieldwork on a study of silence in the deep wilderness of Alaska's Denali National Park:

He'd never set up a station in November and December before. Part of the point was to add to baseline measurements of the park's overall soundscape — another was to measure just how quiet the winter could be and preserve that sensation for posterity. "I suspect that it gets down below the threshold of human hearing," Betchkal said, adding duck seal, Gaffer's tape and an Exacto knife to the bag. "Below zero decibels." If he did manage to capture a stretch of quiet that extreme, I wondered, what would it reveal?

"Openness!" Betchkal exclaimed. He paused to chase his thought. "Quiet is related to openness in the sense that the quieter it gets — as your listening area increases — your ability to hear reflections from farther away increases. The implication of that is that you get an immense sense of openness, of the landscape reflecting back to you, right? You can go out there, and you stand on a mountaintop, and it's so quiet that you get this sense of space that's unbelievable. The reflections are coming to you from afar. All of a sudden your perception is being affected by a larger area. (Tingley, 2012)

Sound and its hearing situates the hearer in his body and environment. Unlike sight, which fixes the observer at a definite point, with a sharp boundary separating him from other bodies and the environment, sound physically interpenetrates observer and environment, such that one becomes *continuous with* the other. Listening to silence in an environment of extreme quiet, then,

is not a reduction of perception but rather an expansion of the listener's already indefinite boundary to encompass more of the environment.

. for three minutes, witness us still our movements and attune our ears to one of the quietest places left on Earth. In that window, I could hear the vastness of the valley — no sound marks materialized, like buoys bobbing on an empty ocean, to segment the sense of infinity. The landscape enveloped me, as Betchkal said it would, and I felt I was the landscape, where mountains and glaciers rose and shifted eons before the first heartbeats came to life. (Tingley, 2012)

Temporal Analyses of Embodied Synchrony

This section presents a temporal analysis of the embodied practice of silence in Quaker small group worship. The approach is visual and quantitative. The raw data are frames of video from six Quaker Dialogues. The question before us is whether these analyses support the observation I presented at the end of Chapter 1, that Quakers appear to move synchronously in their embodied practice of silence. Using visualizations of how Quakers move their bodies in the silence, I show that they do in fact demonstrate synchrony and we can see the wave-like structure of the worship gathering. Following the presentation of the quantitative temporal analyses, I propose interpretations for explaining what underlying social order may be responsible for the waves, and what functions they might serve in the religious life of participating Friends.

The data visualizations in this section offer an interpretive analysis of embodiment in the Quaker worship gathering. The temporal sequence of each individual's bodily movement is the raw measurable phenomenon from which I construct a model of the group's collective embodiment. My interpretive lens for these data is embedded in the algorithms I wrote to produce these representations. The fact that these analyses are produced by a computer should not be misconstrued as being somehow more 'objective.' They are still human interpretations—informed, in this case by long ethnographic participation. Being algorithmic, they should still be taken as theory-laden, but rigorously and consistently so. The algorithm is described in Chapter 4 under 'video analysis.' For the software, see (Steinbock, 2012).

The next several figures show step-by-step how an algorithmic model of group movement is constructed from the raw video data; we can see in stage how interpretation is applied and warranted. Figures 5.1-5.5 show different representations for the same 53-second video of silence from Quaker Dialogue session 2 (18-October-2010)¹. Figure 5.1 shows a frame of raw video, recorded on the panoramic camera. The vertical lines show the first step of analysis where the

¹ This video is available as a supplement to this dissertation in the Stanford digital archive.

analyst manually sets the bounding box on each participant's body. This is not as exact as one might hope as participants occasionally cross the boundary. (For this, and other caveats, see the *Limitations* section below.)



Figure 5.1: First stage of analysis — a frame of panoramic video with participants' body boundaries marked.

Figure 5.2 visualizes the next stage, which is the first step of automated algorithmic analysis. This analysis counts the number of pixels that change between consecutive frames. In the visualization in Figure 5.2, a pixel is painted green if it changes color from one frame to the next. To make this analytic stage more comprehensible as a static image on the printed page, I have layered the pixel differences for all 53 seconds onto a single image. We can inspect this image to see that participant #9 moved a large distance with his leg during the 53-second video. Participants #7 and #11 also show noticeable movements.

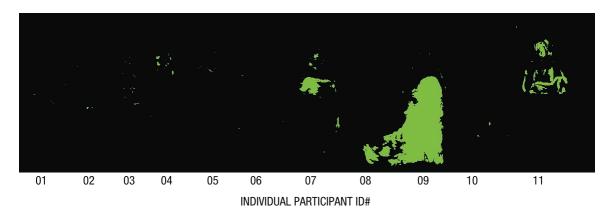


Figure 5.2: Second stage of analysis — analysis algorithm measures and visualizes pixel differences between successive video frames. (Here, showing the combined differences for 53 seconds of video.)

This 'frame differencing' technique (also known as motion energy analysis) follows that of algorithms designed for computer vision, which quantify the amount of visual change that occurs

between consecutive frames. This technique has been used reliably to study face-to-face interaction and synchrony in pair courtship and psychotherapy settings by (Grammar et al, 1999; Komori, Maeda & Nagaoka, 2007; Ramseyer & Tschacher, 2010). Contemporary scholars' use of automated algorithmic tools and digital video follows in the footsteps of pioneers in the study of embodied interaction (Birdwhistell, 1970) and embodied synchrony (Condon & Ogston, 1966) who constructed their analyses manually, using film as source material.

For my analytic purposes, the pixel-level measure of visual change is an adequate proxy for measuring the movement of Quaker bodies. Nevertheless, the appropriateness of the technique derives mostly from its situational particulars: Quaker worship gatherings are generally conducted in a controlled environment dedicated to the occasion. The technique works only because participants' bodies are the only moving objects in the video. The camera has a fixed location in space, offering a perspective of people moving against a static background. If the camera were moving too, or if there were other people or objects moving in the background, it would be difficult (though not entirely impossible) to algorithmically separate the bodies from the visual background. The technique's effectiveness is not happenstance but an affordance of the environment Quakers organize for silent worship.

Figure 5.3 shows the next stage of algorithmic analysis. The visual field of the video having been divided up manually by the analyst into columns (see Figure 5.1), a time series dataset of pixel differences is then generated for each participant. The top section of Figure 5.3 graphs these time-series data, one row for each participant. The vertical axis is absolute number of pixels different between successive frames, normalized based on the maximum value. These normalized graphs make inter-subject comparison possible. We can see that our observations of Figure 5.2 are borne out quantitatively in this analysis. The large graph at the bottom of Figure 5.3 shows the sum of all participants' movement data at each time-step. Once again, these data are made possible due to the situational affordances of a worship gathering. Quakers worship in a circle, so a panoramic camera located at the circle's center produces a video that distributes participants' bodies more or less equally across the frame. This gives each participant relatively equal 'weight' in the analysis and makes comparison much easier than if some participants were much closer to the camera than others.

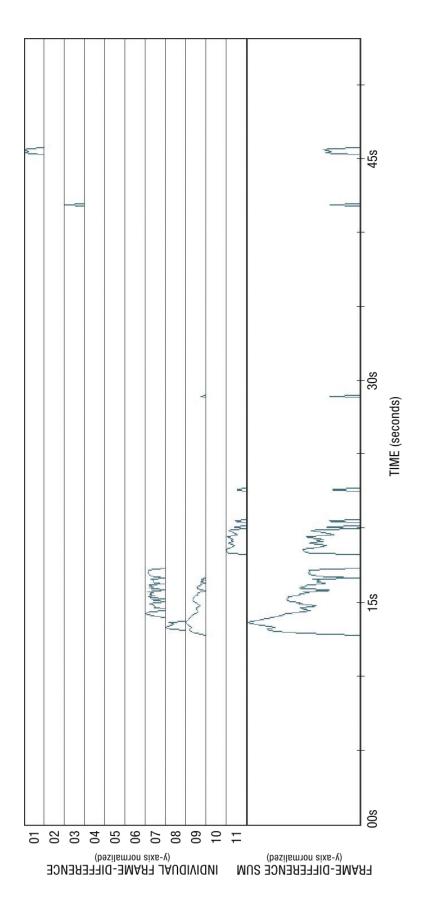


Figure 5.3: Third stage of analysis — time series of pixel-difference data for each participant (top) and sum of all participants (bottom).

Thus far, the analysis has dealt with 'raw' data. There is a one-to-one correspondence between the time series data in Figure 5.3 and actual pixel differences in the Figure 5.1 video. The data has not been reduced or down-sampled (apart from the filtering of noise artifacts noted in the algorithm's specification in Chapter 4). Figure 5.4 shows the first stage of data reduction, making it the most 'interpretive' of the analytic steps so far described. It is a model of individual movement, produced by It reducing the continuous time series data of pixel-differences to a binary time-series: moving or not-moving. A body is considered moving in a video frame if its pixel-difference value is above a minimum threshold of 50 pixels. (See the algorithm specification for how this value was arrived at.) That is, if more than 50 pixels changed from the previous video frame for a given participant, that frame is marked as 'moving.' This is visualized in Figure 5.4 for each participant as a 1-pixel-wide vertical line. Continuous stretches of color along the horizontal axis signify durations of continuous movement (pixel-differences consistently higher than the 50-pixel threshold). The transformation from continuous to binary data can be seen by comparing Figure 5.3 to Figure 5.4. Whenever the line graph in Figure 5.3 rises above the minimum threshold, the corresponding frame is colored in Figure 5.4.

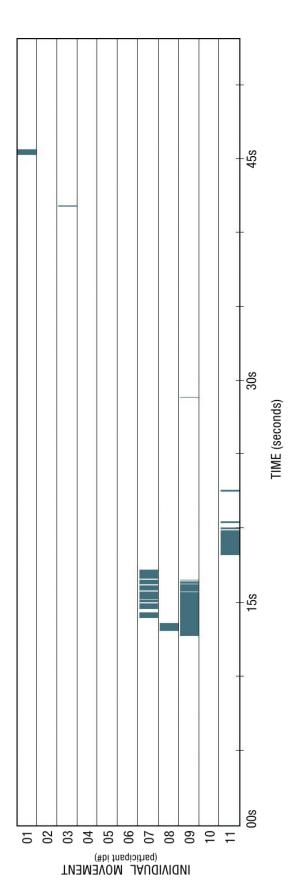


Figure 5.4: Fourth stage of analysis — model of individual movement, marking frames where pixel-differences are greater than minimum threshold (50 pixels).

The final stage of algorithmic analysis produces the representation in Figure 5.5 (referred to as the step-graph). This visualization is constructed from the binary data shown in Figure 5.4. Where Figure 5.4 is a model of individual movement over time, Figure 5.5 is a model of group movement over time. The graph shows the number of people moving in close temporal proximity. For the graphs shown, 'close temporal proximity' means 'within 6 seconds of each other.' (Once again, refer to the algorithm specification for how this value was chosen.) Consider the two blocks of individual movement in the upper-right corner of Figure 5.4. Taken individually, these are two independent events separated in time. In Fig. 5.5, these independent events are interpreted to comprise a single joint event by two participants (seen in the right hand 'hill' of Figure 5.5). Where two individual movements occur close together in time, this model of group movement labels it as a joint event, visualized as a 'stack' whose height shows the number of participants involved. Except in rare cases of perfect synchrony, these stacks have a hill shape, as one person begins moving before another person.

The step-graph is designed to be a model of collectively embodied actions that are visually and acoustically accountable to participants in the interaction. When the movement of one person can be sensed by others, the movement forms part of the environment in which others build their next-actions. These next-actions in turn transform the environment for others. The figures depict a relatively simple rule: a person is more likely to move in an environment where others are moving. Such a rule is sufficient to constitute group synchrony.

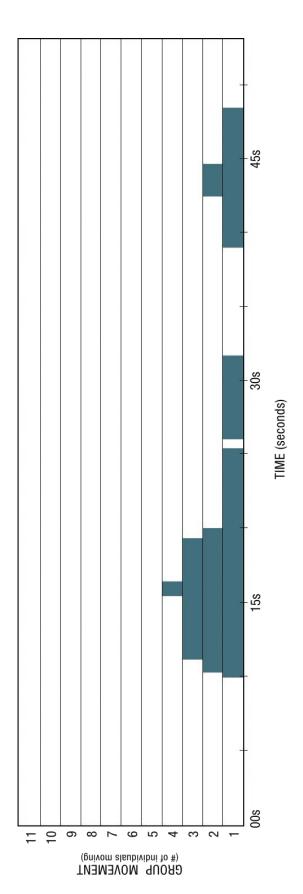


Figure 5.5: Fifth stage of analysis — model of group movement, showing the number of people moving in close temporal proximity to each other (within 6 seconds).

Comparing the step-graph to the original video highlights both the analytic power of this technique and its potential problems. For instance, Figure 5.4 shows movement for participant #8 near the 20-second mark, but this is actually the toe of participant 3 swinging into the area of participant 4. So the determination of this event as size 4 in Figure 5.5 is suspect. On the other hand, visual inspection of the original video shows participant 8's head slowly lowering over the course of the 53-seconds (he is possibly dozing off), but this is too slow to be registered as movement by the algorithmic analysis.

Now that the process by which these graphs are produced has been made clear, we are in a position to see what it is they show analytically. The series of Figures 5.1-5.5 displayed several different analytic visualizations of 53 seconds of Quaker silence, recorded during Quaker Dialogue Session 2. Figure 5.5 shows what appears to be a wave of embodied activity that up to four people participate in. It is followed by another small wave of two participants. Looking to the source video for comparison, the following event can be seen: participant #9 uncrosses his leg, places both feet on the floor, and grasps a writing implement in both hands. Before he completes the movement, participant #7 uncrosses her hands, scratches her wrist, and recrosses her hands. When she completes her move, participant #11 shifts his torso from side to side and raises his head. These events, involving three different individuals, occur over a span of approximately 15 seconds, emerging from a period of time in which no one was moving at all.

Such waves of synchronous activity are typical of worship gatherings, most noticeable during the period of time between the official start of worship and the first speaker. Speaking events introduce more complexity as speakers tend to move more than listeners, using gestures. Here is a running description of a series of waves occurring in the opening minutes of worship before the first speaker, visualized in Figure 5.6.

13:00 - 13:05 Friend #4, who may be nodding off, raises his head from his chest. #7 shifts the position of his elbow planted on his knee. [Movement of size 2 detected.]

13:05 – 13:08 [Stillness detected.]

13:08 – 13:15 #1 lowers his head to face the floor instead of the ceiling and bobs his clasped hands up and down. #4 slowly lowers his head back to his chest (measured below minimum threshold). [Movement of size 1 detected.]

13:15 – 13:25 #6 looks down towards his hands clasped in his lap, then pops his elbows out a few inches then back again. #4 lifts his neck slightly, with chin still to his chest, listing to the side. #1 begins to raise his head. [Movement of size 3 detected.]

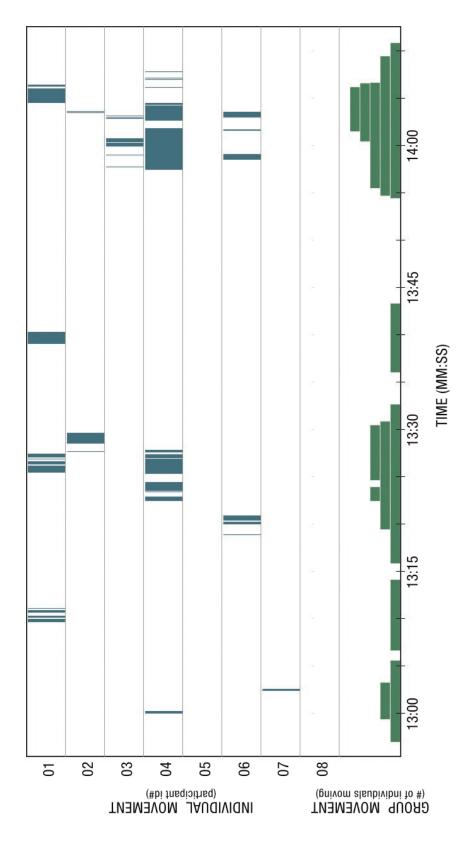


Figure 5.6: Visualization of waves of synchronous group movement over 78 seconds.

13:25 – 13:33 #4 abruptly lifts his head and leans back, opens his mouth briefly, stretches his left leg then right leg out in front of him. Before #4 crosses his ankles, #1 finishes raising his head and lowers his clasped hands between his legs. #2 takes a deep breath and moves his hands from sitting separately on his lap to clasping. [Movement of size 3 detected.]

13:33 – 13:39 [Stillness detected.]

13:39 – 13:43 #1 raises one hand to his forehead, palm facing in, and props his elbow on the other hand. [Movement of size 1 detected.]

13:43 – 13:45 [Stillness detected.]

13:45 – 13:54 #3 tips her head back and #4 tips his head forward (measured below minimum threshold). #4's head slowly drifts forward to his chest (below threshold). [Stillness detected.]

13:54 – 14:10 #4 lifts his head and coughs, bringing his hand to his mouth. #6 lifts his hand scratches one cheek, then the other while #3 lowers her head and #4 leans forward and side-to-side to re-situate himself in his chair. After six coughs, both #4 and #6 lower their hands back to their laps. #2 lifts his head. #1 removes his hand from his face and reclasps hands in his lap. #4 leans well back in his chair and opens his mouth to breathe.

[Movement of size 5 detected.]

14:10 – 14:18 [Stillness detected.]

Figure 5.7 shows a synoptic view of an entire Quaker Dialogue Session (Dialogue Session 1, 11-October-2010). Time runs left to run, and top to bottom over seventy minutes. Periods of talk (purple) are colored differently than periods of no-talk (blue). There are too many data-points to show detail at this small scale, but one can see the overall dynamic of the gathering. Notice the greatly increased activity at the start and end of the session compared to the time of formal worship in the middle. The period of solid purple at the beginning of the chart shows increasing activity as Friends arrive in the room, take their seats, and engage in opening discussion. The transition to silent worship is evident in the sudden drop in group movement matched with an end of talk (near the start of the fourth row). Near the end of the session, Friends signal the end of worship without talk as the whole group moves around before before returning to the lively movement and talk of post-worship conversation.

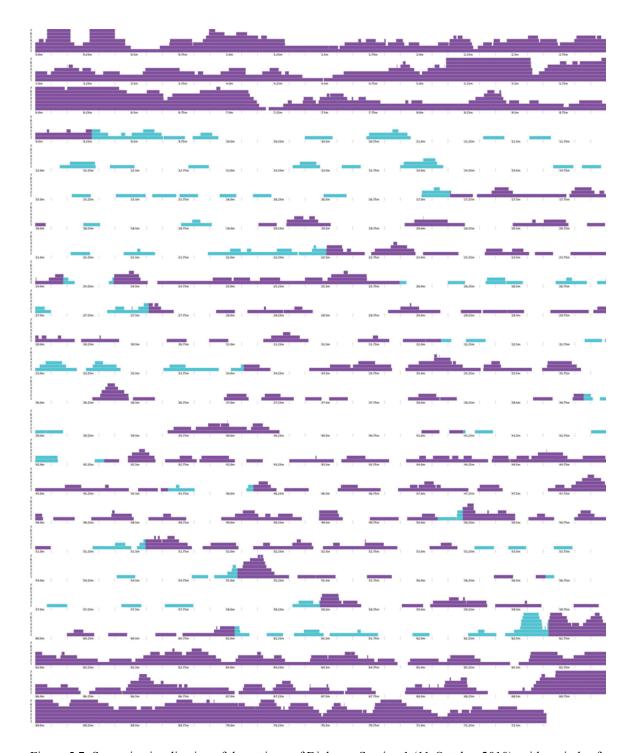


Figure 5.7: Synoptic visualization of the entirety of Dialogue Session 1 (11-October-2010), with periods of silent worship colored blue and all other periods (talk and non-worship) colored purple.

The following table (Table 5.1) gives a summary of all detected movement events and their sizes over all six recorded worship gatherings. Movement event size is calculated as the peak number of simultaneously moving persons detected between two periods of stillness, (as visualized in the step-graphs above, e.g. Figure 5.6). The top row shows session numbers and the number of attendees. Table rows show the number of movement events recorded at each size level (up to the maximum possible given the number of attendees). Two totals are given: total number of events at all size levels, total number of events larger than one person (i.e. the number of *group* movement events).

Event Size	Session 1 (N=8)	Session 2 (N=11)	Session 3 (N=13)	Session 4 (N=12)	Session 5 (N=6)	Session 6 (N=13)
1	14	12	6	1	8	2
2	22	12	3	1	8	1
3	15	12	3	2	12	4
4	20	6	6	2	16	6
5	5	9	5	6	8	4
6	11	13	1	4	14	7
7	4	4	1	4		4
8	4	4	2	3		2
9		2	0	1		2
10		3	1	5		1
11		0	1	3		2
12			5	0		2
13			0			0
Total	95	77	34	32	66	37
Total > size 1	81	65	28	31	58	35
Probability of event > 1	0.85	0.84	0.82	0.97	0.88	0.95

Table 5.1: Table of movement event sizes for each Quaker Dialogue session. Bottom row shows probability of event size greater than 1.

From this table we can make a probability calculation to provide a crude but effective test of the basic assertion of embodied synchrony. Except in rare cases of perfect synchrony, movement events begin with one person. When that one person begins to move, what is the probability that one or more persons will also start moving? This is equivalent to asking, how frequent are events when only one person moves versus more than one person? The bottom row of Figure 5.8 shows

the probability calculations for each session, taken by dividing the two totals. For example, in Session 1, 85% of the events were group movement events (81 out of 95), i.e. 85% of the time that someone started moving, someone else starting moving as well. Over all sessions, the probability was in the range of 82% to 97%, with a mean of 88.5%.

Given the small sample sizes involved, these numbers should be taken as rough approximations. I present them only to justify the observational claims that (1) moments where only a single person moves in a worship gathering are relatively rare, and (2) participants tend to cluster their movements in close temporal proximity with one another. These claims are supported by the numbers and by direct visual inspection of the visualizations.

Limitations of the Group Movement Model

It is not possible to write automated software capable of discerning subtleties of movement, gaze, gesture, and so forth with the sensitivity of a human observer, let alone an observer well-acquainted with the embodied practices of interest. For analysis of minute details of social interaction, human observers are far and away more accurate for discerning features of contextual relevance, precisely because what is or is not contextually relevant cannot be finitely prespecified for the algorithm's benefit. The sound of a sigh, for example, may be construed by human participants as deeply significant with respect to its interactional context — reverence for what was just spoken, for example — but the same exact sigh performed elsewhere in time may be construed as inconsequential and pass unnoticed. An algorithm that depends on pre-specified categories and thresholds for what constitutes a significant feature will never be as accurate. Algorithms that are more adaptive to moment-to-moment dynamics are a step in the right direction but still suffer the category problem which cannot anticipate the ingenuity of human beings as to what may or may not constitute communicative behavior.

All this being said, the inflexibility of algorithmic analysis is also its strength. My intention was not to program interpretation-free analysis software — an impossible task, in any case — but rather to create a tool that would apply my own interpretive lens with perfect consistency. The assumptions built into the algorithms were my best attempts to be reasonable, given the constraints of the technology and diminishing returns on analytic accuracy for greater effort, informed always by my knowledge of Quaker practice. As I have re-iterated, the effectiveness of this analysis depends mostly on affordances offered by the situation rather than technological or statistical sophistication. In some cases, those affordances were disrupted by situational changes, as when a member brought her knitting to the session and made nearly constant small movements (which resulted in fewer, but more emphatic periods of stillness). ² I also had to make seemingly

² I attribute the low total of detected events in sessions 3, 4 and 6 to the presence of knitters whose near-constant movements made the separations between group movement events less clear to the software.

arbitrary determinations, such as the number of pixels that constituted a significant difference from one frame to the next and whether to count the movements of large people differently than those of smaller people. These choices were often guided by iteratively trying out different options and inspecting the results to see if they corresponded or differed from how I interpreted the raw video as an 'expert' observer. Again, the goal was to develop an adequate 'agent' for my own interpretation of the video, one whose innards could be tweaked as my own perceptiveness developed.

Additionally, the technology imposed its own limitations on the explanatory power of the software. The panoramic video camera was a pre-production prototype with a recording resolution (1152 x 320) that was not as high as I would have liked. Occasionally the autofocus on the camera malfunctioned resulting in blurry video. Adding to this, the 'de-warping' software for converting raw video to a horizontal panorama added compression artifacts to the image. These factors contributed to a less-than-perfect video record of events, but nevertheless adequate for the sort of comparative measurements being made here. Notably, low-resolution, focus blur and compression artifacts affect the entire image equally, preserving the comparability of time series data extracted from the different parts of the image. Threats to comparability were more likely to come from human factors, such as participants who knitted.

Social Calibration

In the preceding section I offered quantitative temporal evidence that the practice of Quaker silence is organized into embodied waves of activity. In this section I use the waves phenomenon as a point of departure for an interpretive analysis of Quaker silence. I introduce three kinds of 'social calibration' as conceptual frames for understanding some practical functions that silence plays in the organization of the sensory and social environment of a worship gathering.

There are three kinds of 'social calibration' that I wish to describe. The data indicate that all three are functioning in the silence. I discuss the first two in this chapter. The third relates to the subjective experience of participants in a worship gathering, and will be addressed in the next chapter.

I use the term 'calibration' here in the sense of calibrating a measurement instrument by adjusting its dynamic range to suit the system or environment which it is measuring. For instance, a weighing scale is first calibrated with a known standard weight to correct deviations. A tare weight may then be used to calibrate the scale for a weight range appropriate for the object to be weighed.

The three kinds of 'calibration' I wish to discuss in relation to the practice of Quaker silence are as follows:

- (1) Calibrating the threshold of discernible sense data: Silence re-calibrates the threshold of discernible sense data, the threshold at which phenomena become admitted into conscious experience.
- (2) Calibrating individual behavior to local social-acoustic environment: Calibrating one's behavior to the local acoustic environment is a basic way that individual behavior is situated in its social context.
- (3) Calibrating individual thought to local social environment: The social environment of group silence provides an external resource for the organization of silence in thought.

Calibration of Discernible Sense Data

A group silence is an occasion for people to notice what silence consists of and it first of all consists of the tiny sounds and movements that living bodies make. These sounds are not normally noticeable because the ordinary scuffle of activity and talk covers them up — often deliberately as a strategy of avoidance, as I discussed in Chapter 3. When the scuffle subsides in the deliberate silence of a worship gathering, the subtle sounds that living bodies make become noticeable. In other words, silence re-calibrates the threshold of discernible sense data, the threshold at which phenomena can become part of conscious experience. In this sense, silence works through exclusion, like an epistemic sieve: systematically excluding certain features of the present environment to highlight others and make them salient (Goodwin, 1994).

[P]erception only operates upon difference. All receipt of information is necessarily the receipt of news of *difference*, and all perception of difference is limited by threshold. Differences that are too slight or too slowly presented are not perceivable. They are not food for perception. (Bateson, 1979)

As argued earlier, silence is not an absolute volume level as reported by an 'objective' measurement device. It is, for one, *temporally relative*, in that it is *quieter-than* what came before it and what follows it. Second, it is *socially relative*, in that it is what is accountable to the participants *as* silence. Accountable silences happen during interaction even in 'objectively' noisy environments, which we can locate by asking "Whose silence is it?" Group silence, which is the focus of this dissertation, requires the participation of multiple people and often transforms the local social environment. They contagiously recruit others to join in, thereby increasing the apparent magnitude — and thus recruiting power — of the silence (see Chapter 3, Silence in Social Interaction).

It should be evident that the local acoustic environment is a local *social* environment, in that sound and silence are consequential to human social activity. The three kinds of 'social calibration' under discussion here are three ways in which sound is so consequential. The first has to do with the way that silence functions as a kind of background against which the foreground of discernible, accountable, phenomena may be perceived by human senses. 'Silence,' in this case, is a way of referring to this background. As I have said, and as gestalt theories of perception make clear (Rubin, 2001), the status of some field as background with respect to some foreground does not mean the background is empty or featureless. It is merely *taken to be background* for the purpose of discerning foreground features. There are many contexts in which we transform the background to make discernment easier. Turning down the lights in a movie theatre makes it easier to discern the subtler details on the movie screen. Turning down the music on the stereo music makes it easier to discern the words you're telling me. Asking other audience members to stop talking helps one to hear the lecturer.

We are uncovering the interactive management of the social-acoustic environment as a space in which Quaker-relevant features can be discerned and Quaker-relevant distractions filtered out. The relative quiet of a worship gathering makes a new realm of phenomena discernible to the senses of those present. These phenomena are not normally discernible in such large groups because it is rare that a group the size of a Quaker Meeting gets quiet together. Gatherings of many persons are, in our Anglo-American culture, for the most part occasions for much talk and rabble. Religious and contemplative practices are often occasions that organize group silence, whether for meditation, prayer, introspection, or secular 'moments of silence.' One clear consequence of such rare silences is that new realms of discernible phenomena become discernible that are normally covered up by the babble of gatherings. Group silence re-calibrates the threshold or range of discernible sense data, the threshold at which phenomena become part of conscious experience. With the systematic exclusion of loud sounds from the room, tiny sounds becoming discernible and accountable. (In the deep silence of a Quaker Meeting, they may even become apparently loud.) By becoming accountable, they become *consequential*. And their consequence is, I'm proposing, the embodied waves phenomenon. Tiny sounds — little susurrant rustles and shuffles — are the semiotic material upon and with which the waves are performed. These are subtle materials indeed, quieter than my video camera microphones could detect, which make for a subtle display of group coordination. Its subtlety is what makes the achievement so covert, easily unnoticed, except to one who has been instructed to 'listen to the silence.' What otherwise might appear to be an inexplicable synchrony is here seen to be an intelligible social phenomenon.

This perceptual calibration is not unique to a Quaker Meeting. It exemplifies a basic fact that perception in social environments is a social achievement: the embodied behavior of co-present others is consequential to one's own ability to perceive items in the environment (Goodwin, 1994). Contrary to what perceptual psychology may define as adequate resources for perception (i.e. physiological and cognitive faculties), people routinely depend on others to help them perceive and make sense of their immediate conditions. In the Quaker case, 'immediate conditions' include the embodied behavior of participants, which may be appropriated by the group as resources for the production of silence, whether the individuals intend it or not. It is not an intended goal of Quaker silent worship to hear the tiny sounds of others, but mutual sensitivity to the presence of others *is* a building block in the collaborative construction of the intended goal, group religious experience. What that experience is like for Quakers themselves and how it is intimately dependent on the presence of others is I subject I address in the next chapter.

Calibration to the Social-Acoustic Environment

This chapter has given temporal descriptions of Quaker silence, noting that it is organized into waves of synchronous embodied activity. The reader likely has an intuitive explanation for why these waves occur. This section is an attempt to make that intuition explicit and ground it in familiar social settings, through the concept of calibration to a social context.

Where the first kind of calibration described how silence calibrates *perception* of the social-acoustic environment, the second describes how silence calibrates *production* of the social-acoustic environment. When silence re-calibrates sensory experience such that tiny body noises become accountable — or accountably *absent*— features of the environment, silence renders them potentially *consequential*: these features become available as resources for the organization of ongoing activity. Simply put, people construct behavior differently in an environment where they notice silence to be occurring. Likewise, they behave differently when they notice silence to be *not* occurring. This reflects a more general claim: calibration to the local acoustic environment is a basic way that individual behavior is situated in its social context.

From Rule to Realtime

The sociologist-philosopher, Alfred Schütz, writes of the "mutual tuning-in relationship" with which concerted activities are achieved in face-to-face social interaction. My approach here takes direct inspiration from Schütz's paper, "Making Music Together: A Study in Social Relationship" (Schütz, 1951):

...analysis of the social relationship involved in making music together might contribute to a clarification of the tuning-in relationship and the process of communication as such. (Schütz, 1951, p. 96)

It is precisely this mutual tuning-in relationship by which the 'I' and the 'Thou' are experienced by both participants as a 'We' in vivid presence. Instead of entering here into the complicated philosophical analysis of this problem, it may be permissible to refer to a series of well-known phenomena in the social world in which this precommunicative social relationship comes to the foreground. (*Ibid.*, p. 79)

Consider some contexts where the social-acoustic environment is closely managed. A loud belch at a rock concert is practically a non-event, i.e. inconsequential. The same belch during a wedding ceremony might be grounds for a fistfight, i.e. seriously consequential. People are exquisitely attuned to conformity to locally-organized norms of sound and silence and do constant monitoring to keep with the flow and not stand out. At a cocktail party, speakers must constantly calibrate their talk to immediate conditions in order to communicate: raising one's voice to be heard above other voices, but not loud enough to be overheard; lowering one's voice during a break between songs on the stereo.

At symphony-style concerts popular among the leisure class of the West, there are rules about the kinds of sounds audience members are expected to make and not make with their bodies. During the musical performance, one is expected to not talk, cough, belch, or otherwise make body noise — especially during the quiet parts, *pianissimo*, which are common in Western classical music. (One may get away with it if the part is *forte*.) After performances are complete, audience members are expected to become participants in the acoustic environment by clapping their hands together. To achieve the group phenomenon known as 'applause,' audience members must coordinate themselves so as to produce the appropriate volume, duration and timing of individual clapping. Members attend to their neighbors' behavior as well as the perceivable aggregate applause, in order to determine how and when to clap appropriately. Returning to Schütz's analogous case of two musicians performing together:

...making music together occurs in a true face-to-face relationship — inasmuch as the participants are sharing not only a section of time but also a sector of space. The other's facial expressions, his gestures in handling his instrument, in short all the activities of performing, gear into the outer world and can be grasped by the partner in immediacy. Even if performed without communicative intent, these activities are interpreted by him as indications of what the other is going to do and therefore as suggestions or even commands for his own behavior. (*Ibid.*, 1951, p. 95)

Key to the idea being developed here is that realtime practice does not unfold as a mechanical expression of pre-determinate social rules, but as a *moment-to-moment negotiation by co-present persons*. In the sorts of self-organized social occasions that are the focus of this dissertation — as opposed to more hierarchical, institutionally-circumscribed settings — participants share the responsibility of conforming to and co-determining what is appropriate at any given moment.

Each [performer] has, therefore, to take into account what the other has to execute in simultaneity.... Either has to foresee by listening to the other, by protentions and anticipations, any turn the other's interpretation may take and has to be prepared at any time to be leader or follower. (*Ibid.*, 1951, p. 94)

Even the symphony hall, seemingly tightly regulated by its bourgeois formality, can occasion self-organized subversion. The neat rules for applause are complicated by the fact that Western symphonic compositions often consist of several sub-compositions, or 'movements.' During the orchestra's pause between movements, audience members are allowed to cough, as it's recognized that some kinds of body noise are important to let out for personal comfort and health. However, one is *not* supposed to applaud between symphonic movements. Yet despite the fact that this rule is common knowledge among symphony-goers, anyone who has been to many symphonies surely has experienced a concert where applause did occur between movements. We can't know how it happened that someone transgressed and started clapping — it may have been an enthusiastic first-timer, or an inebriated listener, or a chronic rule-breaker. But if it were merely a rare case of individual transgression then we would expect to hear one or two mistakes against the vast conforming silence (apart from coughing). But that is not what happens. What happens is that a kind of reluctant applause erupts, distributed across the whole audience but concentrated in proximity to the initiator(s), as people join in with the transgression. Regardless of the intention of the initiator (if any), applause is an activity that one is expected to join in with, and this tendency is difficult to resist even when it is 'against the rules.' At such times, we may hear selfconscious laughter from audience members as if to acknowledge, excuse, and perhaps legitimize their complicity in the transgression.

The fact that appropriate applause is achieved routinely by audience members, with no central direction and little conscious effort, shows that sophisticated group coordination in cultural contexts tightly regulated by arbitrary rules can nevertheless become second nature. Both the symphony and the Quaker worship gathering are contexts where individuals learn to 'become' a group of people, gathered into a common experience. In both cases, sound and silence play a central role as means for self-organization, without central control, on a moment-to-moment basis. Similar kinds of 'human flocking' behavior can be seen in riots, rock concerts, sporting events, school dances, classrooms, question & answer sessions, dessert tables, and many

other occasions where initial path-breakers create a cover for others to deviate from convention, however momentary, fragile or arbitrary that convention may be.

In short, the logic of rules and rule-following leaves something to be desired when we try to formulate an explanation of what people are doing together in realtime, embodied practice. In the Quaker case, and our other examples above, when we look closely at occasions of rule-following practice, we don't find a set of individuals falling in and out of line according to their private abilities and perseverances. Instead we find a marked correlation among individuals' conforming and deviating behavior. It is as if the timing of obedience and transgression was coordinated, as if the group were coming to some working consensus as to the current proper level of adherence. We might go looking for evidence that individuals are communicating to each other, each announcing their own plan of action and then working to agree on what the level of adherence will be, for any given moment. On the other hand, members of the symphony audience don't stop to have a meeting to decide how long and how loud to applaud. Quakers and symphony-goers both achieve their coordination without saying a word.

Rules are always and only applied in the present moment of immediate experience. The life they live there is a dynamic one, continuously transformed by co-present persons into an ongoingly intelligible reality, but one that is constantly in flux. Social reality is temporally organized, and what is appropriate in one second may be inappropriate in the next, because what came before has changed where we are now. The organization of Quaker silence into waves of embodied activity, producing audible sound and visible movement, testifies to the fact that 'rule-following' and 'rule-making' can occur on a scale of fractions of a second.

Calibration and Embodied Waves

Where in the world we look for a rule to follow, there we find no rule. We find instead a *context* for ongoingly conceived collaborative action, co-organized moment-by-moment by embodied persons.

A Quaker worship gathering is an occasion where individual behavior is situated in the local social-acoustic context, both by conforming to it and by participating in its transformation. Compared to the dynamic range of silence and applause in a symphony hall, Quaker silence is distinctive for the level of subtlety at which this phenomenon plays out. The deep and continuous silence of the gathering makes even the smallest of sounds stand out as consequential features in the room's soundscape. Most overt embodied behavior of the kinds performed at Quaker gatherings (posture shifts, leg crossings, etc.) make sound of some kind, particularly at the interface of body parts with each other and with objects in the environment (chairs, purses, etc.). I discussed in the previous section on social calibration how a silent environment makes these tiny sonic events apparent and accountable to present persons.

If Quaker worship were merely a collection of separate individuals who happen to be meditating in the same space, then it would be reasonable to expect to hear the rustles happening at random times throughout the course of the Meeting, with accidental overlaps happening with the statistical profile of a uniform distribution. As this chapter has shown, that is not what happens. Instead, the acoustic profile of Quaker worship is a series of *waves of embodied sound* and silence. Accountable body noises almost never occur in isolation. They occur in clusters, where an initial noise event is the leading edge of a wave-front as others join in with the 'transgression' of silence.

In the deep quiet of Quaker worship, a sound as subtle as a scratch or as overt as a cough transforms the immediate social-acoustic environment. Though a norm of quietude held sway a moment before, the newly accountable body noise momentarily rewrites the 'rule of silence' into one that permits a little sound. The initiator creates a 'cover' for others to transgress and the gathering becomes a situation where others have permission to make some noise. In turn, the addition of more body noise further reinforces the transformation of context, making it even more permissive, and precipitating a positive feedback cascade of sound. A crowd draws a crowd. These dynamical properties fit the profile for a complex system, self-organizing emergent properties without central control (Holland, 1992; Kauffman, 2000).

Why is this significant? It is evidence that the group *is* a group and not separate individuals. It is evidence that the individual participants—whether they are consciously aware of it or not—attend to the subtle tremors of others and use them as points of departure for their own (subtle) embodied action. It is evidence of interactive coordination with embodiment as the material medium. I am tempted to call some of these actions 'involuntary' — coughing, scratching, etc. — but I can't justify that designation when the timing of such actions is synchronized across persons. They may be involuntary, but not in the sense of being sub-conscious and physiological, but being supra-conscious and social.

Though a temporary digression into group rustling is collaboratively constructed as permissible, the gathering inexorably returns to silence. The historical context of silence continues to hold sway in Quaker worship, as it has for over three hundred and fifty years. With participants having made a little body noise, coughed, sniffled, re-positioned and re-situated themselves, the wave of embodied sound breaks on the enduring shore of silence and retreats. Stillness and quiet return. Just as inevitably, another wave will come. It, too, will pass. Over and over, Friends will hear the sound of silence returning.

Making Silence Together

What can the organization of embodied activity into synchronous waves tell us about Quaker worship as relevant to the concerns and religious lives of Quakers themselves? In the symphony

hall, music performed on stage by the orchestra is the main event. It is what attendees came to hear. Coughing and applause are sideshows and side-effects of the performance. At the Quaker Meetinghouse, the main event is group silence and what it precipitates. My descriptions and analysis suggest that Quaker group silence is partly constituted by (1) members' mutual awareness of each other's bodily presence, and (2) the sounds and silences collaboratively produced by means of this 'mutual tuning-in' relationship.

As I begin, in the next chapter, to examine the subjective experiences of Quakers participating in group silence, we can see that Quakers' mutual tuning-in actually bears resemblance to the embodied efforts of symphony musicians. Both are simultaneously concerned with inner time and outer life. For Quakers, inner time is a deliberate herding of attention toward the present moment. For musicians, it is the moving inner pulse of the musical composition. Paramount to the concerns of both is the unification of separated individuals into a common experience, synchronized in time by embodied practice.

This social relationship is founded upon the partaking in common of different dimensions of time simultaneously lived through by the participants. On the one hand, there is the inner time in which the flux of the musical events unfolds.... On the other, making music together is an event in outer time, presupposing also a face-to-face relationship, that is, a community of space, and it is this dimension which unifies the fluxes of inner time and warrants their synchronization into a vivid present.... This relationship is established by the reciprocal sharing of the other's flux of experiences in inner time, by living through a vivid present together, by experiencing this togetherness as a "We." (Schütz, 1951, p. 96)

Deep, shared silence experienced as a sense of unity is the central religious experience of a Quaker community. By discovering the means and timing by which Friends arrange to make noise together, we gain insight into the means by which they make silence together.

Those who know don't talk. Those who talk don't know.

— Laozi¹

¹ (Mitchell, 1992)

6 WHAT SILENCE SAYS

In the previous chapter I displayed and interpreted a phenomenon that occurs in the practice of Quaker silence: as participants gather in each other's presence, they arrange to synchronize their embodied sounds and silences together. Group synchrony is evidence for this dissertation's central claims: (1) Quakers tune into one another's bodily presence in the silence, (2) the copresence of others is consequential for their conduct in the gathering. This chapter further develops these claims by looking at the subjective accounts of Friends participating in Quaker silence together. By the chapter's end, I enter the ineffable territory of mystical experience in Quaker worship, building on the insights of William James and Ludwig Wittgenstein in order to articulate the relationship between the embodied practice of silence and mystical experience. Over the course of the chapter, I show that at virtually every point in the sequential unfolding of a worship gathering, even in their most 'interior' of subjective experiences, Friends make use of each other as social resources in the collaborative performance of a worship gathering. In short, *Quaker religious experience is a collaborative achievement and the embodied practice of group silence is the medium for that achievement.*

I ended last chapter with the beginnings of a speculation, that the synchronizing of embodied practice in a worship gathering may implicate a synchronizing of inner experience as well — a "reciprocal sharing of the other's flux of experiences in inner time, by living through a vivid present together," (Schütz, 1951). The 'inner time' of Quaker silence is the subject of this chapter.

In order to gain some insight into what the inner experience of a worship gathering is for Quakers, I introduce transcript excerpts as materials for illuminating my own observational accounts of Quaker silence. This analysis and its materials contribute to further understanding the complex temporal order of a Quaker worship gathering. I present my findings as a five-fold model of Quaker silence — five temporal regimes with five distinct ways of doing silence. Of these, I concentrate on the three that occur during the formal practice of worship. The model organizes my descriptions of observable and experiential characteristics for each kind of silence, and the sequential relationships between silences.

The five-fold model of silence was generated, on one hand, by temporal analysis of the observable conduct of Quaker worship in Meetings and Dialogues, and, on the other, content

analysis of how Friends describe their experiences in the Quaker Dialogue transcripts. Whereas Chapter 5 emphasized the empiricism of the former, the present chapter emphasizes members' perceptions and experiences in the latter.

In the six sessions of Quaker Dialogue I recorded and transcribed, Friends spoke and offered messages about the many practices that constitute Quaker worship in all its major aspects. To generate the five-fold model, I located these practices in the chronology of a typical Meeting. Some practices occur at specific moments, once or several times (e.g. officially starting Meeting, speaking in Meeting), whereas others are practiced throughout a worship gathering (e.g. quieting the mind).

Locating a practice in time does not mean assigning a clock time to it. My focus on temporality is primarily in terms of sequence, not duration. While the clock does play a minor role in the conduct of a Meeting — it being 'about an hour,' with intermediate stages having roughly typical durations — the 'internal clock' of a Meeting is an elastic mechanism, at times swiftly carrying participants into a deeply worshipful state, or at others languishing in unsettled restlessness for a whole hour. This variance is not a sign of disorganization, but rather further evidence that what Quakers are doing is difficult to achieve, sensitive to conditions, and variable in success from occasion to occasion. With no clock or liturgy providing an external mechanism for establishing consensual time, the Quakers assembled on any given day have before them the task of constructing a sense of shared time from scratch, moment-by-moment, using the embodied and historically-present resources on hand².

Accordingly, I give both 'etic' and 'emic' — experience-distant and experience-near — accounts of time in Quaker worship. For expedience of scholarly communication, I have relied mostly on sequential/linear time as the ordering principle. Since the Quakers I studied are typical Westerners, for them linear time is likewise the default order in their everyday lives. In the context of Quaker worship, however, participants conceptualize an *alternate* temporality and perseveringly adhere to it in thought and body. I present this alternate temporality as *cyclical*, *centripetal time*, and analyze the personal and collaborative practices used by participants to generate it.

This chapter's analysis could not be achieved using only the materials I recorded in the Quaker Dialogues. It required years of participant-observation in Pacific Friends' Meetings for Worship. There are a few differences between the conduct of each kind of worship gathering. Because of the relatively greater frequency of speech during a Dialogue as compared to Meeting,

² As the waves of silence attest to in Chapter 5, 'Quaker time' is a fluid, dynamic synchrony, sometimes at the scale of fractions of a second. A synchrony so organized, without external clock or metronome, can only be understood as a self-organized group achievement.

the temporal structure of the five silences differs — not in sequence, but by degrees. Dialogue is less formal than Meeting. Quiet times in Dialogues are not nearly as long. Most significantly, a typical Meeting of Pacific Friends has roughly an order of magnitude more participants (~100 vs. ~10). Quiet times have a correspondingly greater 'depth,' and spoken ministry a correspondingly greater contrast with the surrounding quiet. Because these differences are of degree and magnitude, rather than sequence or function, the five-silences model applies adequately to both, warranting the composite analysis I have done. I emphasize, as Quakers do, the Meeting for Worship, and call out differences between Meeting and Dialogue only if relevant to the analysis.

Sequence of a Quaker Worship Gathering

As a starting point for analyzing the overall temporal order of a Quaker worship gathering, I give in this section a composite description of the sequential practice of a Quaker worship gathering (both Meeting for Worship and Quaker Dialogue). My observations over several years revealed a sequence of stages that occurred consistently at virtually every gathering, suggesting it was important I characterize them. In the following pages, I enumerate the eleven-stage sequence that all worship gatherings conform to. Then I distill from these a minimal set of five interactional orders — the five ways of 'doing silence' at a typical Quaker worship gathering. A detailed analysis of three of these, those that occur during the formal practice of worship, form the bulk of this chapter.

Figure 6.1 depicts the eleven-stage sequence, further grouped into those that occur before, during, and after, the formal practice of worship. The transitions between these groups mark the boundaries between formal and informal practice, and are marked differently. Also, as the following descriptions detail, three of the stages are marked as 'optional,' though each for a different reason. 'Clarifying' is optional in that it occurs during Quaker Dialogue but not Meeting for Worship. 'Ministering' is optional because some Meetings for Worship happen where no one speaks. 'Gathering' is optional because, although Quakers always implicitly intend to reach this state, they may not achieve it at every worship gathering.

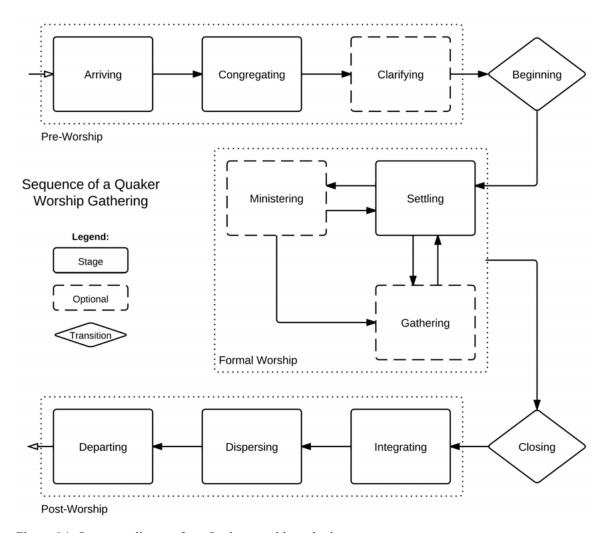


Figure 6.1: Sequence diagram for a Quaker worship gathering.

- (1) *Arriving*. Friends arrive at the appointed gathering place at the appointed time. The group pre-arranges the appointment so that these arrivals align in time and space. This is necessary for any 'gathering,' where the elements being gathered are the human participants. Pacific Friends have long agreed to hold Meeting for Worship every Sunday morning at 10:30am. A Friend answering a phone call at this stage and asked where she is would be able to say, "I am at Meeting," but not "I am on my way to Meeting," for she has already arrived. She could not say "I am in Meeting," for it has not yet begun.
- (2) *Congregating*. Having arrived at the agreed-upon location in space-time, more or less 'on time', the gathering is still fairly loose. Participants are in the building, in the room, arriving early and late. At Pacific Friends Meeting, the Meeting room is in the same building as the library, foyer, office, bathroom and storage closets. Friends may attend to various volunteer responsibilities in these spaces in the minutes close to the official start of Meeting for Worship at 10:30am. In order to gather in worship, Friends now

- congregate in the Meeting room in the minutes before worship begins. Multiple parallel conversations may go on simultaneously, though speakings volume are quieter in Meeting for Worship compared to Quaker Dialogue. People joke, talk about matters outside the Meeting, etc. Talk is casual and holds the group open to easy joining by latecomers who can see upon entering the room that worship has yet to officially begin.
- (3) Clarifying. (Quaker Dialogue only) Someone in the group calls attention to the activity at hand and conversations are winnowed to a single turn-taking system, a single joint activity. It may be the facilitator welcoming everyone ("I want to thank you all for coming tonight,") or it may be a comment by a participant that directs joint attention to the group's planned-for activity ("Well, I thought we'd have a better turn-out."). Clarifying questions are spoken to establish shared understanding of the Dialogue's choreography and the meaning of the Query.
- (4) *Beginning*. This is the formal transition that moves the group into worship. It may last just a few seconds, or a minute if someone reverts the situation to the previous stage (e.g. by asking another clarifying question). It can only be achieved if there is complete consensus everyone needs to tacitly consent for it to happen and any one person can prevent it from being achieved. It may be initiated with an utterance by the facilitator ("Let's begin,") or it may be collectively initiated without speech, using embodied signals like eyes closing, hands clasping, posture straightening. All participants signal in some way their consent to begin, mutually visible to all parties.
- (5) *Settling*. This is the first overt silence, and the period of time in which participants 'settle down,' which is to say, leave behind the relative freneticism of habitual thought and language in daily life and gather their attention, in the absence of speech, into the present moment. In Meetings for Worship, 15 to 20 minutes is the typical minimum length of this stage before someone speaks (see #6). In my recorded Dialogues, this period ranged from 2-9 minutes and averaged about 6.5 minutes. Friends speak of being able to sense the 'settled' state of a Meeting that has been going on for a while versus one that is just beginning. This is the default state of a worship gathering. Friends continue to practice 'settling' throughout worship as their attention drifts away and returns again. Thus this is the first of the stages described thus far that will be cyclically re-visited. This stage is characterized by the silent waves described in Chapter 5, which can be interpreted quite literally as the embodied display of group attention wandering and returning.
- (6) *Ministering*. This is when someone speaks to the congregation, which almost always happens in Meetings for Worship (and always in Quaker Dialogue, though it's more likely referred to as a 'message', not 'ministry'). Only one participant speaks at a time. A stretch

- of silence occurs after each speaker finishes, much longer than the interstitial turn-taking silences of ordinary conversation. This is the first stage that is optional: some Meetings may stay in silent worship for their entirety.
- (7) Gathering. This stage is also optional, but an implied goal of both Meeting for Worship and Quaker Dialogue. It may occur under two conditions. The first is immediately following certain occasions of vocal ministry. When the ministry is particularly profound or emotionally moving, the succeeding silence is unusually quiet, noticeably absent of the embodied waves of Settling (#5), and robust to internal and external perturbations. It is as if the strength of the ministry is measured by the depth of the succeeding silence, which typically lasts about 45 seconds before resuming the usual ambient level of Settling. The second condition for Gathering is the most difficult to give clear definition to. The deep silence that follows profound ministry is an instance of a more general 'deep silence phenomenon' that can emerge spontaneously at any time, though almost always following the work of Settling. This deep silence has an unspecifiable relationship to mystical experience, but the two are somehow correlated. (I take up this difficult analytic matter later in this chapter.)
- (8) *Closing*. Like Beginning (#4), this is a short transitionary moment that formally marks the boundary of worship. One Friend is assigned the role of initiating this stage. In Meeting for Worship, this person turns to his or her neighbor with an outstretched hand and says, "Good morning." This audibly and visibly signals the end of worship and precipitates similar behavior around the room. In Quaker Dialogue, the facilitator usually says, "Thank you, Friends."
- (9) *Integrating*. This is a time that hybridizes worship and informal talk. It superficially resembles Clarifying (#3), in that a single conversation is happening, however the tenor of the interaction has been transformed by the intervening hour of worship. It retains an air of reverence and interstitial silences may emerge that would be seen as unusually long in ordinary conversation. At Meeting for Worship, this is a time for community announcements, introductions by visitors and newcomers, and messages from old-timers during their month of birth. These various speech acts can occasionally be worshipful and carry the group into silence. In my recorded Quaker Dialogues, participants continued to contribute to the Query's topic, but with informal speech and jokes, as well as occasional worshipful messages that brought us back to silence. This is a liminal stage, that holds the interactional order of worship in tension with that of everyday life. This makes it similar to Settling (#5) in that sense, though here participants are faced with integrating their experiences of worship into life. At the very end of Meeting for Worship, Friends

- formally return to silence for a moment, with an explicit intent to integrate the worshipful attitude into everyday interaction after disbanding.
- (10) *Dispersing*. This stage resembles Congregating (#2) with multiple parallel conversations, but now in reverse as the joint configuration of the gathering's circle disassembles. After Meeting for Worship, Friends gradually leave the Meeting room and participate in what they call 'fellowship' out in the foyer or (weather permitting) the backyard, a period of conversation, eating and drinking.
- (11) Departing. Friends leave the premises and return to their lives outside the Meeting.

Five Silences

The eleven-stage sequence given above encompasses all the major phases of a Quaker worship gathering. Within these I have identified five distinct ways that Quakers 'do' silence. Analysis of the entire sequence is beyond the scope of this dissertation's focus, so I henceforth concentrate my analysis on the three kinds of silence practiced during formal Quaker worship. This narrows our attention to the stages I have called *settling*, *ministering*, and *gathering*, and these are the three ways of doing silence that I focus on for the remainder of this chapter. But I would be remiss if I did not mention the two other ways of doing silence: those that come immediately before and after worship.

In Figure 6.1, I have grouped the stages into those that come before, during, and after formal worship. The three key silences of interest occur during formal worship. The two additional silences correspond to the pre-worship and post-worship groups, respectively. I call these *arriving* and *integrating*, naming them after the stages that most characterize them.

Let me explain *integrating* first. I include the qualifier 'formal' in 'formal worship' for two reasons. First, Quakers have a commitment to carry and integrate the attitude of worship into their lives after the Meeting. Second, the stage immediately following formal worship (*integrating*'s namesake, see #9 above), sometimes includes moments that resemble worship in all respects save they occur *after* the official close of worship. For these two reasons, *integrating* is an appropriate name, and has relation to the larger work that Friends take on of transferring the insights, attitudes and practices of formal worship into their everyday lives.³

The last way of doing silence is what I have termed *arriving*. This is simply silence as practiced in ordinary social interaction outside the Meeting (see Chapter 3, Silence in Social Interaction). It is the culturally-normed 'default' way of doing silence that Quakers arrive with and carry into the Meeting. As we'll see below, *settling* largely involves the work of shedding this

³ Much more could be said on this topic, but it falls outside the scope of this dissertation. I plan to elaborate it in a future publication, for it was a key topic of concern among participants in the Quaker Dialogues.

default relationship to silence. *Arriving* silence is thus not unique to Quakers and has been investigated by conversation and interaction analysts, among others. Any contributions I might make to the subject are to be found in Chapter 3.

Introduction to the Three Silences of Quaker Worship

I now turn to the main subject of this chapter: *settling, ministering,* and *gathered silence*—the three distinct kinds of group silence to be found in Quakers' practice of worship. I address each in turn, giving ethnographic descriptions of behavior I observed through participation in worship and experiential descriptions based on analysis of Quakers' own reports.

Discussion of each silence is organized around the following questions:

- (1) Settling. How do Friends reorganize the minds they arrive with into minds suited to the practice of worship? What support does the social presence of others provide to individuals getting settled, i.e. what is special about worshipping together in a group, as opposed to individually? What experience does one who achieves a 'settled' mind gain access to?
- (2) *Ministering*. How do Friends discern when and what to speak? How do Friends listen to others?
- (3) *Gathered*. What is the observable phenomenon of gathered silence? What is the subjective experience of gathered silence? What is the relationship of Quaker mystical experience to the embodied practice of silence?

Settling Silence

...Something that I've learned in Meeting that I carry into every context I can think of, is the practice of settling into that stillness within myself and being called back to my true self... (Andrew, Dialogue Session 3, 25-Oct-2010)

This section describes *settling silence*, the first silence practiced after the official start of Quaker worship. It is so named because it is the time when Friends 'settle' their individual minds as a pre-requisite for participation in the group-centric experience of worship. It also marks a transition from 'ordinary' modes of informal social interaction to the formal mode of Quaker worship.

I present Quakers' first-hand accounts to address the questions pertinent to settling silence (see previous section). The answers to these questions lend support for the claim that Quaker religious experience is a collaborative achievement and the embodied practice of group silence is the medium for that achievement.

Centering Down

The transition from *arriving* to *settling* silence is marked by participants arresting talk and stilling their bodies. Most close their eyes. This sudden and deliberate shift from conversation to silence is what sets Quaker interaction apart from the kinds of interactions occurring in the surrounding miles. It is what is most distinct about how Quakers are with each other. But while the end of conversation may display the achievement of *outer* silence, it marks only the beginning of the struggle for *inner* silence. Participants carry with them to a worship gathering an accumulation of pre-occupations — that constantly renewed supply of concerns, plans and material for thought that we all keep in mind to furnish our inner lives. For the individual participant in Quaker worship, settling silence begins by attempting the difficult task of clearing the mind of outward concerns. It is a meditation, comparable to Buddhist mindfulness meditation practices (Kabat-Zinn, 2003)⁴. Ted describes the work to be done at this starting point:

I think, um, in Quaker Meeting for Worship, for me at least, I try to clear my head of whatever's been going on in my life and just let it become empty – as empty as I can do it, it doesn't always succeed – but sometimes it happens and when it does – This is something that you can't *do* when you're working or with family. It's just to really center down and try to figure out – not figure out anything, just let it be. (Ted, Dialogue Session 1, 11-Oct-2010)

As Ted describes it, a Quaker begins settling by working at emptying his mind of what occupies him in contexts outside the Meeting — e.g. workplace or family. This clearing process is something he finds difficult in those contexts; it requires its own carefully arranged context, which a Quaker worship gathering provides. Even under these conducive circumstances it can be difficult to achieve, as Ted attests to. Re-organizing habitual thinking is not easy, particularly when undertaken as an act of thinking. Ted starts to say that settling involves "figuring out," but then corrects himself. Settling is not "figuring." It is an act of mind but not one aimed at producing new thought. Rather, to center down is to let go of the thinking material that one arrives with from outside the gathering. (See the George Fox quote above.) The geometrical metaphor of a 'center' toward which one aims attention is a recurring image in Quakers' descriptions of inner practice, one that I will return to repeatedly. Attention is directed away from past and future, toward the 'center' of the present moment.

⁴ The similarity between Quaker worship and Buddhist meditation, at least with respect to settling, is widely acknowledged in the Quaker community. In fact, Pacific Friends Meeting hosts a weekly mindfulness meditation session for members. Several regular participants in the Dialogues mentioned their prior experience with the practice.

In active, expectant silence we strive to disassociate the mind from outward thoughts and to center inwardly. (Faith and Practice, 2011)

One interpretation of this settling process is to see it as a kind of withdrawal from the world. An individual practitioner becomes absorbed in the work of stilling the body and clearing the mind of whatever he or she arrived with, thereby to "become empty." To let go of future plans and past occupations appears to be a form of disengagement with social life. The image of a recluse, single-mindedly devoted to individual, interior experience is what meditation is often associated with, by non-practitioners and practitioners alike. Yet when we examine what Quakers are actually doing in the silence and how they describe their experiences to each other, this view is called into question.

Social Support of Embodied Group Presence

This worship in the spirit and in the truth [John 4:23, 24] hits all men and women; they must come to the spirit in themselves, and the truth in the inward parts; this is public, this is not a private worship. (Fox, 2007, p.62)

Each is aided and strengthened by the seeking of others and, since everyone is a participant in this fellowship, worship becomes a corporate experience. (Faith and Practice, 2011)

While settling appears superficially to be an interior individual practice, notice that the very first step is a social and embodied act: arranging through social interaction to get outwardly still and quiet with others. The silence begins with the social conditions of the gathering, an environment on which individuals can begin to build their inner silences. Social silence becomes 'internalized' as inner silence, perhaps analogous to how thinking aloud in young children develops into silent inner speech (Vygotsky, 1986/1934)⁵.

The testimonies of Friends in the Dialogues further attest to the social support that silent others in close proximity provide to the individual working at settling. Quieting the social environment precedes quieting the mind.

In both Quaker contexts and in Buddhist contexts, [4 second pause] I've experienced the much greater power of a group sitting together, worshipping or meditating as the case may be. And the difference is that afterwards the Buddhists say, "Wow! That was amazing. There's just something about having a hundred people together in the room just

⁵ "Egocentric speech emerges when the child transfers social, collaborative forms of behavior to the sphere of inner-personal psychic functions." (Vygotsky, 1986/1934, p.35)

being together in silence." And Quakers have a theology and an explanation for this... "when two or three are gathered together," etc. (Sasha, Dialogue Session 1, 11-Oct-2010)

There's just something about being together in silence. Practitioners in other contemplative traditions, like Buddhism, do it too, but may lack the discourse that Quakers have about why they do it. Whereas Buddhist meditation may be enhanced by doing it in a group, Quaker worship can only be done in group formation. Sasha references a passage from the Christian Bible, one often quoted by Friends for it lends scriptural support for the necessity of group worship: Matthew 18:20, "For where two or three are gathered together in my name, there am I in the midst of them." Which is to say: when meditation becomes a social occasion, God shows up.

Many of the quotes in this section come from the first Quaker Dialogue session. The subject was prompted by one of the Queries that evening: "How does Meeting for Worship differ from solitary prayer or worship? How have you experienced this difference in Meeting?" Friends responded with a variety of contrasts between individual and group spiritual work, and articulated how the co-presence of affected their experience. In the following quote, Julia also draws a connection to Buddhism, noting what is remarkable about being together in silence.

There's a Zen Koan about the — "what is the sound of one hand clapping?" [6 second pause] However, one person meditating to me is like [claps her hands 3 times]. It's fine, it's clapping. [Claps her hands rhythmically: da ditty da di-da] But it's so much *different* than when 20 or more people do it together and it becomes something called *applause*! [5 second pause] When I sit in Meeting for Worship, I hear the silent applause from everyone in the room. Can't pick out any individual claps, but I'm aware of the multiplied silences. (Julia, Dialogue Session 1, 11-Oct-2010)

Julia's comparison of Quaker silence to applause marks it as a distinctly *group* activity. No single person can produce applause, so can no single person produce the experience of group silence. Like applause, the intensity of a group silence is related to the number of people participating in its production. This intensity is noticeable to those present, if only for the fact of knowing that a number of people who normally make sound are not doing so in this context.

In the Dialogues, Friends spoke about deliberately listening to the silence, often linking this listening explicitly to the embodied presence of other participants. The next two quotes are from Dialogue Session 2, in response to the Query, "How do I practice the art of listening during worship?"

...in worship I just – when I find myself focused inside, I keep – I will consciously start looking at people, looking around, in the silence, cause I think you're listening in the *silence* too. (Phil, Dialogue Session 2, 18-Oct-2010)

Later in the same session, August elaborates on the topic of listening to silence.

Several of us have spoken about listening to the silence, and I'm impressed because I don't think I've heard *any* of us say that before – in all our, you know, workshops on speaking during worship. And I recognize that I do that myself, that a good part of the time that I spend sitting quietly, I am listening to the unspoken language that we're all speaking. Some of it is very physical: the squirming and coughing and comings and goings and scratchings of pens and the click of knitting needles, [referring to Julia who is knitting during the Dialogue] occasionally someone will bring a book and have to read it, and they'll turn the page. The children come in. All of those are *saying* something about, not just the individual who's doing it, but about the group that's gathered. (August, Dialogue Session 2, 18-Oct-2010)

August links 'listening to silence' explicitly to the embodied activities of others in the room. He goes further, claiming that, when taken together, this collective activity is meaningful, an "unspoken language" that communicates something to those listening to it.

These accounts demonstrate that Friends are consciously aware of each others' bodily presence, as I hypothesized last chapter as an explanation for the embodied waves phenomenon. According to that explanation, awareness of others makes their presence available as a resource in the construction of behavior. But I also speculated last chapter that the presence of others is not only a basis for bodily behavior, but a basis for organizing the mind and attention — to do the work of settling, in other words. August says that the embodied activity of others, discernible to one who listens to silence, "is saying something." What is it communicating? Phrased differently, what role does it play in the organization of mind? I am building an answer to this question over the course of this chapter. Each of the three silences of interest — *settling, ministering, gathering* — has something to contribute.

Mutual Support and Centripetal Time

Having established that Friends *receive* some (so far unspecified) meaning or resource from the co-presence of others in group silence, I now ask whether Friends *deliberately make themselves available* as resources for one another as well. The following two quotes directly address this question. Both are drawn from the first Dialogue, on the subject of private versus group worship.

...worship is *cumulative*: not in the sense that people are adding *ideas* to each other, but people are adding *presence*, *awareness* of each other. [27 second pause] ...And there's – the other unusual thing – that there's a responsibility for *doing* it, that those who are there with a sense of 'I know what this is and how to hold worship so that other people can join in with me' aren't *leading*, or directing. They're simply creating the potential, the

possible. [14 second pause] And if there's any kind of *training* for worship among Friends, I think that's *it*: how to gather worship so that it is available to others, to become *part of* as it happens... (Adam, Session 1, 11-Oct-2010)

First, Adam re-iterates the idea that participants' presence and awareness of each other in group silence is an active contribution to the organization of worship. Merely being bodily present and aware of others' bodily presence is a full and legitimate form of participation. Furthermore, Adam characterizes the skill that practiced Friends develop to deliberately do this in such a way that newcomers are more easily able to join in. It sounds mysterious: a form of leaderless leadership where, without words or overt direction, Friends co-organize an environment for others to attain inner quiet. My claim is that the dynamics of *settling silence* provide the key to understanding how and what the bodily presence of others *communicates* to the minds of those present, and the puzzling link between collective physical activity and individual thought.

I have two words that keep coming to mind separately, and I mean them both in the lightest possible way. And they're 'intention' and 'responsibility', in that, for me, what's different between an individual experience of prayer I have and one I have in Meeting for Worship is that there is an awareness of everyone else's intentionality. We're all – not necessarily doing or thinking the same thing at the same time – but we're there with the same or very similar intentions. And that brings the experience a certain power. But there's – with that also comes a responsibility – and again it's a very light responsibility. It's not a burden. It's not a weight. In fact, if anything, it's a joyous responsibility that: I'm there too and I need to be aware of why I'm there and keep coming back to it. It's okay if for a minute I get distracted by something that comes into my head, but out of that shared intentionality for the group comes this desire for me to really stay focused in a way that I find difficult – even if I practice Buddhist meditation, which is what I practiced before and ever since I've been attending Quaker Meeting as well. So that there's some of that mindfulness there, but it's not just there for me to be mindful, but instead it's to be mindful for the group, who's also supporting me through their same intentionality as we all do this collective worship together. (Thomas, Session 1, 11-Oct-2010)

Revealed by these accounts is that Friends not only make use of each other as resources, but feel responsible to make themselves available as resources. Participants aren't merely taking advantage of naturally available affordances (the way a rock climber makes use of natural cracks in a rock face), they are actively producing an environment that has these affordances, (the way a climber hammers pitons into the rock to aid those who come after). Taking the quote above in context with the ones on awareness of bodily co-presence, we can begin to understand the puzzling link between, on one hand, the collective physical activity of Quakers in silent group

worship, and on the other, the 'settling' of their individual minds. As Thomas reports, the intention to get settled is shared by participants. But it's not simply held in common — an agreed upon plan with no accountability to follow through. Mutual awareness of others' intentions to do the same is a *shared resource*, made mutually-available and drawn on by participants in need through the collaborative practice of worship: "Out of that shared intentionality for the group comes this desire for me to really stay focused in a way that I find difficult." These qualities meet Bratman's (1992) conditions for shared cooperative activity: mutual-responsiveness, commitment to joint activity, commitment to mutual support. Though where analytic philosophy of action is content with verbal commitments, Quakers achieve mutual support through the communication of bodies synchronized in time.

Shared intentionality, made visible through the embodied practice of group silence, provides a social support that Quakers need, arriving to worship pre-occupied and distracted. It helps them to be persistent in the work of settling, to internalize the outward silence of the gathering, and return to 'center.' When they 'listen to the silence,' *this* is what it is saying.

The Vietnamese Buddhist teacher, Thich Nhat Hahn, writes about how in his tradition there are temple bells that chime, and hearing them, people are encouraged to pause and think to themselves: "Listen, listen. This wonderful sound calls me back to my true self." And he points out that in Western societies we don't have so many temple bells that we can hear easily but we have many sounds that we think of as noises: ringing telephones, backfiring cars, construction sites with cranes pounding things. And with any of these sounds, we can pay attention and allow them to bring us back to our true selves. In Friends Meetings, we worship in silence, and it's the *silence* that calls me back to my true self... And so something that I've learned in Meeting that I carry into every context I can *think* of, is the practice of settling into that stillness within myself and being called back to my true self – especially when I feel challenged. (Andrew, Dialogue Session 3, 25-Oct-2010)

The silence calls this Quaker back to his true self, a silence constituted by the embodied presence of others. Thus the embodied presence of others serves as a social resource in the achievement of contemplative inner quiet, not just once, but, like temple bells, recurrently throughout worship. Though I have emphasized settling silence as the work of a Friend who first arrives in worship, in fact it is an ongoing practice throughout a Meeting. The initial transition from talk to silence that marks the beginning of formal worship is not enough. Human minds and habitual thinking are difficult to manage. Inevitably, a person gets distracted again. Were Quaker silence the empty, featureless landscape it is sometimes mistaken to be, participants might have more difficulty re-attaining inner quiet, once lost. A static silence we may become acclimated to,

desensitized, and forget that it's there. But actual Quaker silence consists of the sounds and movements that living bodies make and, as we have seen, these are organized into waves of synchronous activity. As a wave subsides, those present may once again win the experience of hearing the cover of silence fall over the room.

Meeting for Worship is different from solitary prayer. The strength and focus of the community draw one who is distracted back toward the Center. (Faith and Practice, 2001)

The recurrent temporal pattern of embodied waves thus corresponds to how Quakers describe the pattern of their thinking when doing the work of settling. This suggests that the observable waves are partly embodied expressions of participants' mental dynamics, reflecting outwardly the ongoing and recurrent work of getting settled. Conversely, the synchronization of activity across persons may also furnish an embodied social support to aid participants in returning to center in their minds. Whether they consciously conceive of the fall of silence as a reminder of "shared intentionality," or unconsciously move and still their bodies in sync with the group, or both, the waves furnish a common pulse and external reminder to persist at the often difficult practice of settling.

A silence that recurs may work an 'annealing' in the minds and bodies of participants, helping them to settle more completely by providing occasions for both distraction and centeredness, fidgeting and stillness. The sense of time in worship becomes less a linear progression, and more a *centripetal* cycle of recurrent return. Over many cycles, one who stays persistent may gradually settle with greater stability in, and attention to, the 'center' of the present moment. That moment offers to attention the felt presence of immediate experience — persons living and breathing in realtime while minds are flittering elsewhere.

A new realm of experience is made available to those few or many in worship who, with the group's support, succeed in remaining in the centered state for a period of time. They may gain access to the numinous experience that Friends call *unity* or the sense of being *gathered* — an experience I describe later in this chapter, under *gathered silence*. They may gain access to new insight or knowledge, sometimes with such force that they feel compelled to speak from this deep inner silence. I describe this process in the next section under *ministering silence*. What seems paradoxical at first — that someone should speak and break the deep silence after it was achieved — is instead further example of the mutual support Friends give to each other. Those who speak do so out of responsibility not unlike that described by Adam and Thomas above: vocal ministry aims to make the deep silence of unity even more available for others to join in and become part of.

I close this section with an example of vocal ministry drawn from my fieldnotes in Meeting for Worship. The speaker (August) touches on many themes covered in this section: the egocentric distractions that one confronts in worship, awareness of others' bodily presence, and, finally, that group worship makes possible "gathered moments" — described by one Quaker writer as "breaking down some part of the special privacy and isolation of our individual lives," (Kelly, 1948).

In my journey in search for the truth, I find myself in a hall of mirrors. I find myself in a cul-de-sac, a circle of mirrors. Each one gives back an image of myself. One shows me as a child. One gives back a fuzzy image of me as a teenager. There's one that presents the image of a rigorous thinker. One is a hero. One is a helper. One a student, another a sage.

I know these reflections are false, so I look for a mirror showing me as I really am, neither too large nor too small, not too proud and not too humble. I say, that is my true self! I walk toward this image, and BONK- it is just another mirror.

And so I close my eyes, both to the mirrors outside and the ones inside, and I become aware of the sound of someone breathing, someone who is not myself. It's you sitting next to me in Meeting. I apply all my senses but sight: I am attuned to social cues of movement and body language – shifts in posture that speak of your restless searching, as my body says the same to you. I hear you with more than my ears. I can almost taste you. But I cannot see or touch you. These social cues of the presence of others in worship – the rustles, breathing, coughs –remind me that I am not alone, that you are here too, sitting in your circle of mirrors.

I think our style of worship, according to this metaphor, is this: I take all these clues and it shows me that there are spaces between the mirrors. In the shared silence of the Meeting, I might be able to find one of these spaces and stick my head out between the mirrors, into the void beyond. In gathered moments, I might see you sticking your head out too, and we see each other.

And then we can begin to wonder about the source of the light by which we can see at all, be it reflection or truth.

(August, Meeting for Worship Fieldnotes, 10-April-2011)⁶

⁶ This ministry was written from memory immediately after the Meeting in which it was spoken. The speaker has a habit of writing down his own ministry from memory on days he speaks in Meeting. I contacted him afterwards to compare our recollections. The rendering here combines both of our versions.

Ministering Silence

Vocal ministry in Meeting for Worship is an occasion of spontaneous public talk. The creative process that ministers embody in thought, language, and collaborative practice, is a complex and important topic. But an adequate account of Quaker talk is beyond the scope of this dissertation's focus on Quaker silence. An adequate account would describe

- (1) the 'unwritten rules' of ministering that guide Quakers, for example, to eschew text recitations and premeditated speech in favor of extempore talk,
- (2) how a would-be minister comes to discern the 'voice' of a wise Other from among other 'voices,' in her mind and in the Meeting,
- (3) the distributed, heteroglossic 'theory of mind' this discernment practice implies,
- (4) the sequential thematic relationship between successive ministries, and
- (5) how ministry is situated in its immediate context, using the structure of the social-material environment as a point of departure for creative improvisation.

I have data on these topics and plan to report them in a later publication where they can be adequately addressed as a focus rather than a tangent. A few of the topics earn the barest hint here. What I *will* discuss are those elements of vocal ministry that illuminate and have immediate relation to the central topic of concern, Quaker silence.

As my focus for most of this dissertation has been on occasions of no one speaking, let me remind the reader that most Meetings for Worship and all Quaker Dialogues include occasions of speaking. I will focus on Meeting for Worship as it is most representative of the spontaneous act of Quaker speech. Over the course of the hour or so Meeting, a participant who has successfully achieved (for the moment) the work that settling silence aims to do may, in this state, feel 'moved' to speak by an inner compulsion. Speech in Meeting is called 'vocal ministry' and the one who delivers it is, for the moment, 'minister,' and thus takes on great responsibility in that role. The minister generally stands to address the congregation, speaks briefly for a minute or few, then sits down again. Long stretches of silence pass between speakers and it is considered inappropriate to speak too soon after another has spoken. The reason generally given is that the intervening silence permits those present to reflect on what has been said. A typical Meeting at Pacific Friends Meeting produces a handful of speakers, perhaps three to five, sometimes more or less. Occasionally Meetings transpire with no speakers. I was told that this occurs roughly twice per year among weekly Meetings.

That I have categorized Quaker talk as a *way of doing silence* may still seem odd to non-Quaker readers. Yet you will likely have no quibble with the idea that using silence for dramatic effect is a *way of speaking* that lends emphasis and gravity to the words spoken. Recall Mark

Twain's description on the power of dramatic pause in public speaking (the longer quote is given in Chapter 3):

the *pause* — that impressive silence, that eloquent silence, that geometrically progressive silence which often achieves a desired effect where no combination of words howsoever felicitous could accomplish it. (Twain & De Voto, 1940, p. 226)

In what sense is speaking a way of doing silence? It has been a theme of this dissertation that silence is misreputed to be a kind of emptiness. As I have shown, it is anything but. Rather, when we examine silence carefully we find it produced in intimate relationship with sound, embodiment, and communicative activity. Instead of static emptiness, we find a variety of dynamic ways that silence is managed, organized and produced, situated meaningfully in their communicative circumstances. *Ministering silence*, like *settling silence* before, and *gathered silence* to come, is a distinct way that Quakers organize silence for the purpose of religious experience. The main purpose of this chapter is to uncover how Quakers themselves experience their practices of silence, so far as they describe their experiences to fellow community members in a Quaker Dialogue.

The case of *ministering* is somewhat different than the other two kinds of silence in that it appears to offer up something familiar to social scientists — speech — suggesting that we can bring to bear the analytic tools for linguistic phenomena. One could do that. However I have opted for a different approach. Following Quakers' own hierarchy of silence over speech, I am concerned here with the silence from which Quaker speech arises. The warrant for this lies in the fact that the process of ministering begins long before a word is uttered. Empirically, the video record shows that speakers 'announce' their imminent talk through bodily movement — for example, looking around to ensure no one else is about to speak, parting one's lips, clearing one's throat. Other participants likewise pick up on these signals and re-orient their bodies for listening. Subjectively, ministering begins even earlier, as revealed by Dialogue participants' descriptions of their ministering experiences. It is this subjective process I focus on, as a would-be minister receives a potential message and must take time to self-assess whether it is appropriate to speak or not.

I organize this section into three parts corresponding to before, during, and immediately after, vocal ministry. The first raises the question of how one discerns whether or not to speak. The second describes how listeners experience ministry. The third describes the immediate effect of ministering on the situation of a Meeting. This section can also be mapped to the sequence diagram in Figure 6.1, showing that *ministering silence* connects to surrounding silences in three ways: 1) where it departs from *settling silence*, and 2) where it returns to *settling silence* or 3) leads to *gathered silence*.

Discerning When To Speak

Be still and silent from thy own wisdom, wit, craft, subtilty, or policy that would arise in thee, but stand single to the Lord, without any end to thyself. (Fox, 2007, p.24)

As discussed in the previous section on *settling silence*, most thoughts that emerge in the mind of a Friend practicing settling silence are discarded as distraction. Recall Ted's intent to "clear my head of whatever's been going on in my life and just let it become empty...." I duplicate that quote here, but extend it to include what he said immediately after in regard to occasions when insights that may be potential ministry come spontaneously to mind.

I think, um, in Quaker Meeting for Worship, for me at least, I try to clear my head of whatever's been going on in my life and just let it become empty – as empty as I can do it, it doesn't always succeed – but sometimes it happens and when it does – This is something that you can't *do* when you're working or with family. It's just to really center down and try to figure out – not figure out anything, just let it be. And sometimes things *do* come into your head unexpectedly and that's a big joy when it happens. Private prayer and worship – the activity is different. Your mind is active. It's praying with words. It's worshipping with an idea in mind: why you want to be worshipping right at that point in time. But Quaker Meeting for Worship is really stepping back from that and trying as best we can to let the *Spirit* enter us, and God, if you want to call it that, speaking to us as reaching our soul and our spirit in some special way. (Ted, Dialogue Session 1, 11-Oct-2010)

If the attitude practiced by Friends in *settling silence* is one of indifferent detachment from thought, the attitude of *ministering silence* is one of 'expectant waiting,' a phrase commonly used by Friends to describe the attitude of worship. Here are two similar passages from Quaker community handbooks that use the phrase, (so similar that the texts likely have a common ancestor.) The first is from Iowa Yearly Meeting, the second from Pacific Yearly Meeting, where Pacific Friends are members.

The meeting for worship is the heart of the Religious Society of Friends. Friends gather to experience communion with God. In active, expectant silence we strive to disassociate the mind from outward thoughts and to center inwardly. (Faith and Practice, 2011)

The Meeting for Worship is at the core of Quaker practice. There, Friends gather together in expectant silence, waiting upon God.... Each tries to still the inward clamor of personal anxieties and ambitions, listening for the voice of the Inner Guide, endeavoring to be faithful to its instruction. (Faith and Practice, 2001)

The attitude of mind Friends describe adopting appears contradictory on the surface. How can one quiet the mind of thought while at the same time remain open to the "voice of the Inner Guide"? These dual aims seem at odds. The challenge and the art of ministering lie in the fact that distracting thoughts and legitimate ministry both arise spontaneously 'in the same place,' as it were: the inner theatre of the mind. To confront this challenge, Friends negotiate this through a discernment process that 'tests' potential insights to see if they meet high standards. One of these high standards is that the source of an insight be perceived as an Other whose will overshadows that of the discerning Friend. Occasionally some insight will emerge spontaneously out of the settled silence, a line of thought that is resistant to efforts by the Friend to discard it. As Susan and Ted described in a later Dialogue session, this resistance is taken by Friends as a signal that the insight is worth considering as potential ministry.

I don't often speak in Meeting for Worship, and on the few occasions when I have, it's because I can't not do it. There will be something that – comes – to me, and I'll try to let it go. Or I'll hope that perhaps someone else is receiving that same message – it's spoken for me. But there are times when it just has to be said and if it doesn't it feels like I might just burst. (Susan, Dialogue Session 2, 18-Oct-2010)

What I try to do is what we've been saying: try to clear your mind of whatever's going on in your outside world and try to listen for a "still small voice" within⁷ that just can't be *stopped*, that there's something that needs to come out.... And you have to ask yourself: "Is this the right time? Is this meant only for me?" And you have to say, "No, this is meant for everybody." And where that comes from, it's a *mystery* in many ways. It's just—it's there. It happens. It can't be stopped. (Ted, Dialogue Session 2, 18-Oct-2010)

The would-be Quaker minister is charged with subjecting the candidate message to a series of culturally-prescribed 'tests' developed and articulated by Quaker communities over the centuries. Figure 6.2, drawn from a Friends' journal, *Quaker Life* (Thornburg, 1997), shows one representation of the thought process a would-be minister might follow before speaking. It names a series of tests that potential ministry is expected to pass in order to be spoken. Note that the 'irresistibility' test is shown, here placed in the final position, as well as the 'Otherness' test, shown in the first position. I address a few, but not all, of the tests shown in Figure 6.2.

⁷ The phrase "still small voice," often used by Friends to name the spontaneous voice of insight in worship, is a Biblical reference to 1 Kings 19:12. "Then He said, 'Go out, and stand on the mountain before the Lord.' And behold, the Lord passed by, and a great and strong wind tore into the mountains and broke the rocks in pieces before the Lord, but the Lord was not in the wind; and after the wind an earthquake, but the Lord was not in the earthquake; and after the earthquake a fire, but the Lord was not in the fire; and after the fire a still small voice." (New King James Version) The New Revised Standard Version translates the Hebrew of the final line as: "…and after the fire a sound of sheer silence."

Deciding to Speak in Open Worship

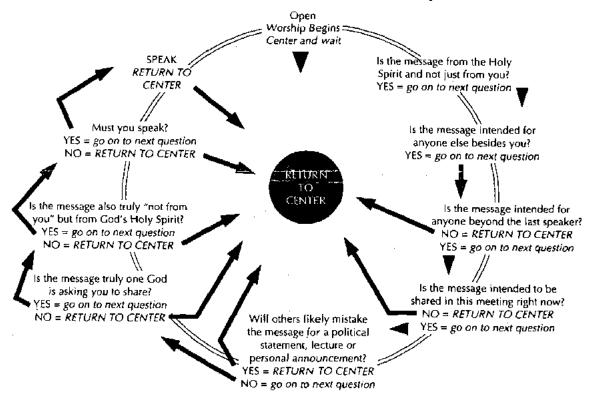


Figure 6.2: Flow chart representation of the thought process a would-be minister might follow before speaking. Found in a Quaker-published journal, *Quaker Life*. (Thornburg, 1997)

The set of practices that Figure 6.2 displays might be said to constitute part of the Quaker 'creative process,' the part performed in the mind of participants waiting in 'expectant silence.' Note how its temporal order corresponds to my description of *settling* silence in the previous section: acts of thinking are arrayed on the circle's periphery, pointing always back toward the silent center. When a Friend's thought or insight doesn't pass the tests for vocal ministry, he returns to settling silence. Given the relative rarity of ministry, certainly many more insights are considered than spoken. Thomas gave one example of an occasion when his potential ministry did not pass. Note that the test Thomas describes is one of the first two tests in Figure 6.2, and eluded to by Ted above when said a message needs to be "meant for everybody," not "only for me."

I have never spoken in Meeting for Worship. I've had two experiences in which I suppose I *might* have. In one, Meeting for Worship closed before it felt *complete*, and it sort of faded after that. And in the other, it was something that felt too rooted in personal experience, as I turned it over, to really, I think, be appropriate. (Thomas, Dialogue Session 2, 18-Oct-2010)

The fact that here is an experienced Quaker who has never given vocal ministry further reinforces the assertion that it is a relatively rare act for a given Friend to undertake. In the consequential context of the Quaker Dialogue in which Thomas was speaking, Thomas's confession that he had never spoken signaled to the others present that his standards are very high. Thomas was one among several Friends who spoke of setting high standards for themselves before being willing to speak. In practice, not all messages are spoken in Meeting according to the same standards as there is variation in how a given Friend discerns whether something is appropriate to speak. These standards are partly inherited from historical tradition and partly developmental. Historically, Friends have spoken and written about the discernment process for as long as Quakers have worshipped together, articulating speaking norms that get repeated in Quaker communities over time. Saying that a message 'rises to the level of ministry' is one such pithy phrase, origin unknown, often used to express that the bar should be set high. Developmentally, individual Friends modify their personal standards over time in adaptive response to experiences. Even longtime Friends continue to be ambivalent about the appropriate standard as Phil, a Quaker since birth, described below. He also clarified that discernment is more than simply an analytical selection process. The conviction that something is worth speaking may be sensed emotionally and viscerally.

Sometimes when I speak it's—it's [5 second pause] it's out of a sense of both obligation and joy, it's—a sense—it will be a prayer of, of joy. I remember one yearly Meeting, in plenary worship, which is a couple hundred people — I had this—this—just sort of came down on me like a rain shower, a warm *summer* rain shower. And I spoke and shared that image of how I felt bathed in this love for the community. And that sort of set a gold standard for me, which is hard to match. So, right now, in recent years, I am finding myself self-censorious, perhaps too analytical about—thinking about whether I should give a message or not, finding that usually it doesn't rise to the level of giving vocal ministry. It's a clever insight, which I'm glad I had, but it's a thought, it's an intellectual *thing* and so I don't give it. I had a prayer a few weeks ago, couple of months maybe, which I *almost* gave. And later I wrote it down. And I'm sort of wrestling with myself: 'Should I have? Why did I hold back? Am I being too self-conscious?' [5 second pause] I think so, but I don't want to—be so egotistical that I force myself to start giving ministry when it's not appropriate. So, [laughter] I'm struggling! — struggling with that. (Phil, Dialogue Session 1, 11-Oct-2010)

Newcomers sometimes speak messages that longtime Friends consider inappropriate as ministry. Through participation, conversations after Meeting, and other more formal learning opportunities (e.g. workshops, retreats), newcomers learn to align their discernment practices more closely with the culturally-sanctioned standards. Still, individual variation in the

discernment standards of even longtime Quakers means that messages spoken in Meeting continue to have variation in content, tenor and tone. This is taken to be preferable to any canonical standard for what 'rises to the level of ministry,' which would undermine the authority of personal experience in Quaker faith. Ultimately each participant is responsible for self-assessing appropriateness. 'Rules' like the ones published in *Quaker Life* (Figure 6.2) may be adequate formulations of what many Quakers do, but it certainly doesn't cover what *all* do (e.g. non-theists would take issue with the mention of God and Holy Spirit) and it is authoritative over no one. Recall that the key doctrine of Quakerism is that each and every person has direct access to wisdom and insight. If someone feels an irresistible compulsion to speak, regardless of the 'rules,' they are expected to speak. I have seen this at work on three occasions when Friends rose to give vocal ministry *after* worship was officially over. The unstoppable inner urge, spontaneously emerging from silence, is the only authority in Quaker religious practice.

Quaker Listening Practices

Dialogue participants described listening to speakers in Meeting for Worship as *active co- participation in ministering*. As this section illuminates, Quaker listening is not a passive consumption of information transmitted from speakers. Ministry's meaning and even its status *as ministry* is interpretively co-produced by listeners. This is most clear in how Friends spoke about the challenge of listening to others.

Sometimes the silence is full and sometimes the silence is nearly empty. [6 second pause] You have to listen differently. [9 second pause] And I have to admit that sometimes my listening involves nodding off, [laughter] because I haven't had enough sleep. [10 second pause] And I have had times, when like Sasha I have thought, "Oh no, is so-and-so rising to speak to? Do I want to hear this?" [laughter] And my defenses bristle, and then I have to *talk* to myself. And the self-talk goes something like this: [5 second pause] "There may be something in this for you; and maybe not. There may be something in this for someone *else*; it's okay. It's okay. Let it be. Let it be." And then suddenly I'll find – "Oh, there *is* something in it for me." I can just accept what's *there*. And it's surprising sometimes how, when I talk myself out of being judgmental, I can be really *blessed*. (Julia, Dialogue Session 2, 18-Oct-2010)

Julia's account shows Quaker listening to be a conscious practice in moments of challenge. As she and the next two quoted Friends described, challenge can emerge when certain ministers speak whom the listening Friend has heard before and has negative associations with their past speaking style or content. The listening goal becomes not only to listen without negative judgment, but to reap insightful benefit. Andrew, quoted next, said that this kind of listening is

difficult, sometimes taking years to learn to do. It may then become possible to carry this listening practice into contexts outside the Meeting.

Another thing that I've learned in Meeting – where it isn't always the case that people who give ministry, especially those who speak frequently, are easy for me to listen to. And so, what we learn with years of practice, is to try to listen *particularly* to people whose way of speaking or surface content is grating – to try to listen past the manner and past the words. And then often, there *is* something to be discovered there that – I think I would never have come to on my own, because that's so *different*. And that, too, I carry into other contexts, where people who initially rankle me bring me something very precious, if I can allow myself to *really* listen deeply... (Andrew, Dialogue Session 3, 25-Oct-2010)

The clear theme is that a listener doesn't passively listen to vocal ministry. It is consciously an interpretive process, partly colored by shared history with others. Because Friends' values are oriented to greater unity, accord, and achieving the quieter states of mind described in this chapter, they deliberately choose interpretations more likely to be beneficial to these aims. Here is one more Friend who spoke about the difficulty and the learning involved in listening to others.

I'm glad this Query starts, "How do I *practice* the art of listening during worship?", because boy, is this *practice* for me. There are times when I really labor with myself when someone stands and speaks – sometimes actually *before* they've started to speak, I'm already going 'oh no' [laughter]. And sometimes I want to sprint from the room, or gag, have just this, you know, *very* dramatically judgmental reactions – usually *before* I've actually heard what they are saying. And I value *so* much the fact that our unwritten rules don't allow me to start gagging or running – [laughter] that it is my task to *appreciate* that person, to remember that there is God in– that of God in that person, and also in *me* as I struggle with myself – much more than I am struggling with that person. And also to remember that I might *be* the difficult person for other people on occasion, and that that might *be* okay also. When I do this somewhat better than that, I can get a feeling of being completely *transparent*, of being invisible, or being a giant *ear*, and nothing but an *ear*, or not even a physical ear but just an act of listening: that there is no 'me' there; there is just listening. (Sasha, Dialogue Session 2, 18-Oct-2010)

Sasha's account of listening is the most self-deprecating of the three quoted, but also the most illuminative of how Quaker listening fits into the larger system of Quaker theology and mystical experience. As these three accounts describe it, listeners actively construct the speaker as a wise

and insightful Other — "that of God in that person." This is the central doctrine of (theistic) Quakerism: all persons have direct relationship to a divine Other, a relationship so intimate as to be housed in the body and accessed in the mind.⁹

Note Sasha's metacognitive perspective in applying the Quaker doctrine equally to herself as to the person she listens to. There is "that of God" in her when she struggles to listen nonjudgmentally and when others struggle to listen to her. The doctrine applies by definition uniformly to all persons. This puts us in a position to see a precise parity between how a wouldbe minister comes to hear the voice of a wise Other in her *mind* and how a listener comes to hear the voice of a wise Other in her *Meeting*. On the 'inner' side, potential ministers — and all present are potential ministers — aim to settle the mind of personal thought and adopt an attitude of "active, expectant silence," "waiting on God," "listening for the voice of the Inner Guide" among the voices that arise spontaneously from the silence of mind. On the 'outer' side, listeners similarly adopt an active attitude, to temper personal judgements and "deeply listen" for "that of God" among the voices that arise spontaneously from the silence of Meeting. This clarifies how the central Quaker doctrine is manifested in concrete practice; all persons are sages-in-waiting, but access to wisdom requires active discernment and interpretive expectation on the part of both ministers and listeners. Those who expect to hear God, do. (Or, more carefully: are more likely to.) Earning the experience of hearing wisdom spoken in Meeting is thus a collaborative achievement of speakers and listeners.

Returning to Silence

Vocal ministry arises suddenly out of conditions of silence and just as abruptly returns to silence. How then, are the conditions of silence transformed by the intervening talk? The last kind of listening I wish to describe suggests an intermediate state between listening to ministry and being absorbed in the deep silence I have called *gathered* (described in the next section). Sasha alludes to it towards the end of her quote above when she speaks of becoming "*transparent*... invisible...there is no 'me' there." Remembering that Quaker worship is ultimately aimed at deeper levels of shared silence, some listeners may already be so settled in silence that they only half-listen to vocal ministry.

⁸ This orientation is illustrated by the following poem by Hafiz, quoted as part of vocal ministry at a PFM Meeting for Worship in 2008. Several speakers had already spoken on the theme of listening. "How do I listen to others? As if everyone were my Master speaking to me his cherished last words." (Ladinsky, 1999)

⁹ For non-theistic Quakers, the wise and insightful Other is conceptualized differently, often as a subconscious voice of conscience or intuition. Nevertheless it is accessed with virtually identical methods, is equally *difficult* to access, and remains no less a mystery.

I get in a state of deeply quiet, where part of my hearing apparatus turns off. I'm aware that someone is speaking and—but I'm unapologetically not following it. (Amira, Dialogue Session 2, 18-Oct-2010)

...in the cases where I've experienced the most in Meeting, I've been able to sort of go back and forth between *this* is what I hear from inside myself, and *this* is what I heard someone just say in a message. Or this is almost what I've heard in the silence between messages. (Thomas, Dialogue Session 2, 18-Oct-2010)

These descriptions reinforce the Quaker primacy of silence over talk. Vocal ministry is useful to the extent it aids listening others to settle more completely in the silent center.

I showed earlier that the work of settling silence is achieved partly by means of brief flurries of apparent 'disruption' of silence — waves of embodied activity, fidgeting, etc., whose ebb provides a recurrent advertisement for silence. Here, too, vocal ministry is not an interruption but a means for deepening collective silence. Whereas a wave of fidgeting and subsequent rise of silence provides a rather gentle reminder to Friends of what it is they have gathered to do, vocal ministry may speak frankly.

Stand still in the light. Turn neither to the right nor the left. Be bathed by it. Be searched by it. Come then to the edge, the precipice of your words. And there: the beginning of the lighted mystery. Learn to listen — and your hearing opens to all the voices of the Earth that go unheard, that are speaking in every room, out of every leaf, all the names for 'God.' (Fieldnotes, PFM Meeting for Worship, 10-Apr-2011)

Those who speak do so out of responsibility to the Meeting's shared silence. When done skillfully, words may direct Friends to go where words cannot, into an experience of mystical union. From the earliest days of the Quaker movement, Friends recognized that the best words were those that brought an end to words.

Take heed of many words; what reacheth to the life settles in the life. That which cometh from the life, and is received from God, reacheth to the life, and settles others in the life... (Fox, 1694/1973, p. 367)

It is a mighty thing to be in the work of the ministry of the Lord God, and to go forth in that. It is not as a customary preaching; it is to bring people to the end of all outward preaching. (Fox, 2007, p.72)

Just as dramatic silence lends emphasis to speech, so too can speech lend emphasis, punctuation and gravity to the silences pronounced in Quaker worship. As a means for inciting Friends to deeper and more mutual inner quiet, we can see clearly now how ministering is a *way*

of doing silence. This is well expressed by Thomas Kelly, a renowned 20th century Quaker writer, who wrote some of the most articulate descriptions of modern Quakers' practice of silence, this one from his 1948 essay, 'The Gathered Meeting':

Brevity, earnestness, sincerity and frequently a lack of polish characterize the best Quaker speaking. The words should rise like a shaggy crag upthrust from the surface of silence, under the pressure of yearning contrition and wonder. But in another sense the words should not rise up like a shaggy crag. They should not break the silence, but continue it. For the Divine Life who was ministering through the medium of silence is the same Life as is now ministering through words. And when such words are truly spoken "in the Life," then when such words cease, the uninterrupted Silence and worship continues for silence and words have been of one texture, one piece. (Kelly, 1948)

Gathered Silence

In this final section I address the third and final silence I have identified in Quaker worship. I describe both the observable phenomenon of what I've termed *gathered silence*, and its experience by participants. Compared to the other silences I have covered, the experience of *gathered silence* doesn't yield as easily to description. At the same time, it is probably the most important kind of silence to Quakers, forming the experiential core around which Quakers have gathered for more than three and a half centuries. Nevertheless I will say what *can* be said: first, a description of the phenomenon as I observed it in Meeting for Worship; second, a discussion of the relationship between silence and mystical experience, drawing on the writings of William James and Ludwig Wittgenstein.

Gathered Silence, the Phenomenon

When I listened intently to the moments immediately following vocal ministry, typically I heard a wave of embodied sound and movement as participants re-oriented from listening to the minister back to the work of settling. The Meeting dynamic returned to its characteristic waves of embodied activity. In the sequence diagram (Figure 6.1), this is shown as the transition from *ministering silence* back to *settling silence*. A situation like this leaves room for a variety of individual responses following ministry, ranging from a large rustling about, to a little, to stillness. The diversity in outward behavior reflects a diversity in listeners' inner reactions to ministry. Some may be moved to ponder the message's meaning. Some may be moved strongly to a state of inner quiet. Some may not be moved much at all, even judging the speaker to be an annoying distraction.

On other, rarer, occasions, I heard not the usual wave of rustling, but instead a remarkably sudden and emphatic return to deep group silence. Even more than a return, for on these

occasions the room was as quiet as I had ever heard it. A thick silence filled the room, truly empty of sound for the first time, but thunderous in its presence. There seemed to be a consensual feeling of awe, as if listeners were moved *en masse* by what had just been said and had immediately entered a numinous state, quiet in mind and body.

I call this phenomenon *gathered silence*. It is accountably different from the more common *settling silence* in its suddenness, unanimous conformity, and extreme quietude. It is noticeably equal to or quieter than the quietest points of *settling* waves — a silence more silent. It leaves no room for variation in individual response. For such a silence to emerge, every single person present must participate. If one did not, it wouldn't be gathered silence: the sound of the nonconformist's body would be instantly noticeable against the backdrop of that utter quiet; in all likelihood it would immediately precipitate a wave of rustling by others, the typical dynamic.

Gathered silence seemed to occur when the vocal ministry was experienced by participants as particularly moving or profound. More precisely, the depth of the silence that followed seemed to be a way for participants to *display* how profound they took the message to be. Simultaneously, the depth of silence was a way for others to *ascertain* how profound it was taken to be. I said in Chapter 3 that group silence can be like laughter or applause — shows of appreciation we do as a coordinated group, to say something without words about the immediate present. The sudden, emphatic rise of *gathered silence* may therefore function like Quaker applause — a social heuristic for spoken wisdom, displaying that something worth attending to has just been said. Newcomers, especially, may benefit from this phenomenon. Though they may not know the proper response to profound ministry, their silence is complicit and becomes appropriated in the amplification of gathered silence.

With the embodied waves phenomenon, we saw that the noise some Friends make in the silence of Meeting provides 'cover' for others to join in and make a little noise. Similarly, the gathered silence that follows some ministry comes over the group rapidly, recruiting others contagiously into its hush, even those who may not have been as moved. Participants thus *gather each other* into the silence. The deep silence in one instant recruits the participation of others in the next, to join in with the silence gathered thus far.

An occasion of such complete group silence can only be understood as a collaborative achievement. This is given by two complementary facts about the phenomenon: (1) all persons present must participate — at minimum, by stilling the ordinary ambient body noises and movements; (2) the resulting silence is sensitive to disruption by any one person — if even a single person makes a noticeable sound or move, the silence becomes incomplete. Gathered silence is thus a state of total behavioral synchrony.

Gathered silences are structurally similar to the uncomfortable group silences I described in Chapter 3 in their suddenness, contagiousness, and lack of object for indexical attention. They are also experientially similar for being a state of intense, charged feeling, as participants are suddenly thrust into an intimate interaction. There are key differences, however, between uncomfortable group silences and Quaker gathered silences:

- (1) Quakers deliberately and willingly enter this state whereas uncomfortable silences are deliberately avoided.
- (2) Accordingly, the stillness and quiet of Quaker bodies is not so much a negatively-oriented *suppression* of movement and sound as it is a positively-willing *production* of silence.
- (3) Whereas participants in uncomfortable silences find their minds perturbed by thoughts of avoidance or escape, Quakers find their minds quieted by the experience.
- (4) Gathered silence has some indeterminate relationship with religious mystical experience. I say 'indeterminate' because when we approach the realm of the mystical, we likewise approach the ineffable. I take this up in detail later on.

Gathered Silence, the Experience

What is the relationship between the phenomenon of *gathered silence* and Quaker religious experience? I have borrowed the term 'gathered' from Quakers' own discourse about the variation in depth and quality of worship. 'Gathered' is the term Quakers use to describe particularly noteworthy Meetings and moments in Meetings. I quoted from Thomas Kelly's "The Gathered Meeting" in the previous section on ministering. His essay is famous among Quakers for doing as good a job as anyone can at describing the qualities of experiences Quakers call *gathered*.

In the Quaker practice of group worship on the basis of silence come special times when an electric hush and solemnity and depth of power steals over the worshippers. A blanket of divine covering comes over the room, and a quickening Presence pervades us, breaking down some part of the special privacy and isolation of our individual lives and bonding our spirits within a super-individual Life and Power—an objective, dynamic Presence which enfolds us all, nourishes our souls, speaks glad, unutterable comfort within us, and quickens in us depths that had before been slumbering. The Burning Bush has been kindled in our midst, and we stand together on holy ground. Such gathered meetings I take to be cases of group mysticism. (Kelly, 1948)

Kelly does a better job than I at articulating how Quakers perceive gathered silences. He explicitly links the phenomenon to mystical experience, specifically *group* mystical experience. Now I can't claim that every observable instance of a gathered silence corresponds one-to-one with a group mystical experience. But I am fairly confident that when group mystical

experiences *do* occur in Meeting, they are accompanied by, even *displayed by*, this kind of silence — "an electric hush and solemnity... a blanket of divine covering...."

Gathered silences can of course occur at times other than the moments following vocal ministry. Those following ministry are simply the ones I can identify with a measure of certainty. This is due to their noticeably sudden contrast with the sound of ministry itself and because post-ministry moments are objectively locatable events that can be compared to each other. As Figure 6.1 depicts, that comparison yielded essentially two kinds of response: a transition to settling silence or to gathered silence. Kelly can go further than I and take account of gathered silences that emerge independently.

Certainly the deepness of the covering of a meeting is not proportional to the number of words spoken. A gathered meeting may proceed entirely in silence, rolling on with increasing depth and intensity until the meeting breaks and tears are furtively brushed away. Such really powerful hours of unbroken silence frequently carry a genuine progression of spiritual change and experience. They are filled moments, and the quality of the second fifteen minutes is definitely different from the quality of the first fifteen minutes. Outwardly, all silences seem alike as all minutes are alike by the clock. But inwardly the Divine Leader of worship directs us through progressive unfoldings of administration, and may in the silence bring an inward climax which is as definite as the climax of the mass, when the host is elevated in adoration. (Kelly, 1948)

We have by degrees approached the silent center of Quaker religious life — the *gathered* Meeting. Words grow more difficult to conjure this close to the edge of the ineffable. In these final pages, I wish to show that a study of Quakers' embodied practice of group silence adds a significant dimension to our understanding of mystical experience. Mystical experience has largely been conceptualized as an individual affair. The Quaker case shows that mystical states can be *social* experiences, collaboratively achieved, and shared in common. The assertion offered in these pages is that the embodied practice of group silence is an expressive communications medium for shared mystical experience. With an experience of mystical union in one hand and embodied silence in the other, we have the materials to understand 'what silence is saying' to the people practicing it.

Mystical Experience and the Ineffable

I have mentioned here and there throughout this text that group silence holds, for Quakers, an association with mystical experience. As we are now firmly in the territory of that experience, I can no longer let this notoriously woolly subject go unexplained. In order to find some solid ground on which to base such an explanation, I build on the insights of two intellectual giants,

William James and Ludwig Wittgenstein. Each, in his own signature way, clarified 'the mystical' and its intimate relation to silence.

I turn to James' classic study on the *Varieties of Religious Experience* (James, 2012/1902). Near the end of the book, James attempts a summing up of the various threads of religious experience that bear on the mystical.

Over and over again in these lectures I have raised points and left them open and unfinished until we should have come to the subject of Mysticism. Some of you, I fear, may have smiled as you noted my reiterated postponements. But now the hour has come when mysticism must be faced in good earnest, and those broken threads wound up together. One may say truly, I think, that personal religious experience has its root and centre in mystical states of consciousness; so for us, who in these lectures are treating personal experience as the exclusive subject of our study, such states of consciousness ought to form the vital chapter from which the other chapters get their light. (James, 2012/1902, p. 264)

James proceeds to offer four characteristic "marks" of mystical experience and these for the most part correspond with how Quakers describe their own experiences. The areas where they do *not* correspond are analytically interesting and they shall be my emphasis.

The four marks are *ineffability, noetic quality, transiency, passivity*. All four have appeared in different guises throughout this chapter. I covered *transiency* under the subject of *settling silence*, noting as I did that the achievement of a 'settled' mind, with attention centered in the present moment, is difficult work with often only fleeting success. The relative rarity of vocal ministry in Quaker Meetings reflects in large part the transiency of the mystical state from which it emerges.

Mystical states cannot be sustained for long. Except in rare instances, half an hour, or at most an hour or two, seems to be the limit beyond which they fade into the light of common day... (*Ibid.*, p. 265)

The marks of *noetic quality* and *passivity* are easily seen in my descriptions of ministering. The 'creative process' of discernment that precedes spoken ministry grants a would-be speaker access to insight and knowledge that may be shared with the community. This is James' mark of *noetic quality*:

...mystical states seem to those who experience them to be also states of knowledge. They are states of insight into depths of truth unplumbed by the discursive intellect. They are illuminations, revelations, full of significance and importance... (*Ibid.*, p. 265)

As we saw, one of the 'tests' to determine the legitimacy of ministry was that it seem to come from an external Other, one whose will overcomes the Friend's power to resist, leading to an unstoppable compulsion to speak. This is James' mark of *passivity:*

... the mystic feels as if his own will were in abeyance, and indeed sometimes as if he were grasped and held by a superior power.... (*Ibid.*, p. 265)

Julia's description of the agency behind ministering is a clear illustration of this mark:

"What has moved you to speak in Meeting for Worship?" [5 second pause] Easy answer is the Holy Spirit. That sounds kind of glib. [5 second pause] But I truly believe that the spirit is *present* and does move us. [6 second pause] ... And sometimes when I stand to minister, I have run through in my head what I think I'm going to say and what comes out of my mouth is not *that*. [5 second pause] Spirit takes over. (Julia, Dialogue Session 1, 11-Oct-2010)

The Adequacy of Silence

James' mark of *ineffability* is the one I wish to examine now in detail. It is the *sine qua non* of mystical experience, according to James:

The handiest of the marks by which I classify a state of mind as mystical is negative. The subject of it immediately says that it defies expression, that no adequate report of its contents can be given in words. It follows from this that its quality must be directly experienced; it cannot be imparted or transferred to others. (James, 2012/1902, p. 264)

Of the four marks, this is the one to which the Quaker case offers a clear counter-example. While it may be true that the experiential essence of Quaker mystical states — like all mystical experience — cannot be reported in words, it *can* nevertheless be *communicated*.

James is not alone in his assessment that mystical experience is incommunicable. According to Joseph Campbell, scholar of comparative religion, the same view has long been held by mystic traditions in both the East and the West.

This doctrine of the incommunicability of the Truth which is beyond names and forms is basic to the great Oriental, as well as to the Platonic, traditions. (Campbell, 1949)

Indeed, we get much the same message from the opening lines of Laozi's *Tao Te Ching*, the foundational text of Chinese Taoism, as from George Fox, founder of Quakerism.

The tao that can be told is not the eternal Tao. The name that can be named is not the eternal Name. (Mitchell, 1992)

Wait in the life, which will keep you above words. (Fox, 2007, p. 26)

For millennia, religious men and women have written about the unsayable nature of mystical experiences and the inadequacy of words to describe them. What has been less appreciated is the implied *adequacy* of silence, under the right conditions, for the same communicative task. By Zen accounts, the greatest teaching of Śākyamūni Buddha¹⁰ (Siddhartha Gautama) was given without words by silently holding up a flower before an assembly of disciples — the so-called Flower Sermon, said to be the origin of Zen Buddhism (Welter, 2000). To say that mystical experience cannot be described in *words* is one thing; to say it cannot be communicated, imparted or shared, is another.

There are two ways in which Quaker religious practice stands as counter-example to the general consensus that mystical experience is the incommunicable, private territory of an individual. The first is the Quaker concept of 'unity.' The second is the practice of communicative silence.

Unity

Of course it is well known that, in spite of ineffability, many who have experienced mystical states, Quaker and non-Quaker alike, have felt compelled by their experiences to describe them to others. This compulsion is understandable given the moving potency with which mystical states beset minds. They are, as James put it, "illuminations, revelations, full of significance and importance," (p. 265) and "absolutely authoritative over the individuals to whom they come," (p. 291). When Quakers talk about their mystical experiences in Meeting for Worship — famous Quaker writers and the pseudonymous participants in my study, alike — they say it carries those present into a shared 'sense of unity' with one another. Recall Thomas Kelly's description of the Gathered Meeting as

breaking down some part of the special privacy and isolation of our individual lives and bonding our spirits within a super-individual Life and Power... and we stand together on holy ground. (Kelly, 1948)

Kelly's description is canonical for Quaker mystical experience. What he makes visible, and what is virtually unanimous among Quakers, is that mystical experience brings with it a *sense of unity* — an unquestionable interdependence among gathered persons. 'Unity' and 'gathered' are the two terms Friends use most often to describe the sense of relationship engendered by the mystical experience of a Quaker Meeting. Both terms carry a sense of *movement from many to one* — of multiple persons gathered into a common body. Kelly wrote the above in the mid-20th

¹⁰ The Sanskrit *mūni* is a term for sage, meaning "the silent one" (Campbell, 1949).

century. We find much the same message three centuries earlier in the writings of George Fox, founder of the Quaker movement.

Ye that are turned to the light, and gathered into it, meet together, and keep your meetings, that ye may feel and see the life of God among you, and know that in one another.... All they that are in the light are in unity; for the light is but one.... and gathers the hearts of his together, to live in love and unity one with another, and lets them see how they have been strangers and aliens from the life of God.... Abiding inwardly in the light, it will let you see one another and the unity one with another. (Fox, 2007, p.58, 62)

If ordinary social life is characterized by multiplicity, difference, separation and division among persons, *unity* connotes for Quakers a sense of connection, integration, and, in the most literal sense, commun-ication — not a rendering in words, but a *direct, shared experience*, achieved with, and in the presence of, others. For James, "group mysticism" is a contradiction in terms. For Quakers, it is a direct, shared experience, intrinsically social, and thus stands as counter-example to James's walled-off individual mysticism. Geertz (1999) lends support for this critique, writing about both the strengths and limitations of James' view:

"Religion," or "religiousness," in [James's] pages, and in his world... is a radically personal matter, a private, subjective, deep-experience "faith-state" (as he calls it).... Cordoning off a space for "religion" in a realm called "experience" — "the darker, blinder strata of character" — seems, somehow, no longer so reasonable and natural a thing to try to do. There is just too much one wants to call religious, almost everything it sometimes seems, going on outside the self. (Geertz, 1999)

Geertz goes on to lament a dearth of research that ties together subjective religious experience, that James so effectively articulated, and the social environment, that he so effectively ignored.

The problem, however, is that if the communal dimensions of religious change, the ones you can (sometimes) read about in the newspapers, are under researched, the personal ones, those you have (usually) to talk to living people in order to encounter, are barely researched at all.... And as a result the Weberian interworking of religious convictions and practical actions, the impartibility of belief and behavior, tends to be lost sight of.... The whole vast variety of personal experience, or, more carefully, representations of personal experience, that James, on the one hand, so exquisitely explored, and, on the other, so resolutely walled off from "those dictators of what we may believe," the public, the social, and the everyday, is not only isolated once more from the convolutions of history — it goes unremarked altogether. (Geertz, 1999)

Geertz, from the halls of the academy, calls us to view religious experience as social. Quakers, from the Meetinghouse, do the same. I believe this dissertation contributes to the pool of religious research that Geertz requested of the scholarly community, by linking social practice to subjective experience. It does this not out of my desire to answer Geertz's call (surely answered by many) but my desire to faithfully display Quakers' own view of religious experience, a view that is fundamentally social. Of course, I don't just mean they share social practices like church services, liturgy, etc. — all religious congregations are 'social' in that sense — but that an individual Quaker's innermost religious experience is a social experience: the presence and lives of others are implicated in it and irreducible constituents of it.

Communicative Silence

Ludwig Wittgenstein gives one of the most precise articulations we have of the relation between silence and communication in his first book, *Tractatus Logico-Philosophicus* (Wittgenstein, 1922), a work that reflects the philosopher's own mystical dispositions (Nieli, 1987, 2007). Wittgenstein's writing is more laconic than James, which perhaps explains the many (sometimes contradictory) interpretations it has garnered (see Lynch, 1997, p. 159). As a way to lend credence to my own interpretive use of Wittgenstein's writings, let me provide a bit of the personal and historical context in which he was writing. The first is from a 1919 letter by Wittgenstein's mentor, Bertrand Russell, written to Lady Ottoline Morell after Russell had met with Wittgenstein to discuss his *Tractatus* manuscript:

I had felt in his book a flavour of mysticism, but was astonished when I found that he has become a complete mystic. He reads people like Kierkegaard and Angelus Silesius, and he seriously contemplates becoming a monk. It all started from William James's *Varieties of Religious Experience*, and grew (not unnaturally) during the winter he spent alone in Norway before the war, when he was nearly mad. (Wittgenstein, et al., 1974, p. 82)

We know that James' *Varieties* was a favorite of Wittgenstein (Goodman, 2002, p. 36), so we can presume he was intimately familiar with James' mark of 'ineffability.' I would suggest here, in agreement with some Wittgenstein scholars, that the *Tractatus* was partly a philosophical outlet for Wittgenstein's own engagement with mystical ineffability, expressing, according to Nieli (2009), his general attitude at the time

that the religious convictions of most people in the West suffered from over-verbalization and that in the realm of "higher things" language was a poor medium for expressing truth. In the presence of what is sacred and ineffable, Wittgenstein believed, we usually do best by retaining a pious silence. As the Christian spiritualist Angelus Silesius once put it,

"God is so much above all that one can say nothing. You worship him better therefore through silence." This was essentially Wittgenstein's view and a central theme of his *Tractatus*. (Nieli, 2009)

Given this background, one interpretation suggests that the *Tractatus* is a public airing of Wittgenstein's personal reconciliation between logical philosophy, on one hand, and his mystical inclinations, on the other. We can see this in his own commentary on the *Tractatus* manuscript, from a letter to his prospective publisher, Ludwig von Ficker:

My work [the *Tractatus*] consists of two parts: the one presented here plus all that I have *not* written. And it is precisely this second part that is the important one. My book draws limits to the sphere of the ethical from the inside as it were, and I am convinced that this is the ONLY *rigorous* way of drawing those limits. In short, I believe that where *many* others today are just *gassing*, I have managed in my book to put everything firmly into place by being silent about it. (Engelmann, 1968, p. 143; quoted by Janik & Toulmin, 1973, pg. 192)

Here are the final verses of the *Tractatus*, which deposit us at the end of Wittgenstein's words and the beginning of his silence — his "second part."

6.53

The right method of philosophy would be this: To say nothing except what can be said, i.e. the propositions of natural science, i.e. something that has nothing to do with philosophy: and then always, when someone else wished to say something metaphysical, to demonstrate to him that he had given no meaning to certain signs in his propositions. This method would be unsatisfying to the other — he would not have the feeling that we were teaching him philosophy — but it would be the only strictly correct method.

6.54

My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.)

He must surmount these propositions; then he sees the world rightly.

7

Whereof one cannot speak, thereof one must be silent. (Wittgenstein, 1922)

Wittgenstein appears to draw, with words, the limit of what *can* be said in words; and then, with a flourish not so different from Laozi or George Fox, points us into silence. His act is like

that of a Quaker minister, whose message ultimately aims to bring the Meeting to silence. I often heard it said by Friends that the answer to some question or another on Quaker theology "can't be said in words" — which is far more specific than saying it can't be said at all. It is commonsense among Quakers that the medium of words is particularly inadequate to communicate the mystical. Silence, on the other hand, when articulated in the right ways, at the right times, in the right environment, is occasionally adequate to the task.

For today it occurs again and again that two or three individuals find the boundaries of their separateness partially melted down.... [A]fter conversing together on central things of the spirit two or more friends who know one another at deep levels find themselves wrapped in a sense of unity and of Presence such as quiets all words and enfolds them within an unspeakable calm and inter-knittedness within a vaster life.... As one friend speaks in such a silence, the words are found to join on closely to the thought of the others, so that words become needless and silence becomes a bridge not of separation but of communication. (Kelly, 1948)

Shared silence can have communicative power, despite an absence of words. In this context, I would suggest that the sense of Wittgenstein's final line is lost in translation to English. The original German reads: "Wovon man nicht sprechen kann, darüber muß man schweigen." Ogden renders it into English as above (Wittgenstein, 1922). The later Pears & McGuinness translation (Wittgenstein, 1961) gives it as: "What we cannot speak about we must pass over in silence." At issue is the final German word, *schweigen*, an intransitive verb-form, *to silence*, for which we have no equivalent in English. We have only the transitive form, requiring an object, as in, "Will you please silence your phone?" We have no easy way of saying in English, "I was silencing for an hour." The German verb *schweigen* denotes silence performed by a person for its own sake, without object, as deliberate and meaningful activity; as in, *kannst du schweigen*? (can you keep a secret?) To translate *schweigen* as "be silent" or, worse, "pass over in silence," suggests that we communicate nothing by it; whereas Wittgenstein's final lines exhort us to *act* — to climb out through, on, and over his words. His silence is not a passing over, a giving up or a setting aside, it is a resounding, deliberate, communicative silence — performed in appreciation for occasions where silence is more articulate than words.

Here, then, is my suggested translation:

What we cannot say with speech, we must say with silence.

Recognizing the communicative power of silence is necessary if we are to understand Quaker silence. Quaker silence is not a *passing over*, as the misperception of silence as emptiness might suggest. Neither is it a *running away*, like the uncomfortable group silence described in Chapter 3

— though it shares with that silence a feeling of charged intimacy, mutually experienced. Quaker silence is a *going into* or a *joining in with*, a deliberate engagement with the felt presence of immediate experience. As I have developed over the course of this dissertation, we can look for the communicative sense of silence in its embodied practice.

Conclusion

After James we were left with the conundrum of *group* mystical experience. Wittgenstein leaves us with the possibility that silence, despite an absence of words, might be capable of communicative power. The inability to describe mystical experiences in words does not mean they cannot be communicated and shared in mutual experience.

It has been a theme in this dissertation that 'silence' is shorthand for embodied interaction. I showed how silence can be a communicative medium for coordinated activity, despite no words being said. What *is* said, is said by embodied practice. What is heard is heard by mutual sensitivity to the embodied presence of others. In this chapter, the same communicative power of silence was seen to be directly relevant to Quakers' own practical religious concerns: meditating as a group where the silent presence of others aids one to attain inner quiet and calm. Even speech can be turned to the purposes of communicative silence, conducting the assembly back into a quieter place than where it started.

The theme throughout this experience-near account of silence has been its inseparability from embodiment, social interaction, and the moment-to-moment collaborative achievements it coordinates. The previous chapter displayed, with no need for religious or mystical reference, the interdependence of individuals engaged in Quaker worship. In this chapter, interdependence and mutual support were seen to be deliberate religious aims of participants. From both perspectives — empirical and experiential — the embodied practice of group silence is the primary means by which Quakers collaborate in their joint pursuit of shared religious experience.

7 CONCLUSION

The last two chapters have carried us through empirical and experiential accounts of Quaker silence. With evidence drawn from participant-observation, computational analyses of video, and transcripts of Quaker groups trying to make sense of their own practices, I have investigated Quaker silence from many angles in hopes of producing a more integral account of its varieties than any one of these approaches could have alone.

As I narrated in the first chapter, I did not originally set out to write a dissertation on silence. I did, however, make an ethnographic commitment to describe the world as experienced by my informants. That commitment led me to look for 'organizing principles' Quakers themselves deemed central to their religious lives. Several years of investigation led to the conceptual turnaround I described in Chapter 1: I noticed and started paying close attention to Quakers' embodied practice of silence, despite having spent years immersed in it. Ethnography is fundamentally a learning activity as one goes about figuring out what one needs to know in order to act in a culturally-appropriate way (Frake, 1962, 1964). Noticing silence for the first time as something worth attending to was the sort of epiphany an ethnographer hopes for. As a consequence, I was compelled to place silence at the center of my analysis.

Investigating a practice that so systematically dispenses with words can make a social scientist uneasy. With no convenient words handy to locate the meaning of a situation, where does one turn? The same conundrum presents itself to any newcomer in a Quaker community. How does one learn from the emptiness of silence? The answer, developed over the course of this dissertation in myriad ways, is that silence itself can be a communications medium for those present, in unexpectedly sophisticated ways. This answer turns on the insight that silence is not simply an absence of sound — it is everything that remains in the room when words have left: living, embodied persons, alive to each other and the common experience they are creating together. Attention to silence means attending to the rich communicative ecology of embodied social interaction in realtime. Where words may take us into discursive realms conceptually distant from the present moment, silence affords a more immediate sort of attention.

The merits of attending to silence thus offer themselves to social scientists and Quakers alike. To the social scientist, silence makes the embodied aspects of communication and social

interaction more salient. One is more likely to notice and confront the general bias toward words, texts and talk over all other communicative modes. In my own case, I found the tools for studying the embodied practice of silence under-developed and so set about building new ones suited to my needs. This effort resulted in software capable of analyzing the first video recordings of Quaker worship in the scholarly record. That analysis revealed patterns of embodied synchrony in the behavior of Friends in worship, making silence visible as a medium and means for group coordination and collaboration — without a single word being spoken.

To the Quaker, attention to silence is an exercise in meditation, but not one performed in seclusion. Attention to silence in Quaker Meeting for Worship is an activity one does with and for others. In the same way that silence makes the body salient to social science, silence transforms the bodily presence of others in Meeting into a salient display of the group's shared intentionality to persist in attention to immediate experience. This display serves as a key support resource in the conduct of Meeting for Worship: "The strength and focus of the community draw one who is distracted back toward the Center," (Faith & Practice, 2001). In its most potent occasions, Quaker group silence becomes a means for achieving a mystical sense of unity with one's collaborators. In this, Quakers go beyond William James' classic formulation of 'ineffable' mystical experience. They demonstrate that the inadequacy of words to share mystical experience with others can be turned on its head: silence itself can be the communications medium for transmitting mystical experience — indeed, can be the very means for collaboratively generating such experiences.

Summary of Findings

By way of conclusion I wish to briefly summarize the territory I have covered in pursuit of answers to my research questions:

- (1) What are the varieties of Quaker group silence?
- (2) What is the temporal structure of Quaker group silence?
- (3) What is the role of embodiment in Quaker silence?
- (4) How is Quaker group silence collaboratively achieved?
- (5) What is the subjective experience of Quaker group silence?

The findings for questions 2-5 are sub-components of my findings for question 1. I will summarize the varieties of Quaker group silence I discovered by describing their temporal, embodied, collaborative, and experiential features.

I identified eleven stages in the conduct of a Quaker worship gathering, from which I extracted five distinct ways that Quakers practice silence. I termed these silences *arriving*, *settling*, *ministering*, *gathered*, *and integrating*. I focused my analysis on the middle three which are the ones practiced during the official time of worship.

Settling Silence

Settling silence engages a participant in quieting his or her mind of outward distractions and bringing awareness to the present moment. This kind of silence has a characteristic temporal structure which I described anecdotally in Chapter 1, quantitatively in Chapter 5 and ethnographically/experientially in Chapter 6. That structure is a cyclic recurrence of what I called 'waves' of embodied activity, as Friends arrange to synchronize their fidgets, rustles, coughs, sniffles and other bodily activity. Though Friends never explicitly mentioned noticing this wave-like phenomenon, their accounts made frequent references to being intimately aware of each other's bodily co-presence in silent worship. They experienced this presence as a helpful resource in maintaining their focus on the 'work' of settling. The quiet but noticeable presence of others publicly displayed a group commitment to the practice. My interpretation of the wave phenomenon was that it contributes to this public commitment display by recurrently making the embodied co-presence of others momentarily conspicuous and thereby serving as a recurrent reminder to return to the settling practice. An individual's achievement of inner peace of mind is thus a *collaborative* achievement, based on the outward social practice of group silence.

Ministering Silence

Ministering silence engages a participant in a creative process that may generate insights worth speaking aloud in the silence of a worship gathering. Settling silence creates the preconditions for ministering by quieting the mind of outward distractions so that, on occasion, spontaneous insights may emerge. I described the subjective thought process of a Friend who must discern whether an insight is worth speaking. One of the key tests for this discernment process was that the insight seem to come from a source external to the Friend's own intellect and instill an unstoppable compulsion to speak. I also presented Friends' accounts of how they listen to those who minister in Meeting. Those accounts show that the wisdom of ministry is not simply a transmission of information from insightful speaker to passive listener, but an active collaboration of both as the listener works at deliberately interpreting the speaker's words as if they are the words of wisdom. Finally, I described the effect of profound ministry on the embodied activity of listening Friends. Immediately following profound ministry, an exceedingly deep quiet emerges in the room as Friends spontaneously generate total group silence. I showed that such moments can only be understood as collaborative achievements for they require the participation of every person present.

Gathered Silence

Gathered silence is what I call the phenomenon of spontaneously-produced total group silence. I suggested that it, too, functions like a collective public display for the benefit of the

Meeting's participants. It is a way for participants to display that what was just said in ministry was particularly profound. It is likewise a way for others, who may not have been as moved, to ascertain how profound the ministry was taken to be. Even those who weren't as moved get recruited into participating in gathered silence. If they don't participate then a gathered silence is not achieved. For Quakers, gathered silence has some unspecifiable but intimate relationship to mystical experience. I elaborated this relationship as best I could given its ineffable connotations, arguing that all my findings around the collaborative, embodied practice of group silence indicate that it is, for Quakers, a communications medium for the achievement of group mystical experience.

Future Work

There are two kinds of Quaker silence that deserve greater elaboration: *ministering* and *integrating*. The collaborative creative process behind spoken ministry is a rich and complex topic that deserves to be reported in a future publication. My focus on silence in this dissertation meant I could not fully elaborate the spoken side of that process.

Integrating pertains to how Quakers learn to transfer their insights and practices from the practice of silent worship to contexts outside the Quaker community. I plan to develop this topic for future publication using the theoretical framework of Repertoires of Collaborative Practice (Barron et al., 2009), which conceptualizes how communities transfer their collaborative practice across episodes and contexts.

I believe the phenomenon I called *gathered silence* can be found in communities and situations outside Quaker contexts. I pointed out the close correspondence between gathered silence and uncomfortable group silences we are all familiar with (see Chapter 6). I have also occasionally encountered *comfortable* group silences outside of Quaker contexts, similar to the Quaker version of gathered silence. Like in Quaker Meeting, such silences may be a collective social heuristic for high-risk/high-intimacy utterances. Listeners who produce a gathered silence in response to a speaker's utterance retroactively frame the utterance as risky by behaviorally distancing themselves from it, while simultaneously acknowledging its bravery — as the audience holds its breath for the high wire act. The generality of this phenomenon should be further investigated. After being sensitized to group silences as a consequence of my dissertation work, I have noted a variety of silential phenomena that deserve more attention with scholarship, particularly in the realm of synchronous group silences that span multiple, parallel conversations.

Considerations for Practice

It is no coincidence that, on one hand, Quaker religious practice is based on silence, and on the other, that this community places little to no value on authoritative verbal definitions of belief, creed and doctrine. In silence, Quakers have found a common ground that words defile. By being merely quiet and present with one another, the Religious Society of Friends has remained a close-knit, mutually-supportive community for over three and a half centuries. There is certainly something to be learned from their practice of deliberate silence. The infamous reputation that silence in social situations is something to be avoided has no doubt been an obstacle to wider practice of deliberate silence. This also suggests it is an untapped opportunity.

Deliberate silence could potentially be transferred to contexts like classrooms, boardrooms and other collaborative discourse communities, as a way of giving permission for reflective thought. This could prove healthy for a society adapted to continuous talk in most social settings. The classroom is an obvious place to start. Uncomfortable silences routinely emerge after a teacher asks a question and students freeze their bodies (and, consequently, their minds) in anticipation of who will break the silence. The simple act of introducing a brief, deliberate silence could modify these conditions for greater reflective thought and, presumably, learning gains: "I'm going to ask a question and I want you to take a minute to silently think about it before answering. Feel free to write down your thoughts while reflecting."

We can also learn from Quaker listening. Listening to and trusting in the wisdom of others, and of oneself, have formed a basis for Quakers' group creativity. Mystical or theological beliefs are not necessary to the practice. It is simply an orientation to the contributions of one's collaborators that assumes they are wiser than they appear. One assumes the best of others, adopting patterns of discourse that bias towards acceptance and discussion of others' ideas instead of critique and rejection. These patterns have been shown to lead to better collaborative learning outcomes (Barron, 2003) and are fundamental to collaborative creativity in some design traditions (Steinbock, 2008). These practices of listening and interacting could potentially transfer across many different collaborative contexts. My future work will examine cases where Quakers have successfully transferred such practices to non-Quaker communities. I also plan further studies of design practitioners in order to elaborate a comparative case for Quaker creative process.

Conclusion

Words overflow our modern lives. In such a world, silence is exceptionally useful, to Quakers and scholars alike, for referring our attention to the unsayable side of experience, *here*, in the immediate present.

When scholars have attended to what goes unsaid in the moment-to-moment dance of human interaction, a theme has tended to emerge: that individual persons are not so separate and independent as commonsense has taught, but are intimately interdependent with the world and its others, co-participants in an ecology of mind that spans 'individual' minds, bodies, and environments (Bateson, 1972; Pea, 1993; Hutchins, 2006; Goodwin, 2011). Perhaps we should not be surprised that when Quakers have attended to silence, they have arrived at the very same conclusion. The difference is that Quakers come to it as a first-hand experience of participation in a distributed mind, not as an abstract scholarly description.

It is my parting hope that this work helps change the perception that group silence is *necessarily* something uncomfortable, a failure in communication, and to be avoided. In the natural laboratory of Quaker worship, I have shown that the emergence of group silence is not a failure but an achievement; not a breakdown — a coming together. Quakers are a community of people who use silence as a means for collaboration, communication, and communion — fluently, deliberately, and with nuance.

Perhaps the next time you find yourself in a group where silence is being made, the perception that you have fallen into a void may be replaced by the sense that you have fallen into a more intimate kind of relationship with the people around you.

GLOSSARY OF QUAKER TERMS

Clearness Committee. A group of Quaker community members who volunteer to form a temporary committee to help another member 'get clear' on some personal issue or project, e.g. someone who is considering marriage or changing careers. I requested the help of a Clearness Committee for co-designing my research study (see Chapter 4).

Closing. Calling an end to a worship gathering; usually the responsibility of a pre-assigned volunteer.

Eldering. Mentoring a fellow community member in the practices of Friends.

Epistle. A public letter of greeting and ministry. Such letters are sent from a Quaker Meeting or Quaker organization to other Quaker groups, to supply information, spiritual insight, or encouragement.

First Day. Quaker term for Sunday. Monday is Second Day, January is First Month, etc.

Greeter: Volunteer to greets new arrivals to Meeting for Worship and provides information to newcomers. (See description of Greeter duties in Chapter 1.)

Fellowship. Informal social time after Meeting for Worship with food, drinks and conversation.

Friends. See Quaker.

Leading. A sense of being called by God, or a similarly powerful inner force, to undertake a specific course of action, e.g. a social service project.

Meeting. In Quaker parlance, the noun "Meeting" may refer interchangeably to the Quaker community as a whole (as in, "This Meeting was established in 1920."), or to the specific religious practice of *Meeting for Worship* engaged in by participants on a regular basis ("Did you go to Meeting today?").

Meeting for Business, a.k.a. Meeting for Worship on the Occasion of Business. A specialized worship gathering, held monthly, where the community attends to its organizational duties, decision-making, finances, etc.

Meetinghouse. The regular site for Meeting for Worship and other Quaker community gatherings.

Member / Attender / Visitor: Members are officially recorded in the membership book of a Monthly Meeting. One must apply for membership, perhaps with the support of a Clearness Committee. Attender is someone who regularly attends Meeting but is not a recorded Member. Visitor is a newcomer to Meeting.

Ministry / Vocal Ministry / Spoken Ministry. Terms for speaking out of the silence of Meeting for Worship. One is expected to only speak if one feels powerfully moved to do so. (See *Ministering*, in Chapter 6).

Quaker: The term 'Quaker' was originally a slur derogating Friends' tendency to "tremble at the word of God" in Meeting for Worship. Today, 'Quaker' is a common nickname, used by Friends and non-Friends alike. Historically, Quakers have had many names, including Friends of the Truth, Publishers of Truth, Seekers of Truth, Religious Society of Friends, and Society of Friends. The official name of the modern Quaker institution is the Religious Society of Friends, and members, Friends. 'Friends' derives from a Biblical passage (John 15:15) where Jesus of Nazareth says, "I do not call you servants, I call you Friends."

Quaker Dialogue / Worship sharing. Small group worship, usually with a discussion prompt, known as a Query. By default, all participants speak at least once. (See Chapter 4.)

Rise of Meeting. The end of Meeting for Worship when participants stand to leave and begin Fellowship.

Yearly Meeting / Quarterly Meeting / Monthly Meeting. Local Quaker Meetings are called Monthly Meetings (referring to how often they hold Meeting for Business). Most Monthly Meetings are affiliated with a regional Quarterly Meeting, which gather participants and representatives from local Meetings four times a year. Participants and representatives from Quarterly Meetings gather for an annual Yearly Meeting, which encompasses Meetings from a much larger region.

WORKS CITED

- Barron, B. (2003). When Smart Groups Fail. *Journal of the Learning Sciences*, 12(3), 307-359. doi: 10.1207/S15327809JLS1203 1
- Barron, B., Martin, C. K., Mercier, E., Pea, R. D., Steinbock, D., Walter, S., Mertl, V. (2009). Repertoires of Collaborative Practice: Theoretical Introduction and background. In *Repertoires of Collaborative Practice*. Symposium conducted at the Computer Supported Collaborative Learning (CSCL) conference proceedings, Rhodes, Greece.
- Basso, K. (1970). "To Give up on Words": Silence in Western Apache Culture. *Southwestern Journal of Anthropology*, 26(3), pp. 213-230.
- Bauman, R. (1983). *Let your words be few : symbolism of speaking and silence among seventeenth-century Quakers*. Cambridge [Cambridgeshire]: Cambridge University Press.
- Bauman, R., & Sherzer, J. (1989). *Explorations in the ethnography of speaking*. 2nd ed. Cambridge: Cambridge University Press.
- Bateson, G. (1996/1971). Communication (introduction to *The Natural History of an Interview*). In H. B. Mokros (Ed.), *Interaction and identity*. New Brunswick, NJ: Transaction. pp. 45-70.
- Bateson, G. (1972). Steps to an ecology of mind. New York: Ballantine Books.
- Bateson, G. (1979). Mind and nature: a necessary unity. New York: Dutton.
- Becker, A. L. (1984). Biography of a sentence: A Burmese proverb. In E. M. Bruner (Ed.), *Text, Play and Story: The Construction and Reconstruction of Self and Society.* Washington D.C.: American Ethnological Society. pp. 135-155.
- Bertalanffy, L. von. (1971/1968). *General system theory : foundations, development, applications*. Rev. ed. New York: G. Braziller.
- Birdwhistell, R. L. (1970). *Kinesics and context: essays on body motion communication*. Philadelphia: University of Pennsylvania Press.
- Bonabeau, E. (2002). Agent-based modeling: Methods and techniques for simulating human systems. PNAS 2002 99 (Suppl 3) 7280-7287; doi:10.1073/pnas.082080899
- Bourdieu, P. (1977). Outline of a theory of practice. Cambridge: Cambridge University Press.
- Bratman, M. E. (1992). Shared Cooperative Activity. Philosophical Review. 101 (2):327-341.
- Brinton, H. H. (1952). Friends for 300 years: the history and beliefs of the Society of Friends since George Fox started the Quaker movement. New York: Harper.
- Brown, A. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of Learning Sciences*, 2(2), 141-178.
- Button, G, Dourish, P. (1996). Technomethodology: paradoxes and possibilities. In *Proceedings of the SIGCHI conference on Human factors in computing systems: common ground (CHI '96)*, New York, NY: ACM, pp.19-26.
- Cage, J. (1961). Silence: lectures and writings. Middletown, Conn.: Wesleyan University Press. (p. 8).
- Campbell, J. (1949). The hero with a thousand faces. New York: MJF Books.
- Campbell D.T. (1974): 'Downward causation' in hierarchically organized biological systems. In F.J. Ayala & T. Dobzhansky (eds.), *Studies in the philosophy of biology: reduction and related problems*. Berkeley, CA: University of California Press. pp. 179-186.
- Collins, P.J. (1998). Quaker Worship: An Anthropological Perspective. Worship 72(6):501-515.
- Condon, W. S., Ogston, W. D. (1966). Sound Film Analysis of Normal and Pathological Behavior Patterns. *Journal of Nervous and Mental Disease*, 143(4), pp. 338-347.
- Cook, J.J. (1964). Silence in psychotherapy. Journal of Counseling Psychology, 11(1), 42-46.
- Crabtree, A. (2002). Taking technomethodology seriously: Hybrid change in the ethnomethodology-design relationship. Technical Report Equator-02-036. Nottingham, UK.

- Dandelion, P. (1996). A Sociological Analysis of the Theology of Quakers: The Silent Revolution. Lampeter, UK: Edwin Mellen Press.
- Dandelion, P. (2005). The Liturgies of Quakerism. Aldershot: Ashgate.
- Dandelion, P. (2008). The Quakers: A very short introduction. Oxford: Oxford University Press.
- Davies, A. (1988). Talking in Silence: ministry in Quaker Meetings. In N. Coupland (Ed.), *Styles of Discourse*, London: Croom Helm, 105-37.
- Derry, S.J., Pea, R. D., Barron, B., Engle, R.A., Erickson, F., Goldman, R., Hall, R., Koschmann, T., Lemke, J.L., Sherin, M.G., Sherin, B.L. (2010). Conducting Video Research in the Learning Sciences: Guidance on Selection, Analysis, Technology, and Ethics. *Journal of the Learning Sciences*, 19(1), 3-53.
- Dewey, J. (1916). Democracy and Education. New York: Macmillan. (pp. 152-179).
- Dewey, J. (1927). The Public and Its Problems. New York: Henry Holt. (p. 15)
- Dohn, N. B. (2009). Affordances revisited: Articulating a Merleau-Pontian view. *International Journal of Computer-Supported Collaborative Learning*, 4(2), 151-170.
- DuBois, R. D. (1976). Deepening Quaker Faith and Practice: Through the Use of Three-Session Quaker Dialogue. Richmond, IN: Friends United Press.
- Dupuy, J. (2000). *The mechanization of the mind: on the origins of cognitive science*. Princeton: Princeton University Press.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), pp. 350-383.
- Emerson, R.W. (1837-1838/1964). Human culture. In S. Whicher, R. Spiller, & W. Williams (Eds.), *The early lectures of Ralph Waldo Emerson*, vol. 2 (pp. 213-364). Cambridge: Harvard University Press.
- Engelmann, P., & Wittgenstein, L. (1968). *Letters from Ludwig Wittgenstein: with a memoir*. New York: Horizon Press.
- Eves, H. (1977). Mathematical Circles Adieu. Boston: Prindle, Weber & Schmidt.
- Faith and Practice Pacific Yearly Meeting of the Religious Society of Friends. (2001). Pasadena, CA: Pacific Yearly Meeting.
- Faith and Practice The Book of Discipline of Iowa Yearly Meeting of Friends (Conservative). (2011). Mt. Vernon, Iowa: Publications Committee of the Iowa Yearly Meeting (Conservative).
- Fox, G. (1694/1973). The journal of George Fox. Norman Penney (Ed.). New York: Octogon Books.
- Fox, G. (2007). Truth of the Heart: an anthology of George Fox. Rex Ambler (Ed.). Philadelphia: Quaker Books.
- Frake, C. (1962). The ethnographic study of cognitive systems. In T. Gladwin and W. Sturtevant (eds.) *Anthropology and Human Behavior*. Washington D.C.: Anthropological Society of Washington.
- Frake, C. (1964). Notes on queries in ethnography. American Anthropologist, 66(3), pp. 132-145.
- Freire, P. (1970). Pedagogy of the oppressed. New York: Herder and Herder.
- Friends World Committee for Consultation. (2007). Finding Quakers Around the World [World map of Quaker populations]. Retrieved from http://www.fwccamericas.org/publications/images/fwcc_map_2007_sm.gif
- Frith, J. (2009). The temporal collage: How British Quakers make choices about time at the beginning of the twenty first century. Unpublished doctoral dissertation.
- Fry, B., Reas, C. (2011). Processing (Version 1.5.1) [Software]. Available from http://processing.org/
- Gal, S. (1991). In M. Di Leonardo (Ed.), *Gender at the crossroads of knowledge: feminist anthropology in the postmodern era*. Berkeley: University of California Press, pp. 175-203.
- Garfinkel, H. (1967). Studies in Ethnomethodology. New York: Prentice Hall.
- Geertz, C. (1966). Religion as a cultural system. In *Anthropological Approaches to the Study of Religion*. London: Routledge.

- Geertz, C. (1974). "From the Native's Point of View": On the Nature of Anthropological Understanding. Bulletin of the American Academy of Arts and Sciences, 28(1): 26-45.
- Geertz, C. (1999). The pinch of destiny. *Raritan*, 18(3), 1–19.
- Gibson, J. J. (1966). The senses considered as perceptual systems. Boston, MA: Houghton Mifflin Press.
- Giddens, A. (1979). Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis. Berkeley, CA: University of California Press.
- Glaser, B., & Strauss, A. (1967). *Grounded Theory: The Discovery of Grounded Theory*. New York: de Gruyter.
- Goffman, E. (1955). On face-work. Psychiatry, 18, 213-231.
- Goffman, E. (1959). The Presentation of Self in Everyday Life. New York: Doubleday.
- Goffman, E. (1967). Interaction Ritual: Essays on Face-to-Face Behavior. New York: Doubleday.
- Goldman-Eisler, F. (1951). The measurement of time sequences in conversational behaviour. *British Journal of Psychology*, 42(4), 355-362.
- Goodman, R. B. (2002). Wittgenstein and William James. Cambridge: Cambridge University Press.
- Goodwin, C. (1994). Professional vision. American Anthropologist, 96(3), 606-633.
- Goodwin, C. (2010). Things and Their Embodied Environments. In L. Malafouris and C. Renfrew (Eds.), *The cognitive life of things*. Cambridge, U.K.: McDonald Institute Monographs.
- Goodwin, C. (2011). Contextures of action. In J. Streeck, C. Goodwin & C.D. LeBaron (Eds.), *Embodied Interaction: Language and body in the material world*. Cambridge: Cambridge University Press.
- Grammer, K., Honda, R., Schmitt, A., Jütte, A. (1999). Fuzziness of Nonverbal Courtship Communication Unblurred by Motion Energy Detection. *Journal of Personality and Social Psychology* 77, 487-508.
- Gutierrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher*, 22(5), 19-25.
- Heilbroner, R. (1980). Marxism: For and against. New York: Norton.
- Holland, J. H. (1992). Complex Adaptive Systems. Daedalus, 121(1), 17-30.
- Hollway, W. (1984). Gender difference and the production of subjectivity. In J. Henriques, W. Hollway, C. Urwin, C. Venn, & V. Walkerdine (Eds.), *Changing the subject: Psychology, social regulation and subjectivity.* (pp. 227-263). London: Methuen.
- Hutchins, E. (2006). The distributed cognition perspective on human interaction. In N.J. Enfield & S.C. Levinson (Eds.), *Roots of Human Sociality*. London: Berg. (pp. 375-398)
- Hymes, D.H. (1962). *The ethnography of speaking*. In: T. Gladwin and W. C. Sturtevant (Eds.) *Anthropology and Human Behaviour*. Washington, D.C.: Anthropology Society of Washington. pp. 13-53.
- Jaffe, J., & Feldstein, S. (1970). Rhythms of dialogue. New York: Academic Press.
- James, W. (2012/1902). The varieties of religious experience: a study in human nature. Central, Hong Kong: Forgotten Books. Retrieved from http://etext.lib.virginia.edu/toc/modeng/public/JamVari.html
- Janik, A., & Toulmin, S. (1973). Wittgenstein's Vienna. New York, Simon and Schuster.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*. 10:144-56.
- Kauffman, S. A. (1993). *The origins of order: self organization and selection in evolution*. New York: Oxford University Press.
- Kauffman, S. (2000). *Investigations*. New York: Oxford University Press.
- Kelly, T. (1948). The Gathered Meeting. Philadelphia, PA: Tract Association of Friends.
- Klein, L. H. (2009). Soft logic for the soft sciences. Bloomington, IN: Xlibris.

- Komori, M., Maeda, K., Nagaoka, C. (2007). A Video-Based Quantification Method of Body Movement Synchrony: An Application for Dialogue in Counseling. *Japanese Journal of Interpersonal and Social Psychology*, 7, 41-48.
- Ladinsky, D. (1999). The Gift: Poems by Hafiz. London: Penguin Books.
- Latour, B. (1987). Science in action. Cambridge, MA: Harvard University Press.
- Latour, B. (2008). A Cautious Promethea? A Few Steps Toward a Philosophy of Design (With Special Attention to Peter Sloterdijk). Keynote lecture, *History of Design Society*, Falmouth, September 3, 2008.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Locke, E.A. (1986). Generalizing from laboratory to field: ecological validity or abstraction of essential elements?". In: Locke, E. (Ed.), *Generalizing from Laboratory to Field Settings*, Lexington, MA: Lexington Books, Heath and Company. pp. 1-9.
- Lynch, M. (1997). Scientific Practice and Ordinary Action: Ethnomethodology and Social Studies of Science. Cambridge, UK: Cambridge University Press.
- Lynch, M. (2007). Law courts as perspicuous sites for ethnomethodological investigations. In: Stephen Hester, David Francis, eds. *Orders of ordinary action: respecifying sociological knowledge*. Aldershot: Ashgate. pp.107-19.
- Maclay, H., Osgood, C.E. (1959). Hesitation phenomena in spontaneous English speech. Word, 15, 19-44.
- MacLeish, A. (1961). Poetry and experience. Cambridge: Riverside Press. p.8
- Mahoney, M.A. (1996). The problem of silence in feminist psychology. Feminist Studies, 22(3): 603-625.
- Marx, K. (1963). The eighteenth Brumaire of Louis Bonaparte. New York: International Publishers.
- Marx, K., & Engels, F. (1988). *Economic and philosophic manuscripts of 1844*. Buffalo, NY: Prometheus Books.
- Maturana, H. & Varela, F. (1980). *Autopoiesis and Cognition: the Realization of the Living*. Robert S. Cohen and Marx W. Wartofsky (Eds.), Boston Studies in the Philosophy of Science 42. Dordecht: D. Reidel Publishing Co.
- McDermott, R.P., Gospodinoff, K., Aron, J. (1978). Criteria for an ethnographically adequate description of concerted activities and their contexts. *Semiotica*, 24(3-4): 245-75.
- McDermott, R.P. (2004). Materials for a confrontation with genius as a personal identity. *Ethos*, 32(2): 278-288.
- McDermott, R.P., Raley, J. (2011). Looking Closely: Toward a Natural History of Human Ingenuity. In Eric Margolis & Luc Pauwels (Eds.), *Handbook of Visual Research*. London: Sage.
- McLaughlin, M. & Cody, M. (1982). Awkward silences: Behavioral antecedents and consequences of the conversational lapse. *Human Communication Research*, 8(4):299-316.
- The Merriam-Webster dictionary. (2004). Springfield, Mass.: Merriam-Webster.
- Milgram, S., Bickman, L. Berkowitz, L. (1969). Note on the Darwin power of crowds of different size. *Journal of Personality and Social Psychology*, 13(2): 79-82.
- Mitchell, S. (1992). Tao Te Ching. New York: Harper Perennial.
- Nathan, M. J., & Petrosino, A. (2003). Expert blind spot among preservice teachers. *American Educational Research Journal*, 40, 905–928.
- Newman, H. M. (1982). The sounds of silence in communicative encounters. *Communication Quarterly*, 30(2): 142-149.
- Nieli, R. (1987). Wittgenstein: From Mysticism to Ordinary Language. Albany, NY: State University of New York Press
- Nieli, R. (2007). Mysticism, Morality, and the Wittgenstein Problem. *Archiv für Religionsgeschichte*, 9(2007): 83-141.

- Nieli, R. (2009, August 8). [Review of the book *The Mystical in Wittgenstein's Early Writings*, by J. R. Atkinson]. *Notre Dame Philosophical Reviews*, 2009.08.08. Retrieved from http://ndpr.nd.edu/news/24116-the-mystical-in-wittgenstein-s-early-writings/
- Okita S. Y., Bailenson J., Schwartz D. L. (2007). The mere belief of social interaction improves learning. In D.S. McNamara, J.G. Trafton (Eds), *The proceedings of the 29th meeting of the cognitive science society*. August, Nashville, pp. 1355–1360.
- Pea, R. D. (1993). Practices of distributed intelligence and designs for education. In G. Salomon (Ed.), *Distributed Cognitions*. Cambridge, UK: Cambridge University Press. pp. 47-87.
- Pea, R. D. (1994). Seeing what we build together: Distributed multimedia learning environments for transformative communications. *Journal of the Learning Sciences*, 3(3), pp. 219-225.
- Pea, R. D. (2006). Video-as-Data and Digital Video Manipulation Techniques for Transforming Learning Sciences Research, Education, and Other Cultural Practices. In J. Weiss (Ed.) *International handbook of virtual learning environments*. Dordrecht: Springer.
- Pea, R. D. (2010). Augmenting educational designs with social learning. *NSF SLC PI Meeting*. Washington D.C. October 14, 2010.
- Pijanowski B.C., Villanueva-Rivera L.J., Dumyahn S.L., Farina A., Krause B., Napoletano B.M., Gage S.H., Pieretti N. (2011). Soundscape ecology: the science of sound in the landscape. *BioScience* 61(3): 203–216.
- Ramseyer, F., Tschacher, W. (2010). Nonverbal Synchrony or Random Coincidence? How to Tell the Difference. In Esposito, A. (Ed.), *Development of multimodal interfaces: active listening and synchrony: second COST 2102 International Training School, Dublin, Ireland, March 23-27, 2009 ; revised selected papers.* Berlin: Springer.
- Rowe, M. B. (1974). Wait-Time and Rewards as Instructional Variables: Their Influence on Language, Logic, and Fate Control. *Journal of Research in Science*. 11(4), pp. 291-308.
- Rubin, E. (2001). Figure and Ground. In Yantis, S. (Ed.), *Visual Perception*. Philadelphia: Psychology Press. (pp. 225-229)
- Sacks, H. (1963). Sociological description. Berkeley Journal of Sociology, 8, 1-16.
- Sacks, H., Schegloff, E.A., Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language* 15(4), pp. 696-735.
- Sacks, H., & Jefferson, G. (1995). Lectures on conversation. Oxford, UK: Blackwell.
- Samarin, W. (1965). The language of silence. *Practical Anthropology*, 12, pp. 115-119.
- Saville-Troike, M. (1985). The place of silence in an integrated theory of communication. In D. Tannen, & M. Saville-Troike (Eds.), *Perspectives on Silence*. Norwood, N.J.: Ablex Pub. Corp.
- Schegloff, E.A. (2007). Sequence Organization in Interaction. Cambridge: Cambridge University Press.
- Schön, D. A. (1987). Educating the Reflective Practitioner. San Francisco: Jossey-Bass.
- Schultz, K. (2009). *Rethinking classroom participation: listening to silent voices*. New York: Teachers College Press.
- Schwartz, D. L. (1999). The productive agency that drives collaborative learning. In P. Dillenbourg (Ed.), *Collaborative learning: Cognitive and computational approaches* (pp. 197-218). New York, NY: Elsevier Science.
- Shuy, R. W, & Shnukal, A. (1980). *Language use and the uses of language*. Washington, D.C.: Georgetwon University Press.
- Stahl, G. (2006). *Group cognition : computer support for building collaborative knowledge*. Cambridge, MA: MIT Press.
- Steinbock, D. (2008). Mindful of process: Scaffolds for collaboration discourse in design education. *Proceedings of the International Conference for the Learning Sciences*, Utrecht, NL, June, 2008.
- Steinbock, D. (2012). Movement [Software]. Available from http://steinbock.org/pubs/qmovement
- Streeck, J., Mehus, S. (2003). Microethnography: The study of practices. In K.F.R. Sanders (Ed.), *Handbook of language and social interaction*. Mahway, NJ: Erlbaum Associates.

- Tannen, D., & Saville-Troike, M. (1985). Perspectives on silence. Norwood, N.J.: Ablex Pub. Corp.
- Thornburg, S. (1997). Resources for Renewal: Open Worship. Quaker Life, July/August, p.20.
- Tingley, K. (2012, March 15). Whisper of the Wild. *The New York Times*. Retrieved from http://www.nytimes.com
- Toulmin, S. (1958). The uses of argument. Cambridge, UK: University Press.
- Toulmin, S. (1990). Cosmopolis: the hidden agenda of modernity. New York: Free Press.
- Trueblood, D. E. (1968). Robert Barclay. New York: Harper & Row.
- Twain, M., & De Voto, B. Augustine. (1940). *Mark Twain in eruption: hitherto unpublished pages about men and events*. New York: Harper.
- Vygotsky, L.S. & Kozulin, A. (1986/1934). Thought and language. Cambridge, MA: MIT Press., p.35
- Welter, A. (2000). Mahākāśyapa's Smile: Silent Transmission and the Kung-an (Kōan) Tradition. In S. Heine & D.S. Wright (Eds.), *The Kōan: Texts and Contexts in Zen Buddhism*. Oxford and New York: Oxford University Press, pp. 75–109.
- Whitman, W., & Stacy, J. (2009/1860). *Leaves of grass, 1860 : the 150th anniversary facsimile edition. 1st University of Iowa Press ed.* Iowa City: University of Iowa Press.
- Williams, R. (1977). Marxism and literature. Oxford: Oxford University Press.
- Wittgenstein, L. (1922). *Tractatus Logico-Philosophicus*. C.K. Ogden (Trans.), London: Routledge & Kegan Paul. (originally published as "Logisch-Philosophische Abhandlung", in *Annalen der Naturphilosophische*, XIV (3/4), 1921.)
- Wittgenstein, L. (1961). Tractatus logico-philosophicus: The German text Logisch-philosophische abhandlung. D.F. Pears and B.F. McGuinness (Trans.), New York: Humanities Press.
- Wittgenstein, L. (1971). *Prototractatus: an early version of Tractatus logico-philosophicus*. B.F. McGuinness, T. Nyberg, G.H. von Wright (Eds.), D.F. Pears and B.F. McGuinness (Trans.), Ithaca, NY: Cornell University Press.
- Wittgenstein, L., Russell, B., Keynes, J. Maynard, Moore, G. E, & Wright, G. H. von. (1974). *Letters to Russell, Keynes, and Moore*. Ithaca, NY: Cornell University Press.
- Wittgenstein, L., Wright, G. H. von, & Nyman, H. (1980). *Culture and value*. Chicago: University of Chicago Press.