Numbers may speak louder than words, but is anyone listening? The rhythmscape and sales pipeline management

MELISSA CEFKIN
IBM Research

In this paper I explore the often fleeting, seemingly constrained acts of expression performed through participation in everyday, routinized actions and practices. The vehicle I use for this exploration is the tools, processes and practices sales professionals use to manage the list of possible sales opportunities, or sales pipeline. I give particular attention to the meetings in which sales professionals and their managers discuss the pipeline. The element of talk, with its potential for unruliness, plays a central role in this otherwise hyper-rationalized activity focused around numbers, accounting and calculability. I suggest that to understand such signification processes and the forms of meaning that emerge through them we must look beyond the content of enunciated statements to consider the forms they take over time. I propose that participation in the sales pipeline process, particularly the meetings, forms a part of sales-people's rhythmscape of work. By situating sites of expression in the notion of a rhythmscape, I point to the broader performance landscape in which employees participate in and experience their organization and in the market more broadly. By doing so, we are reminded to recognize the multiple levels of meaning and signification embedded in ordinary workplace tools and practices, including those intended for other uses, when considering recommendations to and designs for tools, processes and interventions that support them. The paper also suggests the need for a theory of sensation of late capitalist market production.

> Sensory channels may not be modeled after linguistic forms of communication – a
> perfume is not the same as a sentence – but they are still heavy with social
> significance. *David Howes, 2005*

INTRODUCTION

Members of a globally distributed sales team for a global IT firm are meeting by phone to discuss the possible sales opportunities, or "pipeline", for their client, a multinational financial services firm. Sellers from different product and service lines of business as well as different regions and geographies together with some of their team management are present. A seller in the UK notes that he is under pressure from both divisional and regional managers to close a particular sales effort this quarter, and it's not looking good. Referring to the spreadsheet data the team members were all sent in advance of the meeting that summarizes the status of each acknowledged opportunity—its potential revenue amount, for instance, and its likelihood of sale—a Germany-based colleague draws attention to some better news: "At least you've booked another $300,000 in signings."

Moving on, the manager for the sales team asks after the next entry in the pipeline, noting that the possible revenue amount on the opportunity had changed from last week. "What is this number?" he wants to know. What does it represent? Is it what the client has since told them they want to spend? What the seller's gut tells him they can get for it? What the proposal, now complete, priced out at? Soon he will be needing to send his expectations for the next quarter's revenue from this client up to his management and they will of course "challenge" him—that is, set a target and compensation plan designed accordingly—to do even better. What should he really expect here from this one? Is this a reasonable number or a stretch?

And so goes a typical weekly sales pipeline meeting where sales reps in turn speak to their sales pipeline, the status of the sales they are in the process of trying to make. The engines of global market production operate through such everyday practices performed by actors working throughout the system. From the standpoint of the actors of the system, participation in such practices forms one of the sites through which they experience the market and interpret their role in it. Such meetings and exchanges occur repeatedly and unremarkably on a daily basis, forming a known and mundane pattern in the organizational life of commercial organizations. Processes and practices associated with sales pipeline management, with their emphases on numbers and categorization, reflect the rationalizing processes associated with modernity.

There are many ways to interrogate such site of exchange for what they say about the experience of participants in the productive capacity of the global economy: through a Foucouldian analysis of how power is generated and instantiated through such forms of practice and institutions, for instance, or how more textually through consideration of how processes of modernity are subverted by speech acts. Understanding the "emotional management" required and reinforced in the narrative forms of similar kinds of exchanges has had a well established tradition of effort since Hochschild's 1985 publication of *The Managed Heart: Commercialization of Human Feeling*. Anthropologists have long paid attention to forms of resistance (Abu-Lughod 1986) and the articulation of both authorized and subversive cultural values and concerns in everyday narrative forms. In studies of work, Orr's (1996) rich exploration of the varying contexts of exchange among field service technicians shows how the bits and shards of storytelling conducted throughout and within technicians' practice form a constitutive part of the doing of the work.

Here I am interested in exploring the processes and exchanges of sales pipeline management in terms of the way they form sonic sensory experiences for participants that exceed their narrative form. I am interested in listening to them for what they say about the rhythms of everyday work. I argue that we can enhance our understanding of such processes and the meanings that emerge through them by looking beyond the content of enunciated statements to consider the form of the interchanges over time. To move beyond a logo-centric approach to understanding, I introduce the notion of "rhythmscape" as a way to

situate such exchanges as a part of a broader dimension of the dynamics of market production.

By rhythmscape I refer to the regularly repeated and patterned auditory events by which actors in the many enterprises that fuel market production experience the global economy. Exploring the rhythmscape as part of ethnographic design research in commercial organizations offers a particular filter through which to access work practices and to model employee experience and dimensions of market dynamics more broadly. While the work I speak to here has not yet resulted in manifest new designs for tools or methods of support[1], I believe that such an understanding holds promise to lead to better designs, both technical and organizational. Echoing observations by Dourish (2001) about the dual role of technologies arrived at by stepping back and looking at the technologies and their use from a view beyond their intended functions, I attempt to engage a fuller sense of work activities and their instantiation in organizing processes and technologies than that produced through analysis of such activities solely as direct, if complex, means of data flow and exchange. To "hear" the dynamics of the marketplace and the actors within it we must listenin for more than words. I propose that consideration of the dimension of "rhythmscape" offers a unique means for this hearing in the context of the complex business enterprise.

The sales pipeline review process—or, as its known in the key research site I draw on for this work, the *cadence* process—offers a particular window into the rhythmscape. For many a company sales rep, the ritual of participation in sales forecasting activities, particularly pipeline review meetings, is an inescapable aspect of their work on a weekly (in some cases daily), monthly and quarterly basis. Inputting, updating, and managing data for the forecast and otherwise figuring out a means of engaging with it is a persistent, if often unattractive and distracting part of the work practices of sales reps and managers. The pipeline, in its overall management and particularly in the form of the pipeline review meeting, reveals a promising site for examining the rhythms of everyday work and the forms of meaning and expression that emerge within them.

METHODS AND APPROACH

The thinking for this paper draws on projects over many years of my ethnographic research among sales professionals in a wide range of commercial enterprises, from independent 'agent' reps working for small office supply companies selling Xerox copiers in places like rural Maine, small town England, and suburban Dusseldorf and Barcelona, to large teams of seasoned business and technical specialists selling, through protracted and complex sales interactions, billions of dollars of products and services. Participation in activities related to pipeline management, notably meetings to review the unit's status, has been a consistent aspect of my observations across these settings. These different studies

---

[1] My argument here falls out of research conducted for different applied ends, most heavily from investigations of team collaboration. I am using this analysis as an occasion to push further in thinking through the design implications that may fall out of such a perspective.

were conducted for a range of applied aims, from the design of distance learning programs for far flung independent sellers to advancing collaborative practices among large teams of globally distributed and highly specialized sellers. None of the studies have (yet) been consigned with the explicit purpose of making interventions to the pipeline process.

While my thinking for this paper builds on this broad set of experiences, for this paper I draw particularly from research projects conducted with my colleagues at IBM, Jeanette Blomberg, Lisa Kreeger and Jakita O. Thomas. The objective of these projects has been to prompt interventions to enhance the collaborative practices of the sales teams. We have conducted ethnographic research among four sales teams of a large IT service and product company. Each team is dedicated to a single large (and similarly global) client, and includes roughly 60-75 members. Our fieldwork consisted of two to five months per team and included observations of team activities, including one-on-one observations of personnel, attending key planning and organizational meetings in person and by phone (as with other members of the teams), and listening regularly to their sales pipeline review meetings. We also conducted 57 interviews, many of which explored the interviewee's experiences with and views onto the pipeline process. In addition, we have reviewed materials accessed through the corporate intranet which speak to aspects of the sales management process. For this paper particular analysis has been focused on the forms and interactions of the pipeline review meetings as well as fieldnote and interview data pertaining to the pipeline review process.

THE CADENCE OF SALES WORK

Sales pipeline management is used in commercial enterprises as a means to direct focus and attention of personnel and to anticipate future performance. The system of accounting expressed in the sales pipeline is used to monitor potential revenues, manage investment decisions, and to frame future projections and hence provide guidance to shareholders and market analysts. Once a sale closes, it comes off the pipeline. In this way it differs from the double-entry form of balance statements, a history and practice of continued critical interest (see, for example, Carruthers and Espeland 1991). It shares with double-entry bookkeeping, however, in being emblematic of the rationalizing processes of modernity.

In this fieldsite the sales pipeline process overall, as well as the particular meetings that occur within it, are known as the "cadence". The cadence process revolves around efforts of varying actors—sales representatives, sales management, controllers, and administrative support, most notably—in updating and managing the data, an activity punctuated by regular meetings to review the data. The notion of cadence appears to primarily point to the cascading of meetings that occur to discuss the pipeline and the report about the pipeline assembled to guide those meetings. The cadence is tied directly to the broader sales methodology used in the company and is the focus of a great deal of training and attention. It is also the source of a great deal of dissatisfaction on the part of sales reps.

The application through which the pipeline data is used is a customized version of a well known Customer Relationship Management (CRM) system. The tool is considered cumbersome to use – users must navigate multiple windows and numerous fields to enter a new opportunity, for example, and it has limited integration with other systems. The company has made, and continues to make, multiple efforts to address these issues. Another complaint revolves around the perceived marginal value of the pipeline review meetings in proportion to the time devoted to this activity. While our observations revealed that there can be significant value gained by ensembles of people coming together to discuss the sales pipeline, an observation that was supported by some interviewees, concerns and complaints about these meetings in interviews, in corporate-wide employee intranet forums, and in comments to management blogs were vocal and pronounced. One complaint concerned the time and scheduling required for the meetings. Cadence calls (both due to geographical distribution and to allow people to call in from client sites or at home during off hours) almost always include participants joining by phone. Some cadence meetings are held entirely as conference calls. Participants often experience distraction and interference, timing their schedule to join the meeting, for example, by cell phone en route from one client call to another. Others may be joining the meeting in the middle of the night from a distant time zone. Multi-tasking is rampant and is made visible by the frequent pauses and requests to repeat questions or comments.

In addition, cadence calls are held for each team, unit, product group, and region. Depending on the particular role of the seller (client executive, product specialist, territory rep, etc.) any given individual could potentially be requested to join multiple calls a week as each brand, region, dedicated account team and other sales units could potentially request their input. Sales managers, in addition, participate in further cadence meetings with their management as the information is disseminated upwards. There is an effort to reduce this profusion of meetings. Indeed using a language invoking the sense of the rhythm being out of whack, a general manager for a large geographical region commented in his internal company blog that the aim is to make it so that each sales rep should only have to participate in one meeting a week, and asks of employees to comment on whether they are still fielding requests for "out-of-cadence" reviews.

Issues of control and surveillance, as have been identified by other researchers focused on the adoption and resistance to technologies (Brannen 2005; Hanson 2004; Orlikowski 1995) are also apparent. Not only the recorded pipeline data but also the cadence meetings are perceived in some cases to primarily serve the interests of management by enabling them to oversee and monitor sales rep actions and behavior. Entries in company blogs echo views expressed by some interviewees, that in theory the data should be directly attainable through the system. Carefully weighing his words, one interviewee asserted that the cadence meetings serve three functions--to feed the managing director's need to know what is going on, to provide a means for the managing director to figure out where to "insert herself" into the work, and to force the sales reps to "focus themselves" by having to prepare for the

meeting[2]--all pointing the sense that the meetings are larger about supporting management's need for a sense of control.

These factors are emblematic of the disdain for cadence calls, an attitude witnessed in the following exchange: A sales team manager, a client executive and a brand specialist who span two continents are meeting to discuss some joint work pursuing opportunities for a client. As they conclude, the sales team manager comments "last year we had regular calls [to collaborate on opportunities]. Maybe we should have regular calls every four to six weeks?" The specialist reacts negatively and assertively, reminding him that she serves multiple accounts. "I'm not going to agree to any more calls." The client executive chimes in "we are trying *not* to make it [this particular exchange] a cadence call!"

MANAGING THE PIPELINE

The forecast consists of a list of the opportunities for the as yet unrealized sale of a firm's products and services and is embodied in artifacts such as index card files, whiteboards, spreadsheets or complex information systems[3]. Reporting or listing conventions vary. Typical components include the name of the potential buyer, the products and services under consideration for purchase, a dollar amount related to the cost of the purchase, and an indicator of the likelihood of sale. The information in the forecast is meant to be populated in most cases by sellers on the front lines. In theory, each new opportunity is entered as it is identified and then is updated on a regular basis. Ideally chains of management throughout a business organization should be able to reference the current state of all open opportunities in the pipeline at any given time and gain a realistic snapshot of the potential future business performance.

In practice, however, there is often a lag between the actual current state of an opportunity and what is recorded. Indeed, the very question of when and even *if* to add an opportunity into the pipeline record is a matter of some consideration, negotiation and

---

[2] Personal communication, Dec. 8, 2005.

[3] While the pipeline process used in small organizations may be of a modest level of technicality and detail, a simple spreadsheet, for instance, those of larger enterprises often involve complex information systems. In the early 1990's, database and enterprise software companies accelerated their competition to dominate the market in tools to support the tracking of sales opportunities and to integrate the information contained therein into enterprise-wide work and information flows. The rise of enterprise management software such as Sales Force Automation (SFA) and the Customer Relationship Management (CRM) systems in which SFA's are typically embedded, the management of the pipeline and the tools, knowledge and practices used to support it have spawned a whole market. In addition to product firms such as Salesforce.com, Seibel, and Oracle (now owned by Seibel) are consultants who specialize in services to improve the effectiveness of firm's processes surrounding the pipeline process, systems integrators who tie the technical systems into other systems such as HR and payroll, and training companies offering courses in everything from general management of the sales process to improving business decisions through the use forecasting data.

manipulation by sellers. What constitutes "an opportunity" is itself open to interpretation; is it upon the first indication that a customer may have a need, such as when noticing a broken machine but before exploring the client's expectations of replacing it? Is it after presenting a pitch about how the seller's company can help solve a client's business problem? Upon receipt of a Request for Proposal (RFP)? Once an opportunity is noted and entered, a whole range of considerations emerge concerning the data and practices in updating it. Chief among these are considerations of time and perceived benefit. Finding time and remembering to go into the system and navigating through the multiple fields to make updates is commonly perceived as a nuisance and diversion by sales reps, and an activity of little benefit to their primary orientation to aspects of the work involving interactions and relationships. Accordingly, various disciplining practices have emerged in an effort to enforce the timely and thorough maintenance of pipeline information, from monitoring by sales management to the addition of sales support staff whose job consists largely of tracking down sales staff in order to update the pipeline.

Choosing to enter opportunities into the system and managing updates is also a matter of individuals' efforts to control their standing in the team and vis-à-vis management. The visibility accrued by inclusion of an opportunity in the system can flag the need for support and investment – the more significant the opportunity, for example, the better the chances of getting additional administrative support and resource investment in the sales process. On the flip side, however, this also exposes sales reps to added attention, something that is not always desired. Should an opportunity stall or the size of the opportunity decrease, a seller's savvy in reading or managing the client may be questioned. If the opportunity is large, people elsewhere in the system may exert pressure and interference in an effort to grow or hasten the sale. As the pipeline travels in throughout the organization, identification of opportunities that may relate to additional areas of the client can bring attention from multiple units; in the IT sector, it is not uncommon for opportunities to involve hardware, software and services components with representatives of each of those areas trying to get a piece of the action or to stave off potential trouble, adding considerable complexity to deciding on and executing particular approaches in the sales effort. With this, sales reps risk loosening or losing control over their highly valued and often guarded client relationships.

Moreover, the practice of quarterly or annual quota setting (the amount of business a sales rep or unit is expected to accomplish) is based in part by 'upping' the amount of the current pipeline. (Other factors for target setting include historical data on actual sales and other market projections). This leads to a 'punished by reward' syndrome in which those reps or units who do particularly well are charged with having to do even better the following quarter or year. Given these factors, participants actively attempt to control their pipeline by avoiding disclosing an as yet uncertain effort underway, setting potential close dates further out than is anticipated, understating potential revenue amounts, minimizing the likelihood of sale, and by not pushing to finalize a sale within a certain time period so as to avoid over-achieving the target (thus leading to an even bigger one the following term) and at the same time getting ahead in their achievement of the next term's quota. Management typically considers such actions to be 'gaming" the system and may make efforts to stop it.

Indeed, CRM applications themselves are often designed with functions intended to prohibit these manipulations by triggering notifications after certain time has elapsed, for example, or when key milestones have been achieved.

TALKING ABOUT THE PIPELINE: CADENCE CALLS

Cadence calls, the re-occurring meeting held to discuss the pipeline, is typically led by a person whose role crosses those of the reps, such as the team manager or controller. A report is used to both focus and guide the meeting. The report is a transformation of the data fed through the CRM system and ported into a spreadsheet. The production of this report itself constitutes a site of significant activity for members of the teams. Sellers' work practices are often significantly framed in relation to reporting deadlines as they scramble to enter their updated info or reply to requests from information from others. In certain cases, participants were known to dedicate a heavy portion of their week to producing the report. As I show elsewhere (Cefkin et al. 2007), these activities in turn have an impact on intra-organizational relations and team dynamics. Importantly the production of the report requires a fair amount of manual manipulation, a sign that the information is always in need of contextualization and interpretation despite the promise of the tools to automate and simplify the process.

Various ordering principles are used to structure the information, and this typically sets up the flow for the meeting itself. It may be based on categorical differences in which the opportunities are organized by rep, product or division, for instance, or based on valued differences, where the opportunities are organized from the most to least likely to close or highest to lowest value deals. Differences in organizing principles appear to be driven by both the conventions of the unit or company and managerial preferences and provide sellers with some expectation from week to week about when they'll be likely to need to speak during the call.

While the meeting is explicitly designated as a group event, review of the opportunities proceeds, nonetheless, as a series of primarily one-on-one interactions. The key node of interaction is between the sales rep with designated responsibility for each opportunity and the meeting leader (sales manager or controller). As the turn comes to the rep, he or she typically provides an update on the status of the opportunity, either repeating what is reflected in the updated pipeline or by offering new information to update the status at that moment. More generally the seller fills out the story of what has led to any changes in its status or, if there are none, to defend why not. The seller's peers may occasionally interject with bits of additional information, questions, ideas, or, as suggested in the opening vignette, attempts at camaraderie and morale boasting, but the primary role of other participants during each seller-manager interchange appears to be as witness. In other words, completion of the pipeline review requires the serial interchanges between the manager and each seller whereas peer-to-peer inputs are optional.

Various interaction modes characterize the interchanges themselves, suggestive of the highly negotiated nature of the work practices and of representations within them. Explanation and interpretation are common throughout the meetings – describing why a revenue amount was changed, for instance, and then discerning whether it is being appropriately categorized. Interactions can also be seen as positional plays by participants to affect particular perceptions or to prompt particular actions or behaviors. This may be about positioning participants collectively as representatives of the firm against the competition or about status and power plays among and between team members and management. To illustrate, during one cadence call a data entry error was identified. Instead of a total potential revenue amount in the thousands, the opportunity was in fact worth millions. In addition, the opportunity was not yet marked "qualified", meaning it had not been factored it into potential quarterly revenue. The manager grew audibly excited by this find as it suggested the team had greater potential of achieving their target. However the tone of the seller's reply was one of worry and consternation as the manager suggested they reclassify the opportunity as "validated". The seller replied quickly that if they did so, he would request that the total revenue potential be lowered. The implication to the seller was that he would likely receive greater attention and pressure than perhaps he felt would be useful. The manager disagreed, despite the sellers protestations.

TOWARDS THE RHYTHMSCAPE

The practices and experiences pertaining to the sales pipeline share with other corporate rituals such as quarterly meetings and celebrations of teamwork efforts in their repetitive, supererogatory nature; in this era of automation and digital information flows it is functionally possible for the data-as-information to be entered and disseminated as necessary without requiring participants to come together in a single time and place to speak to the information. And yet the practice persists, suggesting that something more than simple information exchange is going on. The focus on numbers and the dimension of calculability create a particular aura for the event; unlike other corporate rituals such as a quarterly meeting which are already construed around the 'softer' dimensions of identity production (e.g., team building) and morale support, pipeline review meetings are construed as the 'real' work of managing the business through the hard and neutral representation of numbers. This 'real' work transpires, nonetheless, through a ritualized form of interchange of call-and-response between leader and seller with others as witness.

My interest in this paper is to explore different means of interpreting these dynamics. I introduce the notion of "rhythmscape" as an effort in that direction. The notion of "scape" identifies a particular dimension of broader dynamics without forcing them to be fixed or reduced to singular meanings. Rather than fixing a single point-of-view, the notion of scape carries with it a sense of fluidity and dynamics; a land*scape* changes, for instance, as the perceiving subject moves across space. The perceiving subject also experiences the scape from a particular position, reminding us that a scape is also perspectival. It is perceived according to the specific histories of participants in conjunction with the histories of the dynamics with which they intersect. Appadurai (1996), for instance, posits that notion of an

"ethnoscape" as a constitutive dimension of the global cultural economy. Howes (2005) suggests that a "sensescape" to point to broad fields sensory experience while Feld (2005) specifically explores the soundscape as a means of overcoming the dominance of visualism. Following on these efforts to open up and extend means of grasping social processes, I similarly aim to overcome singularly logo-centric ways of understanding and to emphasize an aural-kinestic sense to the dynamics.

The rhythm of the cadence is suggested by both its auditory and its cyclical/repetitive aspects. I have thusfar been describing a routine and seemingly rationalized process of generating, sharing and managing data, and through it, actions, perceptions and behaviors. It is worthy of note, however, that despite the fact that there are all sorts of means for the data-as-content to pass through the system, a ritualized practice of auditory expression is maintained and repeated within the process. This auditory performance—an occasion to verbally repeat expression of the data and to subject it to discussion— is replicated through a whole series of meetings cascading from team to unit to division to corporate levels of the organization and repeated on a weekly, monthly and quarterly basis. These auditory events happen in a pattern of predictable repetition which play out both across time in relationship to other such meetings (that is, the cascading of meetings is meant to happen in a particular order from week to week, and from which the cadence gets its name) and within the course of a particular meeting as the talk moves from rep to rep through a patterned form of exchange.

Close attention to what transpires in the meetings suggests the form exceeds the semantic dimensions of the discourse, in other words, what happens is more than the summation of the content of the utterances made. In the course of the meeting, numbers may be guessed at and the categorization of information changed due to movements in the conversation itself whether or not any material change in the opportunity had been previously identified. Participants attempt to play with and control the proceedings to avoid prompting unwanted repercussions. The auditory repetition of review of the pipeline in the form of the cadence call, I would suggest, functions to both expose and enable these sorts of practices. The risk of data flowing through the system un-interrogated in a setting such as a cadence call is that such opportunities to impact sellers' actions and behaviors would go undetected. Pointing to the albeit flawed connection between the use of the system for tracking and maintaining data and the holding of a meeting, said one interviewee "The problem is you've got a tool everyone uses for discussion, and the ease of use hinders that discussion."[4] By holding a meeting in which individuals must speak out loud, the context is created to generate enunciations that may have meaning-creating consequences. Such enunciations hold greater potential for manipulations that can impact performance than do mere numbers in a spreadsheet. In the case noted above, for instance, a manager's identification of a data entry error in the revenue amount – the opportunity was worth much more than had been thought – and the manager's insistence on reclassifying it against the

---

[4] Personal communication, April 2005.

Sales Pipeline Management – Cefkin

wishes of the sales rep from an "unqualified" to a "qualified" opportunity surely resulted in the sales rep leaving the meeting with a pressing sense of the need to act on this effort.

As auditory events, such meetings participate in a powerful aspect of hearing, that it is, however imperfectly, an immersive experience (Carter 2004). The meetings proceed by way of creating an "acoustic space" (a notion of Carpenter and McLuahn taken up by Feld). The prompting of these enunciations in a relatively public context plays a disciplining role; others act as witness to the movements and changes of effort. The particular perspective a participant brings to the event, the positionality of the participant, contributes to the ways the meeting is heard, but participation more generally entails a kind of forced listening. That the process repeats from week to week with a high likelihood of the same information being reviewed repeatedly suggests that the particular significance of any given adjustment to the content is negligible. Further changes to the same opportunity could be made again in the weeks following.[5] The overall form and repetition of the meeting compels the meaning of the process. The form itself generates an expectation of movement and action. This imperative, reinforced as part of the rhythmscape of business workers, exceeds the function of articulating data and exchanging information. The form of the meeting, with its repeated series of one-on-one interactions of manager and sales rep held in front of an audience who may also at time join in the interaction to participate, produces an urgency, an imperative to act.

The cadence in the work of sales emerges and becomes formed by the many practices of sales work, among them as explored here, the practices of the sales pipeline. In the data-saturated world of tool, process and technology design it is appropriate to focus attention on the content of what is being expressed, to search for layered and multiple angles of signification. But there are other ways to understand and access what is happening. By giving a name to the aural dimensions of work, by suggesting they participate in a dynamic, fluid, cyclical dimension of rhythm and sound, a rhythmscape, I am suggesting they operate as a performative site for the production and reproduction of the market and sustaining organizations within it.

Consideration of the phenomenological aspects of the pipeline process, examining it in terms of its form and in particular the rhythmscape, provides a novel way to access existing workplace experience. It draws attention to ways to hear that which often is not listened for, less the content of what is being expressed than the forms which make up the contexts of the expressions. That the design of products and services can be enhanced through (some would say, requires) understanding the social and cultural contexts of use is by now well established. The rhythmscape, I am suggesting, offers designers a refreshed orientation to the sonic and rhythmic aspects of these broader contexts of use and a novel way to consider how their products participate in broader cultural dimensions of practice. To practitioners of

---

[5]This reinforces the point, as Julia Gluesing pointed out in review of an earlier draft of this paper, that the event is less about the data than it is about the relationships among participants and between them and the actions at hand—the data are manipulated to achieve particular relational outcomes.

ethnographic research in industry, the rhythmscape suggests a way to identify and elaborate on performative dimensions of market production and consumption by opening up a different route into understanding experience than the dominant visual and logo-centric means of interpretation. I am suggesting that a theory of sensation in late capitalism is needed and that linguistic transactional analysis is not sufficient. I gesture towards what may become this theory by exploring the rhythmic and auditory aspect, the rhythmscape, of practices that emerge across combinations of the technologies, people, processes, and disciplining structures and which underlie and form these productive processes.

REFERENCES

Abu-Lughod, L.
1986   *Veiled sentiments: honor and poetry in a Bedouin society.* Berkeley, University of California Press.

Appadurai, A.
1996   *Modernity at Large: Global Dimensions of Globalization.* Minnesota Press.

Brannen, M.
2005   "Once More with Feeling: Ethnographic Reflections on the Mediation of Tension in a Small Team of Call Centre Workers," *Gender, Work and Organizations*, 12(5):420-439.

Carruthers, B.G. and W. Espeland
1991   "Accounting for Rationality" Double-Entry Bookkeeping the Rhetoric of Economic Rationality," *Journal of American Sociology.* 97(1):31-69.

Carter, P.
2004   Ambigious Traces, Mishearing and Auditory Space. In Hearing Cultures: Essays on Sound, Listening and Modernity. V. Erlmann, ed. Oxford, New York: Berg. Pp. 43-64.

Cefkin, M. and J. Thomas, J. Blomberg
2007   The Implications of Enterprise-wide Pipeline Management Tools for Organizational Relations and Exchanges, *Group '07 Conference Proceedings*, Sanibel Island, FL, US, ACM.

Dourish, P.
2001   "Process Descriptions as Organisational Accounting Devices: The Dual Use of
        Workflow Technologies." *Group '01 Conference Proceedings*, Boulder, CO, USE, ACM.
Feld, S.
2005   "Places Sensed, Senses Placed: Towards a Sensuous Epistemology of
        Environments," *In* Empire of the Senses: the Sensual Culture Reader, D. Howes,
        ed. Oxford, New York: Berg. Pp. 179-191.

Hanson, N.
2004   Consuming Work, Producing Self: Market Discourse in Dispersed Knowledge
        Work. Anthropology. Philidelphia, Temple University. PhD.

Hochschild, A.
1992   *The Managed Heart: Commercialization of Human Feelings*. University of California Press.

Howes, D. ed.
2005   *Empire of the Senses: the Sensual Culture Reader*. Oxford, New York: Berg

Orlikowski, W. J.
1995   Evolving with Notes: Organizational Change and Groupware Technology. Sloan Working
        Papers.

Orr, J. E.
1996   *Talking about machines: an ethnography of a modern job*. Ithaca, N.Y., ILR Press.