

# Inexplicable Silence: An Uncomfortable Analysis of the Social Silences

Daniel Steinbock, Keio University, KMD Office, 4-1-1 Hiyoshi, Kohoku-ku 223-8526, Japan  
daniel@steinbock.org

**Abstract:** *Social silence* refers to silences that arise in face-to-face social interaction. Despite having a reputation for being nothing at all, close examination of social silence reveals various *kinds* of silence, arising under different conditions, playing a variety of roles in the temporal order of social interaction. What distinguishes one silence from another? For instance, why are some moments of silence experienced as uncomfortable and others as unremarkable? Here I introduce a conceptual framework for describing a variety of social silences, built on the work of conversation analysis and an ethnographic study of silence in the religious practices of Quakers. A focus on social silence naturally makes the unspoken dimensions of interaction salient and offers new confirmation for the view that face-to-face learning and communication are always partly constituted by embodied (non-verbal) actions. The included framework, descriptions and empirical data serve as platform for two theses: 1) calibrating to the acoustic environment is a basic way that individual behavior is situated in its social context; 2) group silence regulates collective attention by directing it to the present moment of social interaction.

**Keywords:** social silence, social interaction, embodied practice, conversation analysis, Quakers

## Introduction

*Social silence* refers to silences that arise in face-to-face social interaction. In the West and in the social sciences generally, silence is commonly perceived to be a particular kind of nothing, empty of words and structure, offering no material for attention or analysis. On the other hand, certain kinds of silence in social interaction are routinely cause for discomfort, embarrassment, and other charged emotions — hardly what we'd expect of 'nothing' — demonstrating that social silence is, in fact, *something* and worthy of our attention. This paper offers a way of distinguishing one silence from another and thus can answer why, for instance, some moments of silence are experienced as uncomfortable and others as unremarkable.

My aim is to describe a few varieties of social silence, with attention to the different situating conditions in which they arise, take form, and end. I have found this micro-analysis of situated silence helpful for understanding the unspoken side of a range of social behavior, including but not limited to public speech, cocktail party conversation, awkward silence, and mystical experience (Steinbock, 2012). An investigation of social silence offers balance against the overwhelming bias towards linguistic phenomena — talk and text — in the social sciences. As ethnographers of social interaction and speaking have repeatedly asserted, face-to-face learning and communication are always partly constituted by embodied (non-verbal) practices (Birdwhistell, 1970; McDermott, et al., 1978; Goodwin, 2011). Social silence naturally makes these unspoken dimensions salient, without artificially separating them from the total communicative system (Tannen & Saville-Troike, 1985).

In these few pages, I offer both the wide view — a way of distinguishing and ordering kinds of social silence — and a close look at one culturally-situated practice of silence. First, I introduce a conceptual framework for categorizing different kinds of silence in social interaction, built on the work of conversation analysis. I then share results from a four year ethnographic study of group silence I conducted in a Quaker community. Quakers have practiced deliberate group silence for religious purposes for over three and half centuries. In addition to participant-observation, I recorded panoramic video of Quakers' embodied practice of group silence *in situ*. These materials provide a basis for discussing the significance of social silence within and beyond the Quaker context.

## Social Silence

Like all social phenomena, each silential situation is unique in its particulars. But are there, perhaps, recurrent forms that arise under comparably similar conditions? Here I'll describe three distinct categories of social silence, each having variations that are 'comfortable' (situationally-appropriate) or 'uncomfortable' (situationally-inappropriate): 1) intra-speaker silence, i.e. pauses in individual speech, 2) inter-speaker silence, i.e. gaps between speaker turns in conversation, and (3) group silence. Group silence refers to those seemingly inexplicable silences, familiar to any casual observer of social life, that occasionally arise in rooms full — now

suddenly empty — of conversation. Group silence is the least understood of the three forms and thus will earn the most attention in this paper.

This three-fold framework distinguishes silences by the person(s) responsible for producing them. What does it mean to assign ‘responsibility’ for a silence? Unlike talk, spilt milk, and left hooks, silence seems to be no one’s doing in particular. Although commonsense, this view misconceives silence as meaningless emptiness. In response, let us examine a number of silences in their social context and take careful account of who is responsible.

### Individual Pause (Intra-speaker Silence)

Individual silence refers to breaks in speech while a single speaker ‘has the floor.’ Yet in what sense is individual silence *social*? Mark Twain, expounding on the use of silence in public speaking, illustrates how an individual is not only socially responsible for his own silences, but capable of deploying them with great communicative precision:

...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. (Twain & De Voto, 1940, p. 226)

Twain observes the subtle social contingencies of delivering a single break in public speech, noting three elements that will be recurrent themes in this paper: 1) mutual attendance between speaker and listeners, 2) attention directed to expressive bodies (faces, in this case), 3) the normative claim that a silence should fit its social context. Twain’s main point is that the length of a pause is gauged by keen social awareness of the audience’s developing reaction. Too short and it won’t have its desired ‘impressive’ effect, being indistinguishable from an ordinary break between utterances. An over-long silence, on the other hand, may have *too* impressive an effect — an experience terrifyingly familiar to any public speaker who has momentarily forgotten her speech. In other words, when further talk is expected but none is offered, the resulting silence may take on an uncomfortable hue. Indeed, the impressive effect of a skilled speaker’s dramatic pause may be understood as playing deliberately close to the edge of uncomfortable silence — like a tight rope walker flirting with danger while we all watch, thrilled and anxious. One can imagine that this mixed emotion is precisely what Twain’s orator looks for in the faces of his audience.

As for *who is responsible*, in the case of public speech-giving, the orator is the only possible candidate: for any break in speech, he is locked into the position of next-speaker (Sacks & Jefferson, 1995, v.2:521). Generalizing this principle to ordinary conversation, if the next-speaker is determinate (e.g. when someone has just been asked a question), that person is responsible for any silence that ensues (Schegloff, 2007, p.19-20). So long as an individual remains in the position of next-speaker, any silences are her responsibility. The situation is different when there is more than one candidate for next-speaker and we get *shared* responsibility for silence — inter-speaker silence.

### Lapses in Conversation (Inter-speaker Silence)

The field of conversation analysis, closely associated with the work of Harvey Sacks and Erving Goffman, pioneered the identification of ‘rules’ that implicitly govern the formal organization of conversational turn-taking and interaction rituals (Sacks, Schegloff & Jefferson, 1974; Goffman, 1967). According to Sacks and his collaborators, conversation is, properly speaking, no more than one person talking and no less than one person talking. Now we all know that everyday conversation is full of lulls, interruptions, and overlaps. What Sacks’ definition does is establish the *unremarkable* norm against which gaps and overlaps can be seen as *accountable deviations*.

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]

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. When an interstitial gap is over-long and no speaker takes the floor, it is transformed from an unnoticed structural marker into an acutely accountable moment lodged in the foreground of awareness — *uncomfortable silence* (McLaughlin & Cody, 1982). Case in point: the silence that falls between two people who have just met at a cocktail party (that canonical laboratory for social interaction and self-presentation). If a moment should arise when newly acquainted persons run out of supplies for conversational material and a shared silence emerges, it may be construed as an embarrassed or awkward silence, the embarrassment springing from conversationalists' mutually visible inability to keep to the expected 'rule' of continuous talk.

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)

Given its direct conflict with the implicit 'rules' of conversational turn-taking, it is no wonder that silence has come to have uncomfortable connotations. It evidences failure in communications — a breakdown in the otherwise continuous flow of talk. Discontinuities are often hastily masked or repaired by noise-making or meaningless filler talk: coughing, "ok, so...", "anyway..." (McLaughlin & Cody, 1982; Newman, 1982). Perhaps, like the author, one may take the uncomfortable quiet itself as a conversation topic to banish the silence.

## Group Silence

Group silence is the least understood of the three silences discussed in this paper, partly because it transcends the boundaries of a single conversational turn-taking system, and so has not been a unit of analysis for conversation analysts. Yet any casual observer of social life has noticed these seemingly inexplicable quietings in a room full of parallel conversations, such as at a cocktail party. Suddenly the room is quieter than it was a moment earlier. Speakers' voices drop in volume or cease altogether. For a fleeting moment, the social boundaries between conversational huddles weaken or dissolve, and those present are drawn into one of the most transient of social organizations: group silence.

Who is responsible for such a silence? Unlike the previous silences, where responsibility lies with the candidate(s) for next-speaker, group silence appears to be an emergent social phenomenon, irreducible to particular persons who are or are not speaking. Also, whereas the previous silences are discrete — present or not present — group silence has variable magnitude: the proportion of present persons who are participating in its performance. The limit case, when all talk momentarily ceases, can only be understood as a collaborative achievement, for such a state of quiet requires the participation of everyone present; even a single non-conformer prevents the achievement.

Group silence cannot be explained by simple logical extension of conversation and discourse analysis for it passes beyond the analytic territory of these tools. What material explanation can account for group silences arising? That is, by what means are present persons synchronizing their sound-making behavior despite giving no indication that their attentions are oriented to anything other than their private conversations? In order to establish empirical ground on which to propose answers to these questions, I present the following ethnographic data, drawn from a study on group silence I conducted within a Quaker community. These materials offer insight into how such silences unfold in realtime and why we must attend to the *embodied practice* of group silence in order to adequately explain it. After analyzing group silence in the Quaker context, I will return to the topic of group silence in general.

## Ethnographic Study of Quaker Silence

### Study Setting and Methods

In order to investigate social silence ethnographically, I sought out naturalistic laboratories where silences routinely arise in the social soundscape. I marginalized myself at social gatherings in order to listen to the whole room at once. I let silences enter my conversations with others in order to (tactlessly) observe the consequences. The community that became the eventual focus of my research has made group silence their central religious

activity for over three-and-a-half centuries. The Religious Society of Friends, commonly known as Quakers, gather regularly for practices known as 'Meeting for Worship' and 'Worship Sharing,' where participants sit in a circle, in deliberate silence, for religious contemplation. Silent worship is punctuated by brief, spontaneous speech acts, known as 'ministry,' where participants share, if inwardly moved, insights that have just occurred to them in the silence.

I conducted a four year ethnographic study of Pacific Friends Meeting, an established Quaker community on the West coast of the United States. The primary method was participant-observation in all aspects of community life: religious, social, and committee gatherings. In the final stage of research, I captured the first-ever video recordings of Quaker worship. This video study was designed to capture the embodied practice of group silence in fine detail. By combining participant-observation with software-based video analysis, I was able to verify key ethnographic findings with video evidence. The present paper offers a glimpse of this data diversity in a highly abbreviated form. For the whole picture, see (Steinbock, 2012).

The video study was conducted over a six week period in weekly 90-minute sessions. I used a 360-degree panoramic video camera to record groups of Quakers practicing 'worship sharing,' with groups ranging in size from six to thirteen participants, most attending multiple sessions. Due to the unusually specific nature of the data, I wrote custom software to analyze the video using computer vision and modeling techniques. Movement detection algorithms identified who was moving at any particular instant and the magnitude of their movement from one frame to the next (1152 x 320 pixel resolution, 15 frames per second). Counter-intuitively, this *visual* data turned out to be more representative of the perceivable soundscape of group silence than the corresponding audio data. A video camera is a more sensitive detector of the nearly inaudible, small body movements that characterize Quaker silence, whereas a microphone is unable to distinguish such tiny sounds from background noise. More importantly, the video image locates the movement (and thus the sound) precisely in space, so that I could justifiably assign responsibility to a specific participant (see Figure 1, showing Quakers' bodies delimited for movement analysis). On this basis, the structure and timing of participants' movement-sound and stillness-silence was precisely mapped and measured.



**Figure 1.** A frame of panoramic video shows Quakers practicing group silence.

### **Embodied Practice of Quaker Group Silence**

Over the course of four years participating in Quaker silent worship, I listened to the soundscape of this culturally-situated social silence and observed the embodied behaviors that constitute it. In result, I identified five distinct ways that Quakers 'do' silence (Steinbock, 2012). Three occur during the formal practice of worship, which I termed *settling*, *ministering*, and *gathering* silence. The remaining two, *arriving* and *integrating*, appear immediately before and after formal worship, respectively. I focus on *settling silence* in this paper for it illustrates the underlying embodied order for *all* the Quaker silences.

When Quaker worship officially begins and participants settle into deliberate silence, the room becomes much quieter than it was a moment earlier. Relative to its former clamor, the room is utterly silent. And yet, the disappearance of noise from the room makes it possible to hear what 'silence' actually consists of: the tiny sounds of movements that living bodies make (shifting posture, sighing, scratching, sniffing, and so on). Though ever-present, these sounds go unnoticed under the covering scuffle of ordinary activity and talk. But when silence falls over a Quaker gathering, these sounds become salient. We could say that the practice of group silence 're-calibrates' auditory perception such that quiet body sounds become accountable, noticeable events. As I will attempt to show, by becoming accountable, they become *consequential*, modifying the social interaction field in observable ways.

Given the inevitable noises produced by embodied beings, what sort of soundscape should we expect to find in the silence of Quaker worship? Presumably individuals cough, sniffle and fidget on their own physiological schedules, so we would expect to find a more-or-less uniform distribution of individual sound-making against a silent background, sometimes a little louder or softer, as chance would have independent physiologies align in time.

This is a reasonable expectation but it is not to be found in the Quaker silence. Instead, individual body-sounds arise in definite *group formation*, clustered together in time, and separated by long gulfs of quiet. One person's cough, for instance, is almost inevitably accompanied by a cascade of sounds from several individuals around the room. After the cascade has run its course, the soundscape returns to prolonged quietude, that is, before another 'wave' of sound inevitably emerges. This ebb and flow pattern of embodied synchrony (Condon & Ogston, 1966) was consistently observed across different days and participants. A similar cascade pattern was observed among British Quakers (Dandelion, 1996), though only in connection to overt causes like the arrival of latecomers. When I attended to the soundscape of silence itself over scores of sessions, waves of spontaneous, synchronized, embodied sound and silence proved to be the defining feature. These observations were confirmed by quantitative analysis of movement in my video study of Quakers practicing group silence. See Table 1, showing movement events detected across all six 90-minute sessions, according to the number of people synchronously moving at the same time (event size). The data show that Quakers tend to move together, i.e. it is relatively rare for a single person to move without others following suit. Averaged across all sessions, Quakers moved together 88.5% of the time, lending quantitative support for the ethnographically-observed finding.

Table 1: Synchronous movement events detected in all video-recorded sessions of Quaker worship, sorted by event size. (Size is the number of participants moving synchronously (within 6 seconds of each other), from 1 to N. Bottom row shows the percentage of movement events where more than one person participated.)

Event Size (# of participants)	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
Percent of events > size 1	0.85	0.84	0.82	0.97	0.88	0.95

## Calibrating to the Social-Acoustic Environment

In the deep quiet of Quaker worship, a sound as subtle as a scratch or as overt as a cough transforms the social-acoustic environment from one where a norm of quietude holds sway to one where a little sound is permitted. The initial transgression provides 'cover' for others to follow with apparently lower social cost, analogous to the 'broken windows' theory of social norms (Keizer, et al., 2008). In turn, the sound contributions of additional participants further transform the norm, making it even more permissive, and resulting in the cascade of sound described above. As participants come to complete their posture changes, coughs, etc., silence once again settles over the room, and this event, too, becomes something people normatively join in with. These dynamics could be described as complementary feedback loops, as seen in autopoietic complex systems (Maturana et al, 1973).

The synchrony of Quakers' sounds and silences illustrates a key idea: *calibrating to the social-acoustic environment is a basic way individual behavior is situated in its social context*. Furthermore, the acoustic environment is not an external given; everyone present co-participates in its creation. In this way, the group continuously negotiates a working consensus as to the appropriate volume level for sound-making behavior. Thus is seen the difference between the official rules for culturally-appropriate behavior in a situation (e.g. Quakers worship in silence) and the actual practice of persons participating in contingent interaction, sharing the responsibility of co-determining what constitutes appropriate behavior at any given moment.

Given such precise synchrony in the Quaker practice of silence, we might go looking for the communications medium individuals use to announce their respective plans of action and work to agree on what the consensus will be at any given moment. Scholars have repeatedly shown the multiplex communicative

power of embodiment in orchestrating realtime collaborative action (Schütz, 1951; Birdwhistell, 1970; McDermott, et al., 1978; Goodwin, 2011). In the Quaker case, we can say that the *embodied practice of silence* is the communications medium in that deliberate group silence establishes an environment in which the social order can be co-managed by the subtle bodily manipulation of sound and silence.

Is the embodied synchrony of Quakers merely an epiphenomenon of unconsciously negotiating a social behavior norm or it is possible that it plays a functional part in their purposeful practice? At the very least, Quakers' synchronized sounds and silences imply they are more aware of each others' bodily presence than their closed-eyed meditations might otherwise suggest. This inference was affirmed by study participants when they described how they experienced silence during worship. They spoke in various ways of the supportive role that the presence of others played in their personal meditative practice, specifically calling out bodily sounds and silences as reminders to focus on the group activity of worship:

In both Quaker contexts and in Buddhist contexts, I've experienced the much greater power of a group sitting together, worshipping or meditating as the case may be. There's just something about having a hundred people together in the room just being together in silence. (Sasha, 11-Oct-2010)

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... 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. (August, 10-Apr-2011)

We can begin to see what the bodily awareness of others affords to Quaker participants. Body sounds in close proximity remind the meditator that he or she is not alone and is gathered with others for the collaborative task at hand: group religious contemplation. Recall that the soundscape to which participants are referring when they speak of the reminding power of body sounds has a particular temporal structure, i.e. the very shape of a recurrent reminder, repeatedly calling participants back to the meditation by re-asserting the embodied presence of others. Here lies the link between the social practice of group silence and the psychological process of meditation.

[W]hat'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 there with the same or very similar intentions and that brings the experience a certain power. But with that also comes a 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... to be mindful for the group, who's also supporting me through their same intentionality as we all do this collective worship together. (Thomas, 11-Oct-2010)

Quaker silence is the sound of many people meditating in close proximity. While a person meditating alone may be prone to distraction, Quaker silence provides an acoustic environment that recurrently renews one's intentionality. If the rustling of others reminds the meditator that he or she is not alone and is gathered with others for a shared purpose, the ensuing silence symbolizes that purpose: attention to the felt presence of immediate experience, the present moment. Thus the social-acoustic dynamics of group silence are linked to the purposeful psycho-spiritual practices of those present. With the passing of each wave of body sound, participants gain the recurrent experience of a lasting silence settling over the room, reminding them of why they are gathered.

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... In Friends Meetings, we worship in silence, and it's the *silence* that calls me back to my true self. (Andrew, 25-Oct-2010)

In summary, as Quakers calibrate their sound-making behavior to the local environment, moments are repeatedly organized for silence to become contagious. Participants are reminded to direct their attention to the present that silence exposes: people gathered together, alive to each other and an unfolding group experience. For Quakers and other contemplative practitioners, attention to the present is a practice for generating insight; by exposing the habitual patterns of mind that carry attention away from the present, insight emerges. Over time, distraction may decrease as the mind settles on the present. Over the course of a single Quaker worship

session, recurrent silence settles the congregation into more stable, longer-lasting periods of quiet. Only from these deeply quiet times can the other two silences of Quaker practice, *ministering* and *gathering*, emerge (Steinbock, 2012).

## **An Explanation for Inexplicable Group Silence**

Two key insights have emerged from the preceding discussion: 1) Calibrating to the social-acoustic environment is a basic way that individual behavior is situated in its social context. 2) Group silence directs collective attention to the present moment. Now we're in a position to return to the canonical cocktail party and see both of these principles at work in the everyday phenomenon of spontaneous group silence. I'll describe three kinds of group silence in turn, each produced by the interaction of these two principles. All three are potential grounds for discomfort.

The first group silence has an obvious environmental cause. In any social setting, the social-acoustic environment determines an appropriate volume range for talk and other sound-making. This has both social and pragmatic factors. One must speak loud enough to be heard by one's interlocutors but not so loud as to expose one's talk beyond its intended audience. Appropriate speaking volume depends entirely on acoustic context: a rock concert will differ from an art museum. Furthermore, contexts are acoustically dynamic, requiring correspondingly dynamic responses from participants: at a party, when the background music suddenly goes silent, speakers instantly drop their voices in adaptation. Someone who fails to do so is inadvertently thrust 'on-stage' as their talk is exposed to a suddenly expanded audience. To be thus caught out of tune with the environment may be cause for embarrassment. Such is the importance of staying both socially and acoustically calibrated to the immediate context.

The second group silence has no obvious warrant and so people must go looking for it. As discussed early in this paper, the implicit rule of conversation is to maintain continuous talk. At a party, where many conversations are ongoing in parallel, clamor is the norm and silence a deviation for which warrant must be present. If, while one is speaking, other speakers in the room go quiet for no apparent reason, the appropriately-calibrated response is to follow suit. This adds further power to the signal that stimulated the response. Whereas a change in background music is an external cause for social silence, here the operant signal is the sound of silence itself. Those present may momentarily turn away from the members of their conversation and look around in search of warrant for the silence: perhaps the birthday cake is being carried into the room. When the inexplicableness is resolved by an object or outlet for collective attention, we can say the group silence is *indexical*: it calls attention to something. This is a useful silence, a signal for collecting and directing group attention, just as we saw in Quaker silence.

The contagious and functional qualities of indexical group silence may indicate its evolutionary roots. Several animal species signal alarm to their mates through silence and motionlessness (Dapper, et al., 2011; Pereira et al., 2012). Joining in with group silence also corresponds to the contagious human behavior of group looking (Milgram, Bickman & Berkowitz, 1969), where there's generally good reason to look where a group of others are looking: something dangerous or delicious this way comes.

The third and final kind of group silence is seemingly inexplicable: the case where no warrant is found. Spontaneous silences may emerge, for instance, when inter-speaker silences coincidentally align across different conversations, creating the impression of a warranted indexical silence. As above, conversations momentarily drop in volume or cease altogether. The acoustic boundaries between different conversations weaken or break down altogether, making it difficult to speak for one's intended audience alone, and further adding to the tendency toward not speaking. Drawn together into a shared awareness of their mutual silence, the group casts about for an object or outlet for its now-gathered attention. Something is expected but nothing is happening. Painful associations with past conversational lapses may be triggered, except this silence is multiplied by N. Participants are now caught in a state from which it is difficult to escape: any utterance or overt body sound/gesture produced in such a quiet environment will instantly become the outlet for pent-up attention, exposed on stage to a greatly expanded audience and to greater risk for embarrassment. Thus bodies tend to freeze into motionlessness as voices fall quiet, everyone waiting to discover who will break the silence. (Classroom teachers are intimately familiar with a similar situation, when a question put to students is answered with silent, collective fear of taking the floor.)

Fortunately for party-goers, repair is usually forthcoming, but not through individual heroics. A Quaker-like wave of synchronous noise or utterance is enough to pull everyone back into the comforting din of small talk. In practice, a momentary group silence may be uncomfortably obvious or so brief as to be unnoticeable. In fact, upon inspection, the soundscapes of social gatherings *always* contain brief, spontaneous group silences that exhibit the dynamics described above. This only goes to show how sensitive and responsive people are to their social-acoustic environments. That extreme instances occasionally rise to the level of conscious discomfort should not be taken as evidence of communicative failure, but rather as dazzling displays of social awareness and collective action.

## Conclusion

Calibrating to the social-acoustic environment is a basic way individual behavior is situated in its social context. With intra-speaker silence, we learned that an effective dramatic pause is performed by sensitivity to the audience's embodied social cues. With inter-speaker silence, we learned that turn-taking conversationalists aim to keep talk continuous, with a minimum of gap and overlap; this, too, is achieved by sensing the embodied cues of others to anticipate the timing of their utterances. With group silence, we found a medium for collecting group attention, which serves Quakers' contemplative purposes but may be cause for discomfort in some everyday social settings.

Future research could make a fruitful study of social soundscapes, particularly to examine how embodied synchronies of sound and silence show up outside the Quaker context. I have observed, for instance, that speakers in adjacent conversations unconsciously synchronize the cadence of their utterances and silences, especially when intimate subjects are being discussed, to collaboratively maintain mutual privacy.

Social silence is an underappreciated element of everyday social interaction that deserves wider awareness, by both scholars and everyday conversationalists. Like laughter and applause, silence is a medium for sharing embodied experience: it says something important, without words, about the situation in which it occurs. Perhaps the next time you find yourself in a group where an inexplicable silence is arising, the sense that you are falling into an uncomfortable void may be replaced by the sense that you have fallen into a more intimate relationship with the people around you — something worthy of appreciation.

## References

- Birdwhistell, R. L. (1970). *Kinesics and context: essays on body motion communication*. Philadelphia: University of Pennsylvania Press.
- Condon, W. S., Ogston, W. D. (1966). Sound Film Analysis of Normal and Pathological Behavior Patterns. *Journal of Nervous and Mental Disease*, 143(4): 338-347.
- Dandelion, P. (1996). *A Sociological Analysis of the Theology of Quakers: The Silent Revolution*. Lampeter, UK: Edwin Mellen Press.
- Dapper, A.L., Baugh, A.T., Ryan, M.J. (2011). The Sounds of Silence as an Alarm Cue in Túngara Frogs, *Physalaemus pustulosus*. *Biotropica*. 43(3): 380-385.
- Goffman, E. (1967). *Interaction Ritual: Essays on Face-to-Face Behavior*. New York: Doubleday.
- 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.
- Keizer, K., Lindenberg, S., Steg, L. (2008). The Spreading of Disorder. *Science*, 322(5908): 1681-1685.
- Maturana, H. & Varela, F. (1980). Autopoiesis and Cognition: the Realization of the Living. In Robert S. Cohen and Marx W. Wartofsky (Eds.), *Boston Studies in the Philosophy of Science* 42. Dordrecht: D. Reidel Pub. 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.
- McLaughlin, M. & Cody, M. (1982). Awkward silences: Behavioral antecedents and consequences of the conversational lapse. *Human Communication Research*, 8(4): 299-316.
- Milgram, S., Bickman, L. Berkowitz, L. (1969). Note on the drawing power of crowds of different size. *Journal of Personality and Social Psychology*, 13(2): 79-82.
- Newman, H. M. (1982). The sounds of silence in communicative encounters. *Communication Qlty.*, 30(2): 142-149.
- Pereira, A.G., Cruz, A., Lima, S.Q., Moita, M.A. (2012). Silence resulting from the cessation of movement signals danger. *Current Biology*, 22(16): R627-R628.
- Sacks, H., & Jefferson, G. (1995). *Lectures on conversation*. Oxford, UK: Blackwell.
- Sacks, H., Schegloff, E.A., Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language* 15(4): 696-735.
- Schegloff, E.A. (2007). *Sequence Organization in Interaction*. Cambridge: Cambridge University Press.
- Schütz, A. (1951). Making Music Together: A Study in Social Relationship. *Social Research*. 18(1): 76-97.
- Steinbock, D. (2012). *Making Silence Together: Collaboration in the silent gatherings of Quakers*. (Doctoral Dissertation). Retrieved from [www.steinbock.org/pubs/steinbock\\_dissertation.pdf](http://www.steinbock.org/pubs/steinbock_dissertation.pdf)
- Tannen, D., & Saville-Troike, M. (1985). *Perspectives on silence*. Norwood, N.J.: Ablex Pub. Corp.
- Twain, M. & De Voto, B.A. (1940). *Mark Twain in eruption: hitherto unpublished pages about men and events*. New York: Harper.

## Acknowledgements

This work was supported by an NSF grant (NSF#0354453) to the LIFE Science of Learning Center. Thanks to Hiroki Oura for comments on an early draft of this material.