

# The NSF report on the Work, Identity and Community in Silicon Valley project

*Slightly edited honoring the rights of  
Human Subjects, protecting informant anonymity*

## **Participants**

### **What people have worked on this project?**

#### **Principal Investigators**

- J.A. English-Lueck, Ph.D Associate Professor, Department of Anthropology, San José State University
- Charles N. Darrah, Ph.D. Associate Professor, Department of Anthropology, San José State University
- James M. Freeman, Ph.D, Professor, Department of Anthropology, San José State University

The Principal Investigators designed the research plan, conducted a majority of the field interview/observations, transcribed interviews, created codes and trained interviewers/transcribers/coders, and analyzed data.

#### **Interviewers**

Note: Graduate students were recruited from the following programs at San José State University—Social Science with an emphasis in Anthropology; Interdisciplinary, Library Science, Psychology. Undergraduate students were recruited from the Anthropology and Behavioral Science programs.

- Kathleen MacKenzie, M.A. Social Science with an emphasis in Anthropology
- Araceli Valle, graduate student
- Blair M. Dunton, graduate student
- Joe L. Hertzbach, graduate student
- K. Joelle Sorensen, graduate student
- Lori Burgman, graduate student
- Israel R. Zuckerman, graduate student

- Maho Teraguchi, graduate student
- Piper McNulty, graduate student in conjunction with Antioch University
- Sharon Covarrubias, graduate student
- Diana M. Petry, undergraduate student
- Dana Ou, undergraduate student
- Doris O’Loughlin, undergraduate student
- Eric L. Metz, undergraduate student
- Eric N. Rhebergen, undergraduate student
- Joseph Duran, undergraduate student
- Jenny L. Eaton, undergraduate student
- Jason S. Silz, undergraduate student
- Lydia M. Struich, undergraduate student
- Linda Quach, undergraduate student
- Naftoli Pickard, undergraduate student
- Paula Rockstroh, undergraduate student
- Robyn D. Lauziere, undergraduate student
- Robert F. Olds, undergraduate student
- T. C. Chang, undergraduate student

### **Transcribers**

All of the interviewers plus:

- Karl Lueck, M.A. Instructional Technology, San José State University
- Deborah Dalton, graduate student
- Vicki Geissinger, graduate student
- Vandy Ham, graduate student
- David Cismowski, graduate student
- Debbie Faires, graduate student
- Jennie Eaton, graduate student at Santa Clara University
- Janet Thieman, undergraduate student Cabrillo College
- Susan Weatherly, undergraduate student Cabrillo College
- Robin Velte, undergraduate student Cabrillo College
- Ronda Vague, undergraduate student Cabrillo College

### **Coders**

- Karl Lueck, M.A. Instructional Technology, San José State University
- Bonnie Evans, Graduate Student in Social Science with an emphasis in Anthropology, San José State University

### **Archivist**

- Deborah Dalton, B.A. Anthropology, San José State University, M.A. graduate student in Library Science

### **Technical Consultant**

- Karl Lueck, M.A. Instructional Technology, San José State University

## **What other organizations have been involved as collaborators or partners?**

The research team at San José State worked collaboratively with several partners to align their research goals with our own. These organizations included non-profit organizations such as the Alfred P. Sloan Foundation (especially Kathleen Christensen on the interface of work and family among middle class Americans), the Institute for the Future (especially Andrea Saveri on the use of emerging technologies at work and in households, particularly in high tech and global work), MIT/Working Partnerships (on the role of temporary workers in Silicon Valley), Xerox PARC and Interval Research (on ethnomethodological techniques, and the distinctive qualities of Silicon Valley as a research site).

Several organizations donated funds to the research effort including: The Institute for the Future, Daimler-Benz, and Ericsson.

## **Activities and Findings**

### **Describe the major research and education activities of the project.**

#### **Description of research activities**

The National Science Foundation funded only a portion of the larger Work, Identity and Community in Silicon Valley project. In this section we will describe the larger project (research design, fieldwork, final analysis) and the portion funded by the grant (transcription, coding, preliminary analysis).

#### **Overview of the Work, Identity and Community in Silicon Valley**

The Work, Identity and Community in Silicon Valley (WICSV) project ethnographically investigates how work schemata are recontextualized into different domains in the lives of a wide variety of people in Silicon Valley. Our tasks are to identify those schemata, identify recontextualization between domains such as work, family, friendship, religion, and civic community. We identify the distribution of activities across these domains and the catalytic elements such as technology, changing work organization, models of family and community that drive this particular form of culture change.

To accomplish this we conducted a series of interviews with selected informants, maximizing the variation across ethnicity and national origin, class, position in organization hierarchies, and types of work. We were particularly interested in capturing a wide range of views of civic identity. Some informants simply lived in the region, with little overt identification with Silicon Valley per se. Others shaped the perceptions of Silicon Valley and actively embraced the regional identity as a driver of change. Based on preliminary research, our sampling strategy identified a series of variables which defined groups from which our informants were drawn. A specific sampling strategy was developed for each group (see Figure 1).

The interview protocols combined semi-structured interviewing and structured observations. Informants were interviewed multiple times in differing locations—in the primary workspace and at home, often in another neutral location. The multiple interviews allowed informants to reflect on questions between sessions. Topics for inquiry included: work practice, work relationships, work history, network elicitation, residential history, cultural identity, volunteer work and civic involvement, workspace geography, home workspace geography, familial and household rules about working, religious practice, gift-giving practice, elicitation of intercultural interactions, projected individual and regional future scenarios, and conceptualization of Silicon Valley. Detailed observational tours were made of primary workspace

Figure 1: Sampling Design for the Work, Identity and Community in Silicon Valley Project

*DEFINING VARIABLES/ SAMPLING STRATEGIES	INFORMANTS
<p>DEMOGRAPHIC ASPECTS LINKED TO CULTURAL IDENTIFICATION</p> <p>(Culture of origin, ethnic affiliation, gender, gender orientation, profession/occupation, local or sojournerstatus)</p> <p><b>Sampling Strategy:</b></p> <p>Maximum variation using multiple sources of identity each often viewing itself as essential to Silicon Valley, some viewing themselves as distinct from it.</p>	<p>Locally born and sojourner workers, the latter drawn from international (European—British, Dutch, German, French, Austrian) Asian (Vietnamese, Burmese, Chinese, Japanese, Indian) North and South American (Canadian, Mexican, Colombian etc.), African (Nigerian), and ethnic origins (Hispanic/Latino, Asian-American, Pacific Islander, and African-American, Jewish-American, etc.) as well as differing regional origins (Midwest, South etc.). Men (51%), women (49%) of a various of gender orientations, ages (18-76). Family and marital structures included married (43%), never married (26%), divorced (22%), widowed (3%) and partnered individuals (2%). Family structures included those with no children (51%), at least one child at home (40%), adult children (8%), or those expecting (.5%) or with child deceased (.5%). Mothers worked outside the home and at home as primary care givers.</p>
<p>SELF-IDENTIFICATION WITH SILICON VALLEY STATE OF MIND</p> <p>(Risk-taking, entrepreneurial zeal, innovation)</p> <p><b>Sampling Strategy:</b></p> <p>Confirming and disconfirming sites drawn from self-affiliation and rejection. Boundary testing sites are particularly important.</p>	<p>Entrepreneurs, consultants (Institute for the Future, Advanced Technology Staffing), outposters (Daimler-Benz, Ericsson), high tech workers. Also included were regional non-profits such as Aris, the Career Action Center, Chick-tek.</p>
<p>CONSTRUCTORS OF COMMUNITY DISCOURSE</p> <p><b>Sampling Strategy:</b></p> <p>Maximum variation drawn from vocal and visual enactors of Silicon Valley regional identity.</p>	<p>Journalists, Joint Ventures Silicon Valley activists, regional municipal governments, intercultural consultants, community systems consultants, designers and architects.</p>
<p>SOCIOECONOMIC STRATA</p> <p><b>Sampling Strategy:</b></p> <p>Maximum variation of class and organizational hierarchies</p>	<p>Support staff and part-time workers, administrative assistants, middle management, professionals and upper management from Apple, Adobe, Cisco, Hewlett-Packard, Phoenix, SLAC National Laboratory. Personal assistants, artists, editor/entrepreneurs, fitness specialists, ministers, teachers, restaurateurs, building painters, machinists, custodians, laborers.</p>

organization and technological use as well as residential work spaces. A total of 175 informants were interviewed/observed.

The interviews were taped, and then transcribed. Transcribed interviews were placed in an Ethnograph 5.4 format and given to the trained coder. Coding categories were developed and spot checked by the Principal Investigators (see Figure 2.) While most of the codes serve as topical indices, other codes such as recontextualization, or articulation of work and family are used to delineate cultural processes. Handwritten codes were then entered into an Ethnograph database. A physical archive was developed to include coded transcript, drawings of networks and work spaces, and any ephemora (information about the organization, gifts given by the informant) for each interviewee.

Figure 2. Detailed Code Descriptions

Activities, recreational	Models, work/work ethic
Articulation of work and non/work	Networks, familial networks
Articulation of work and family	Networks, non-familial networks
Child care	Networks, stories
Cultural diversity	Recontextualization, organizational
Education/training	Recontextualization, work and home
Education, personal history	Recontextualization
Future, probable personal	Religion
Future, probable regional	Reputation
Future, optimistic personal	Residential description
Future, optimistic regional	Residential history
Future, pessimistic personal	Silicon Valley, constraints
Future, pessimistic regional	Silicon Valley, opportunities
Gifts	Technological metaphors
Government	Time
Holidays/ celebrations	Travel
Identity	Trust
Identity, gender/gender orientation	Work ethic
Identity, ancestral culture (list),	Work, global
Identity, self-identified culture (list),	Work, volunteer
Immigration	Work, job description
Migration	Work, job evaluation
Industry,	Work, organizational description (including personnel flow)
Life history evaluation (turning points)	Work, personal work history
Models, community	Work, stories
Models, family	Work spaces, work at home description
Models, success	Work spaces, home/work rules
Models, risk	Work spaces, description and evaluation
Models, Silicon Valley	
Models, Bay Area/California	

\* In addition to the analytical efforts funded by the National Science Foundation, described below, we are conducting in-depth analyses of models of place, education, work, family, community and identity. We are looking at the interaction of these domains, and the nature of the activities that

are placed in each domain. We are examining the tension placed between the models and the violation of those models in daily life. For example, families construct rules about working at home that they can articulate in the abstract, but their stories and researcher observations indicate those rules are regularly violated. How is the decision to violate the rules being made and by whom? What are the consequences of those violations and how is the model then reconciled to experienced behavior? We are also exploring the constraints placed on the informants by their participation in the workforce, and the strategies they use to navigate through a world of competing obligations.

### **Description of the portion of the Project funded by NSF**

The portion of the total project funded by NSF, as noted in the revised scope of work, covered the transcription, encoding and preliminary analysis. The Work Identity and Community in Silicon Valley project, primarily interview based with situational observations, is articulated with a deeply observational study of dual career families in Silicon Valley funded by the Alfred P. Sloan Foundation. In the scope of work outlined in the revised proposal, data from the WICSV project was to be mined to sensitize the researchers to the articulation of work and family and the emic categories imbedded in the work, family and community domains. Work to home recontexting, models of place, learning, family and work were particularly salient. The revised scope of work included completing the transcription of the interviews/ observations, preparing those data for encoding, encoding and testing for reliability, and conducting a preliminary analysis to create further provisional research questions that could be explored in depth by the 2400 hours of observation that was conducted with 12 families during the 1998-2000 field period. The above activities also entailed training and supervising the support staff to ensure timely and accurate task completion.

From August 1998 to February 2000, student assistants and staff transcribed 11,296 pages of taped interviews and observations, some 4 million words. 45,611 segments of discourse/observations were coded. The principal investigators read transcripts as they were being completed and worked with the coded data as it became available, particularly focusing on descriptions of 1) work practice and work relationships, 2) family and friendship network creation, maintenance and erosion and 3) the articulations between work and family activities. Twice a month the Principal Investigators met to discuss the preliminary analysis and its connections to the Sloan funded observational research on work and family. The product of that analysis is discussed below.

### **Describe the major findings from these activities**

Since the preliminary analysis of the data was designed to sensitize us to areas of further observational investigation, we focused on issues that would appear in interview data, but would not provide in-depth information on the activities and processes. The Work, Identity and Community in Silicon Valley project would allow us to capture breadth. Observations from the Sloan-funded study of the dozen plus dual-career families would provide depth. The broad strokes painted by the interview data sensitized us to phenomena to be explored in depth by the observational detail. As a result we began to question some of the assumptions we had made in our earlier studies. Armed with these conceptual revisions we could explore more subtly the details in the lives of workers in Silicon Valley. Some of these findings had implications for methodology, others illuminate social processes.

#### **1) The complexity of networks**

Data from the discussions of relationships, and particularly the drawings of informant networks, suggested that networks were not tidily compartmentalized into work, family and community domains. This meant we could not assume that domains were a salient unit of analysis, or even that

individuals would be an appropriate unit. Instead, interactions were the key focal points for both the analysis of relationship data in WICSV, and the observational data being collected in the Sloan-funded study of work and family. This has an implication for any studies of work and family that may employ assumptions that limit the scope of their examinations.

## 2) The complexity of culture

At several points in the interview protocol we asked about identity, cultural affiliation and intercultural interaction. We augmented these responses with observational descriptions of the material environments at home and at work. For example, if plaques of “I love being Irish,” decorated a cubical wall, that data was added even if the informant did not mention that element of identity. Out of those data it became clear that cultural identity was complex, categories were flexible and different criteria for identity (culture of origin, ethnicity, professional status, corporate affiliation and gender orientation) were fluid and mobile. If cultural affiliation is fluid in an individual, it is certainly mobile within a network of family members or co-workers. Again, this shifted the focus from the individual as the locus of identity, to the interaction in which the cultural affiliation was expressed.

## 3) The complexity of technological use

In studies of technological use, the temptation is to focus on the device or service (How is the Internet being used?) or the user (How is that informant using the Internet?). The detailed description of technological use at work and home led us to instead examine function and context. We began to refer to an interacting ecosystem of devices, rather than a particular user with a particular device. Technological devices have multiple functions tied to particular contexts. For example, a voice mail system can serve to communicate multiple messages. Not only is work related data conveyed, but also relationship data about relative power (“He must now send me an E-mail with the information I want”) and interactional desirability (“I called at 1 A.M. so I would not have to talk with him”). In addition to the messaging, a saved voice mail can be a source of information retrieval, storing information in an accessible form until it is needed. It is used as a self-messaging prompt to stimulate work activity. (“I listen to the device to remind myself I need to get these specs”). The tasks of device use are accompanied by social contexts.

Technological multitasking is used to manipulate the contexts of human relationships. This finding led us to pay particular attention to the use of technology in context. Which E-mail address links to which social networks? The “invisible technologies”—the telephone and television related devices that have faded into the background of daily life—provided both communication methods and content. Such invisible culture is difficult to retrieve in interviews, although it was clearly important. This led us to pay special attention to the less glamorous technologies in our observations of daily life.

## 4) The complexity of work

In their description of work practice, the WICSV informants made it clear that work is not an undifferentiated, homogenous activity. People are reacting to a variety of different work rhythms. The cycle of the financial year intersects with the cycle of product development. The constraints of your teammate who telecommutes on Tuesdays and Thursdays alters your own patterns. Work combines synchronous communication (meetings and telephone calls), with asynchronous methods (E-mail and voice mail) to reach people who must insert cooperative work into their own daily activities. Client based work is clearly different from project based work in temporal and social demands. Code-writing can take place at 2 A.M., but a lawyers are bound by different rules of

time and place. Individuals function within a network that contains not only current co-workers, but a social work of former teammates, classmates, technically competent former spouses and friends. This pool of networked knowledge must be established and maintained through communication—adding to the demands of work. The variation revealed suggested that we pay attention to the specifics of work rather than treating it as a single undifferentiated domain.

#### 5. The complexity of family

Just as the interviews revealed that work was not a single undifferentiated domain, the network descriptions and narratives about relationships indicated that the specifics of family matter. The configurations of family highly variable, so that marital status, number of children, sexual orientation, and ages are highly relevant. Family itself is a social construction, not a natural unit, that embraces fictive kin and a fluctuating network of near and distant relatives. Especially in a region marked by geographic mobility, kin need to be “manufactured.” Capturing this variation was a key element of our sampling strategy in the Sloan-funded Work and Family project. The interviews revealed that family was being by Silicon Valley denizens used as a verb, rather than a noun. Again, this allowed us to focus our observational methodology on interactions and activities in a family context rather than simply observing individuals in the received roles. Using such an approach, a variety of caregivers and fictive kin could be included in the family ecosystem.

#### 6) The interpenetration of domains

The interviewees’ descriptions of relationships suggested that domains such as work, family and community were intertwined. The recontextualization of activities from one domain into another was commonly described in WICSV interviews. Religious values penetrated software management practice. Myers-Briggs human resources typologies shaped the conduct of courtships. The use of metaphors were often a marker of such interpenetration. People used technical and work-related language to discuss community and family. This was a tricky area since people were much more willing to talk about the intrusion of “work” into “life” but less inclined to articulate the opposite since it is considered a questionable practice. However, enough instances occurred in the interviews to sensitize us to the existence of the phenomena. In our detailed observations of work and family we could then focus on the full range of articulation. Work and family, or to be more precise, work-related and family-related networks, do interact with each other.

#### 7) Contradictions in models of place and work

\* Several sections of the interview ask about place. Some questions asked about all the places where work is done, or where the informant had lived. Others asked about the future of the “region.” Yet others explicitly asked people to describe the values associated with Silicon Valley. In the course of describing networks place was always an attribute. In this various discourse on place it was clear that place was being used tactically and variously. For example, stories were told of organizations that changed their name specifically to use the “value-added” by the Silicon Valley name. Silicon Valley had multiple meanings constructed along a wide range of criteria. It referred variously to geography, economic sector, a “culture” of risk taking, high tech expertise, or the social organization of a global network of digerati. In their narratives, people flowed from one type of Silicon Valley to another. Some talked of how they worked in Silicon Valley (an economic definition) but lived “elsewhere” (a geographic or cultural definition). Teasing out these distinctions allowed us to look at the “ripple effect” of high tech work. Silicon Valley became a metaphor for discussing the impact of high tech, especially high tech work. This work had an impact on



children, on the interactions of the network and on the work practices of non-technical labor. The Silicon Valley label lent a distinctive cast to learning algebra, joining book clubs or being a secretary. A secretary who is a competent computer user and Internet enthusiast is part of the “Silicon Valley.” In the Sloan-funded Work and Family in Silicon Valley study, we sampled for socialization activities and work that went beyond high technology stereotypes to capture the complexities of models of place.

Other work models seemed to contain contradictions. Widely acclaimed as “risk-takers” the interviews suggested that workers were careful risk managers, who used the economic growth of the region and their own personal networks to minimize the costs of risk. Work is glorified in Silicon Valley culture, so that it encompasses activities that were once not work, “workifying” other aspects of life. However, “working” on ones own skills and ones own family is time consuming and eventually threatens to overwhelm “work work.” The tensions are inherent in the models of work practice. People could articulate stories about them, even if they themselves did not see the contradictions. Analyzing the interview data reinforced our methodological strategy to observe closely the events and interactions surrounding work in daily life.

### **Describe the opportunities for training and development provided by your project**

The active phase of information collection was a central feature of two courses—Anthropology 149, Ethnographic Methods and Anthropology 195, Research Practicum. The former collaborated with MIT/Working Partnerships to collect data on temporary workers in Silicon Valley. That component, while differing slightly in research protocol, supplemented the larger Work, Identity and Community in Silicon Valley effort. The latter course trained students explicitly in the data collection strategy of the Work, Identity and Community in Silicon Valley project.

Post-collection educational benefits have included a revision of the pedagogy in Anthropology 149, Ethnographic Methods, to include research on global workers in Silicon Valley (Fall 1999) and technology use by youth. It has also resulted in the creation of a new course, Anthropology 102, Silicon Valley Connections, which features some of the findings of the Work, Identity and Community in Silicon Valley project. We are proposing an experimental Masters program in Applied Social Sciences (combining applied anthropology, intercultural communication and public administration) with a regional focus on Silicon Valley to begin in Fall 2001.

Individual undergraduate student projects included Naftoli Pickard’s supervised senior honors thesis on situational identity in Silicon Valley, supervised paper presentation at the Santa Clara Undergraduate Research Conference (Spring 1997), and Paula Rockstroh’s analysis of WICSV data for the recontextualization of family activities into the work context (Spring 1999). Graduate theses connected to the project included Maho Teraguchi’s supervised graduate thesis fieldwork and analysis on Chuzaiin: the ethnographic study of Japanese business sojourners in Silicon Valley; Joe Hertzbach’s thesis on organizational change, Interdisciplinary Studies Major, MA in Leadership Systems and one finished thesis from Margery Dreyer on telecommuting and its impact on business and personal relationships. (degree granted Spring 1999). Beyond San José State University, the findings have also been used to revise docent training for the History Museums of San Jose. An interdisciplinary research team at Santa Clara University have consulted with us on putting both the methodology and the findings of Work, Identity and Community in Silicon Valley and the Sloan funded Work and Family in Silicon Valley project into their research and teaching agenda on work and technology (April 2000).

We have had four workshops for regional anthropologists. In the first one, we did a workshop on

developing a regional research that combines pedagogy, scholarly ethnographic research and community service for the faculty at California State University, Sacramento (November 1998). We repeated this workshop at the Southwestern Anthropological Association Meetings (April 1999). We also had a workshop, cosponsored by the Society for the Anthropology of Work, and the Society for the Anthropology of North America, at the American Anthropological Association meetings on research on work and family (December 1999). We drew on the methodology of the Work, Identity and Community in Silicon Valley project as well as the Sloan funded Work and Family in Silicon Valley project which articulates with it. The most recent workshop was conducted at the Southwestern Anthropological Association Meetings (April 2000) on combining pedagogy and regional research.

### **Describe the outreach activities your project has undertaken**

Our project team has been active in reaching the public through public presentations and media efforts.

#### Presentations

Presented seminar “Silicon Valley Cultures.” Center for Technology and Work. Santa Clara University. Santa Clara, CA. April 10, 2000.(Darrah, English-Lueck and Freeman).

Panel on “Global Work, Cultural Competencies.” Southwestern Anthropological Association Meetings. San Luis Obispo. April 8, 2000. (English-Lueck, and undergraduate students Lisa Noriega, Norma Rivera and Aracelis Velasquez).

“Living in the Eye of the Storm: Controlling the Maelstrom in Silicon Valley.” In the conference, “Work and Family: Expanding the Horizons,” sponsored by the Business and Professional Women’s Foundation, the Center for Working Families at the University of California, Berkeley, and the Alfred P. Sloan Foundation. San Francisco. March 5, 2000. (Darrah, English-Lueck and Freeman).

Expert Presenter in the “Global Innovations Forum,” sponsored by the Institute for the Future, Palo Alto, CA. March 15-17, 2000. (English-Lueck) .

Expert Presenters in the workshop, “Wireless Networking in 2005” sponsored by the Institute for the Future, Menlo Park. June 29-30, 1999. (Darrah and English-Lueck).

Presented “Silicon Valley Ethnography: Conceptions of Culture” at the Institute for the Future, Menlo Park, June 22, 1999.(Darrah and English-Lueck)

Expert Presenter on “Global Interconnection and Identity: The Context of Future Work,” in the conference, “Global Interconnection: Identity, Infrastructure, and New Technologies Outlook Exchange,” sponsored by the Institute for the Future. San Francisco. March 30-April 1, 1999. (Darrah and English-Lueck)

Presented “Silicon Valley Cultures Project: Implications for Docents” for the History Museums of San Jose. April 7, 1999. (English-Lueck).

Presented “Silicon Valley Cultures Project Research Methodology” for Chad Raphael, Communications Department, Santa Clara University, March 2, 1999. (English-Lueck) .

Presented “Temping at the Low End in Silicon Valley.” Presented at the Labor Market Institutions in the New Economy: Lessons from Silicon Valley Conference sponsored by Massachusetts Institute of Technology and Working Partnerships. January 24, 1999. (Darrah).

Presented Seminar: Americans at Work: New Technologies of Family Life. Sponsored by the Center for the Ethnography of Everyday Life and the Michigan Family Studies Seminar Group, University of Michigan, Ann Arbor, MI. December 9, 1998. Invited by T. Fricke. (Darrah).

Presented “Knowledge Management in the Big Company Town.” American Anthropological Association annual meeting. Philadelphia, PA, Dec. 4, 1998. (Darrah).

Panelist in Invited Session: AAA Public Policy Forum on Anthropology and Middle Class Working Families: Knowledge and Policy. American Anthropological Association annual meetings, Philadelphia, PA, Dec. 4, 1998. (English-Lueck).

Presented poster on “Silicon Valley—Global Suburbia” in session on the “consequences of Restructuring for Urban Communities.” American Anthropological Association annual meetings, Philadelphia, PA, Dec. 3, 1998. (English-Lueck).

Presented keynote speech (with C. Darrah and J.M. Freeman) on “Life in the Fast Lane: The Environment called Silicon Valley” for the California History Center and Foundation, Cupertino, CA, November 13, 1998. (Darrah, English-Lueck and Freeman).

Expert Presenter on “Technology and Households: Four Starting Points (Silicon Valley Cultures Project),” in the workshop, “Technology Diffusion and Household Adoption,” sponsored by the Institute for the Future. San Francisco. July 21, 1998. (Darrah and English-Lueck).

Presented forum on the Silicon Valley Cultures Project, International Visitor Program, Silicon Valley Forum, July 15, 1998. (Darrah and English-Lueck).

## Media

The project has been the focus of media attention in a variety of venues. (See Media Page) This listes newspaper, magazine, e-zine and website references, as well as television and radio events. The media participation has facilitated access to informants, increased interest in the anthropological research of work and daily life.

## Publications and Products

### What have you published as a result of this work?

#### Journal Publications

“Technological ecosystems and middle class families.” Feature article in the Anthropology Newsletter. 39 (9) Dec. 1998. (C. Darrah, J.A. English-Lueck and J.M. Freeman).

“Silicon Valley reinvents the Company Town”. Article in press for Futures, September 2000 Issue. (English-Lueck).

#### In Progress

“Trusting strangers: Work relationships in four high tech cultures.” Draft article done. (English-Lueck, C. Darrah and A. Saveri).

“Silicon Valley as place: Models and uses.” Draft article done. (Darrah).

“What our children really learn.” Draft article in progress. (Freeman and Darrah).

Anthropology of Work Review thematic Issue on “Doing good: High tech missionary work in Silicon Valley and beyond.” Papers elicited. (English-Lueck, Darrah and Freeman eds., three articles planned).

## Books or other non-periodical, one-time publications

\*Note the “Technology and social change: The effects on family and community,” Consortium of Social Science Associations Congressional Seminar (sponsored by Ford Foundation) was reprinted by several Internet listservs for use in the professional and academic community. See below:

“Technology and social change: The effects on family and community,” Consortium of Social Science Associations Congressional Seminar (sponsored by Ford Foundation), to be reprinted in the book, Millennium Previews: Best of Australian Business Network Report 1997-1999. (English-Lueck).

“Technology and social change: The effects on family and community,” Consortium of Social Science Associations Congressional Seminar (sponsored by Ford Foundation), reprinted in the Australian Business Network Report on Learning, Leadership and the Future. Vol. 6, Number 8, September/October 1998. (English-Lueck).

“Technology and social change: The effects on family and community,” Consortium of Social Science Associations Congressional Seminar (sponsored by Ford Foundation), reprinted in the Wills and Probate Bulletin (Melbourne, Australia), Volume 13, 1998. (English-Lueck).

## What web site or other Internet site have you created?

The following web site was designed to provide information, especially to the public at large, student researchers and the participants in the project:

<http://www.sjsu.edu/depts/anthropology/svcp/>

(overview of the larger research agenda for anthropological research in Silicon Valley)

<http://www.sjsu.edu/depts/anthropology/svcp/SVCPwic.htm>

(overview of the Work, Identity and Community in Silicon Valley Project).

## What other specific products have you developed?

Using Ethnograph 5.0 we have created an 11,296 page database of coded interview transcripts. We have organized a physical archive of coded transcript hard copy, drawings, field notes and ephemera. We have also created a photographic collection that documents various public activities and illustrates the “look and feel” descriptions cited by architects and designers interviewed in the project. We are in the process of discussing the ultimate location of the archive, possibly at Stanford University and San José State’s Special Collections.

## Contributions

### Contributions to anthropology

Our primary methodological contribution has been to demonstrate the effectiveness in applying “traditional” ethnographic interviewing and observational techniques to a contemporary postmodern community. Using multiple sites, multiple inquiries, probing for clarification rather than accepting assumed categories are hallmarks of traditional ethnographic technique. Nor is the project entirely based on

discourse analysis. Instead we incorporate observations of context and detailed descriptions of material culture to produce “an archaeology of work” in Silicon Valley. We have employed two strategies that have cross-cut traditional anthropology. First, we focus on the tension between the cognitive schemata of behavior and the lived experience. Contrasting rules and behavior yields fundamental assumptions made by the culture, and often by the anthropologists as well. Second, the emphasis on a range of ordinary people, daily life and everyday practice propels the finding beyond the “exotic hype” that characterizes the discourse on Silicon Valley.

\* The applications of such techniques allow us to view important phenomena. Studies of cybercommunities involve life on two sides of the screen. By focusing on daily life and work practice we can explore life on this side of the screen. By studying the mundane middle, rather than the underclass or high profile elite, we can uncover the process of ethnogenesis, cultural creation, that takes place in the humble corners of daily life. Innovation is not simply the production of new transformative paradigms, but also embodies the subtle experimentation of placing a behavior from one domain in a new context. Bringing management models into the family, inserting slices of family time into work relationships, or learning to recognize the multiple ways in which work bonding occurs across cultures, are significant social innovations in American culture.

Ironically, the “hype” about the region has made it a fruitful arena for media activity. Journalists, documentarians, writers and scientists are interested in the “phenomenon” of Silicon Valley. This project has been part of that media explosion. By establishing a positive relationship with media we have discovered 1) media coverage lends credibility that makes it easier to recruit informant and do fieldwork “at home,” 2) the intellectual exchange with the media is in itself an analytical exercise allowing us to formulate and synthesize data, and 3) media provide important outreach, far faster than the traditional means of disseminating information. These lessons are not lost on the anthropological community.

#### Contributions to science and engineering

Silicon Valley, as a site, is significant to the history and sociology of technology. The region has been historically significant in an impressive array of industries—aerospace, semiconductors, computing, communications, Internet applications and biotechnology. Our project, an anthropology of technology, explores the cultural implications of “technofication,” saturating a region with technological production, uses and activities. Silicon Valley is distinctive in that it is not merely a collection of sophisticated users, but technological producers as well. One of the unusual features of our project is that it has also illuminated the less obvious impact of technofication on non-technical workers.

#### Contributions to human resources

Two concerns loom large in human resources research—managing diversity and work/home balance. In our project we provide basic descriptive data about how people in diverse cultures work together, and how real people juggle the demands of work and life. These have enormous implications for human resource policy, intercultural training, and education.

#### Contributions to information resources

We plan to have the interview archive available to researchers in online databases. However, several significant obstacles need to be surmounted. First, it will be necessary to construct an interface that will limit access to entire interviews. Even with coded names, the collection of interviews by a single individual does reveal enough information to reconstruct the identity of the interviewee, compromising

our agreement to maintain confidentiality. Life history details will need to be edited and the indexical coding in Ethnograph will need to be converted to a more “archivally stable” system.

### Contributions to public welfare

The Work, Identity and Community in Silicon Valley project touches on several social issues. Spanning the class spectrum, it touches on the implications of the rich-poor gap in Silicon Valley. Economic statements about “lifting the poor as well as the rich” become clearer as people talk about their perceptions of opportunity and the grimmer realities of living in such an expensive region. The cost and benefits are placed in terms that go beyond monetary criteria.

Intercultural relations and issues of identity are at the core of the project. Silicon Valley is a place marked by diversity. A third of the population is foreign born, ranging from farm laborers to elite entrepreneurs. Linguistic, ethnic and regional diversity are profound, with technological migrants adding to a historically complex mix. Yet the interdependency of work and the salience of social networks forces people of difference to work together. Silicon Valley people are pioneering cultural innovations for effective cultural competency.

Work-life policies go beyond the realm of human resources. Family policies rest on a set of assumptions about what is happening in contemporary families. This study provides basic descriptive information which can inform interested policy makers. Educational policy likewise is based on a set of assumptions about workplace skills. Again, the Work, Identity and Community in Silicon Valley project provides basic descriptive information about a wide range of work practices, highlighting the role of social/cultural competence and creative problem-solving in contemporary work practices.