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Impressions in action: the socially situated construction of expertise in the workplace

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Abstract

Purpose – The impressions of others' expertise are fundamental to workplace dynamics. Identifying expertise is essential for workplace functions such as task assignment, task completion, and knowledge generation. Although prior work has examined both the nature of expertise and its importance for work, formation of expertise impressions in the workplace has not received much attention. The paper aims to discuss these issues.

Design/methodology/approach – In this paper the author addresses the question – how do we form expertise impressions in the workplace – using data from an ethnographic study of a workplace setting. The author employs a case study of project team formation to synthesize a process framework of impression formation.

Findings – The author proposes a framework that integrates sociocultural and interactional accounts to argue that actors utilize situational and institutional frames to socially construct their expertise impressions of others. These frames emerge as actors engage in activities within a community of practice.

Originality/value – This practice-based explication of expertise construction moves beyond narrow conceptions of personality-based traits or credentials as signals of expertise. It explains why sharing of expertise within organizations through the use of information technology continues to be problematic – expertise is an enactment and therefore it defies reification through knowledge management.

Keywords Frames, Impression formation, Situated practices, Workplace expertise

Paper type Research paper

In any workplace it is essential to understand the basis of workers' impressions of one another because these impressions impact how the employees work together. Whether it is assigning a task, asking for help, or deciding whether to interact with others personally, most workplace decisions are based largely on how we perceive others (Hinds *et al.*, 2000; Moore *et al.*, 1999). Of the myriad roles of impressions within the workplace, their utility in signaling expertise of coworkers is of utmost importance, particularly in the twenty-first century "knowledge economy" (Powell and Snellman, 2004). In these settings work is inherently complex and teams serve as the minimal organizing unit. Teams are formed primarily with the intention to leverage diverse disciplinary backgrounds and job experiences (Faraj and Sproull, 2000; Gherardi *et al.*, 1998). As work increasingly becomes knowledge-based and work settings more complex (Stevens *et al.*, 2014), understanding how workers form expertise impressions

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in these settings becomes an important area of study. Typically, social norms and the social structure of an organization create opportunities that assist in forming impressions. For instance, a younger colleague can be expected to have less experience than an older colleague; those who are older can also be assumed to be at a higher position within the firm and thus command a higher status, and more power and authority. The location of office, leadership within meetings, information available on the intranet, all provide cues for impression formation. In knowledge-based settings, these traditional indicators are often insufficient as even a young colleague can be an expert in a very narrow domain. Furthermore, cues about expertise might be available only digitally, making face-to-face indicators absent or less reliable (Johri, 2012). In this paper I address this issue and examine how impressions are formed through a field study of a research and development (R&D) laboratory, a representative organization of twenty-first century knowledge economy.

The nature of expertise and expertise sharing

Research on the nature of expertise has a long lineage but it has traditionally had a narrow focus (see Chi and Glaser, 1988; Chi *et al.*, 1988 for a summary). Its primary contribution has been the synthesis of factors that make experts different from novices. Findings from this work show that experts demonstrate an advanced ability to utilize their memory capacity, perceive meaningful patterns, see and represent a domain, and actively self-monitor their cognition (Chi *et al.*, 1988). Research on expertise, which drew primarily on experimental studies, has been often criticized for a disproportionate focus on individual experts' performance and cognitive competence within controlled environments. This approach fails to take context into account even though, as scholars have argued (Agnew *et al.*, 1997), "expertise emerges from a dynamic interaction between the individual and his physical/cultural domain (p. 221)," and "interplay between cognitive and cultural/social processes (p. 225)." Clancey (1997) further echoes these concerns and argues that expertise is a reflection of knowledge that develops and has value only within enacted activities. According to him, flattening of knowledge into facts – to be memorized or recollected – overlooks the reality that "problems arise not in selecting facts, but in conceptualizing how we should view the activity we are currently engaged within (Clancey, 1997, p. 275)." Therefore, according to Clancey (1997), capture of explicit information does not imply access to knowledge about how work actually gets done; in other words, it overlooks the role of tacit knowledge in expertise (Lam, 2000; Polanyi, 1966). Tacit knowledge, including knowledge about others, which is, "essential for assigning jobs, getting assistance, and developing team (Clancey, 1997, p. 277)," emerges only through participation in workplace practices and is guided by events as they provide an interpretive frame for impression formation by focusing "individual's attention on certain information, making that information more salient, and provides expectations concerning individual behavior and the logical consequences of such behavior (Harris, 1994, p. 227)."

The theoretical perspective advanced by Clancey (1997) and others (Brown *et al.*, 1989; Greeno, 2006), and echoed by social psychology scholars (see recent work by Krueger and Funder, 2004; Semin and Smith, 2002; Smith and Semin, 2004; Yeh and Barsalou, 2006), commonly referred to as the situated view, forms the point of departure for my study from other traditional experimental psychological examinations of impression formation (Fiske and Neuberg, 1990). Traditional research on impression formation assumes artificial contexts, limited cues, and

focuses disproportionally on first impressions, at the expense of real world social context (Smith and Semin, 2004; Yeh and Barsalou, 2006). Context has largely been overlooked and neglected in social psychology research, "Self-report measures are a mainstay of social psychological research, and they often ignore context by asking people (for example) to report attitudes toward various objects without any context being specified, or to report their standing on various broad personality traits or affective states, again without context (Smith and Semin, 2004, p. 88)." An alternative approach, as Holmes (2006) suggests, is to examine situations, since "people's characteristic ways of coping with situations, their "personalities" will depend in important ways on the distribution of the type of situations people experience, the "landscape" or "geography" of their environment. Thus, an understanding of the nature of situations experienced in people's personal worlds will tell us much about their psychological processes (pp. 267-268)." Following this advice, I use situated lens to develop an interpretive understanding by focusing on tacit rules, symbols, and resources present in organizations, which are essential for how organizations work (Elsbach *et al.*, 2005; Powell and DiMaggio, 1991). I start with the empirical question – how do expertise impressions form in the workplace?

In the rest of the paper, I present findings from a study that directly examines how coworkers form expertise impressions. I examine this process by looking closely at the firms' activities and practices to arrive at an interpretive understanding of the process. I first identify a crucial practice within the firm, that of forming teams to undertake research projects, and then look at formation of expertise impression within the context of that practice. I derive a process model based on my findings. Finally, I discuss implications for future research.

A practice-based approach for examining expertise

A common approach for developing an interpretive understanding of work, workplaces, and workers is by utilizing a practice-based approach (Schatzki, 2001), an idea originally advanced by Bourdieu to understand the everyday human practices (Bourdieu, 1977). To understand the application of practice theory in work settings it is important to understand one critical aspect of this theory – the emphasis on how work gets done and the underlying tacit aspects of work. Given its tacit aspects, practice-based knowledge is produced continuously in situated action, as people draw on their physical presence in a social setting, on their cultural background and experience, and on sentient and sensory information (Orlikowski, 2002). Practice-based knowledge does not exist independently of social action, and its content does not necessarily mean the same thing to all involved. According to Brown and Duguid (2001), practice highlights know-how defined as the ability to put know-what into practice. These skills include tapping into knowledge held by a community. Practice-based knowledge is collective, since no person can know all the heuristics or principles involved, or possess all necessary experience. Competent practitioners need to know-how to interact, negotiate access and participate in the community (Wenger, 1998). Another aspect of practices that is important to emphasize is that a practice is "shared embodied know-how (Schatzki, 2001, p. 3)." In other words, practice scholars focus on the ways in which participants enact activities with and in relation to each other, often using materials, in order to accomplish their goals (Johri, 2014a). Thus, practice theory attempts to describe, rather than control, situated social phenomena including the myriad ways in which people are related to each other and relative to the tools that they use together. But a true understanding of individual sensemaking needs to see beyond localized

interactions and interpretations since these smaller units are just one part of a bigger enterprise and have a broader meaning for the participants beyond their localized occurring. They are part of the constitution of practices (Wenger, 1998) or "organized nexuses of activity (Schatzki, 2001, p. 48)" that form the "context of social order" (Schatzki, 2001, p. 54). Within practices, the "here-and-now" or situational action merges with the long-term goals of an organization. Participation in practices entails engaging not just activities and events but building a broader understanding of the organizational context (Nicolini *et al.*, 2003; Wenger, 1998).

Field study of Techlab: method and analysis

The empirical basis for the process model I propose in this paper comes from an ethnographic study of a R&D laboratory situated on the west coast of the USA which I will call TechLab (all organizational and personal names used in the paper are pseudonyms). TechLab is the R&D division of a Japanese multinational. TechLab conducted research in the area of information sciences. At the time of this study TechLab had entered its tenth year as a research laboratory. TechLab had around twenty fulltime researchers who were supported by a staff of about 20 people that handled the administrative and technical support responsibilities. In addition to developing new technologies, researchers at TechLab published and presented papers and filed patents. I spent a total of five months at TechLab. I used an in-depth qualitative field study and data were collected using interviews and observations, supplemented by field surveys and archival materials (Johri, 2014b). I formally interviewed all researcher members, several members of technical support staff, administrative staff, and interns (37 individuals for a total of 60 interviews; see Table I). Although all informants were living in the USA at the time of the study, they were originally from over ten different countries including Germany, India, China, Belgium, Netherland, Philippine, Taiwan, and Japan. The informants were observed at their place of work. All interviews were transcribed verbatim.

I was hired by the organization as an intern during the time of the research study and conducted participant observations. I was able to contribute to several projects while I was at the research site due to my background in usability, user studies, and human-computer interaction. On a number of occasions I helped researchers with their user studies as well as participated in brainstorming sessions. Even my informal conversations with them would often turn into discussions about technology and systems. All informants were aware that I was conducting research in the setting to examine work practices. Observational field work was undertaken for seventy days

Participant profile	Number of participants	Number of interviews[a]
Fulltime researchers (USA)	19	40
Managers (USA)	2	2
Interns (USA)	4	4
Contractors (USA)	5	6
Tech Support (USA)	3	4
Others (former employees, interns)	4	4
Total	37	60

Note: [a]Several informants were interviewed multiple times

Table I. Participant description and interview details

and I was at the site for five-eight hours each day. The relatively small size of the organization facilitated in-depth look at relationships.

Overall, interviews and observations resulted in around 1,200 pages of single spaced text. In addition, unobtrusive data collection (Webb *et al.*, 1966) resulted in e-mails, minutes of meetings, publications, technical reports, monthly activity logs, memos, PowerPoint presentations, audio files, video files, Flash files, and content on the intranet. Even though when I entered the field I had a general conception of what I was going to look at – impression formation, the nature of data and the analysis determined the final findings.

Data analysis

As with most naturalistic studies aimed at building an interpretive understanding (Johri, 2014b; Yanow, 2006), data analysis occurred iteratively where some data were being analyzed while others were still being collected. The data analysis closely followed the procedure outlined by Strauss and Corbin (1998) and consisted of the following steps (see Figure 1). First, all interviews and field notes were read "microscopically" and open coding was done for anything that seemed interesting and pertinent to my research questions. This step was taken to look for emerging trends within the data. Examples of some coding categories at this stage include – "day-to-day work," "coworker interdependence," "coworker relationship," "projects," "significant event," and "impressions." Once all the interviews were coded, I coded the observation

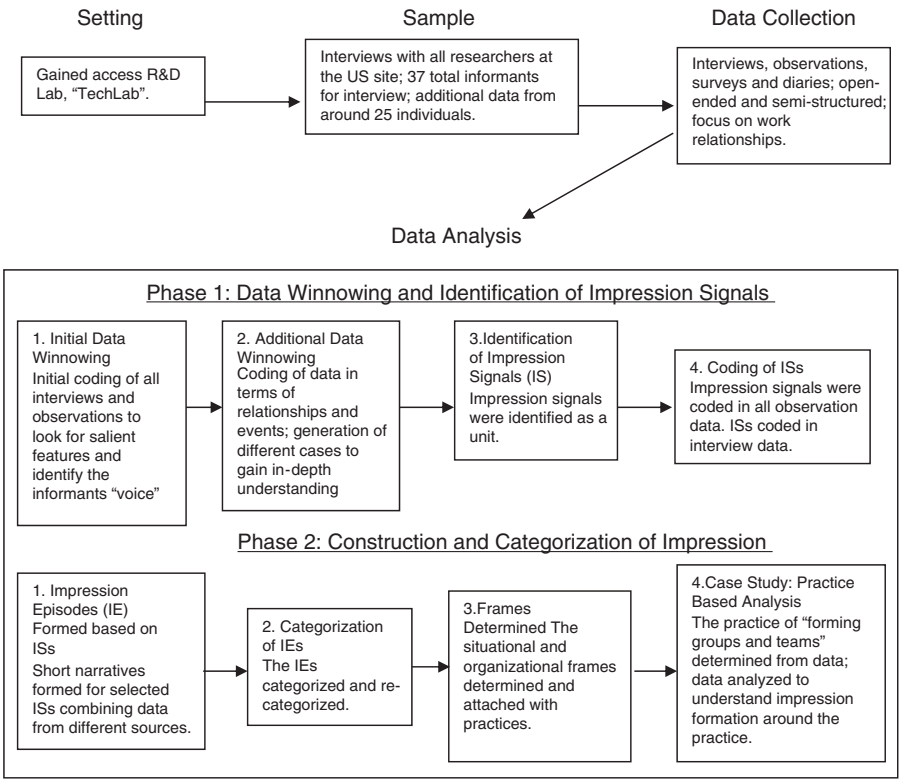

Figure 1.
Data collection and analysis

data based on similar categories, especially "events." After this I started axial coding along two main dimensions: relationships and events. Several rounds of coding were conducted as part of the iterative process.

The analysis started to take a distinct shape when the answer to one of the initial questions I asked in the interview "how do you form teams" provided interesting responses. Informants were often at a loss for words to describe the process yet they repetitively said that forming teams and working on teams was a core practice in the organization. Subsequently, I followed this thread across different data points linking individuals to events and then to larger projects. For instance, one informant said that the idea for a project came while he was having coffee with colleagues and then he worked a little on it and asked another colleague, who had done something similar, to get involved. Then they went to a third colleague who had filed a similar patent to get his expertise and soon they had a project they could try and sell to the managers as something worth investing resources. Examples like these prompted me to understand why someone was considered an expert and whether that impression was universal. Data were triangulated to draw a complete picture of the practices within the organization. For instance, during one interview an informant mentioned that someone was "hard to work with." This statement prompted me to look at the data for other instances where this informant had talked about the target, and vice versa. Then I looked at their work relationship and looked for data in the observations about their interaction. This kind of data triangulation, over a period of time and across instances, helped me understand why the informant had the impression that the target was hard to work with. I also looked at the data to see how others talked about the target. Given the interpretive nature of the field study, my theoretical conception and methodological approach built on each other. Data analysis required some boundary conditions and one of those was different events in the organization that were significant for informants such as "staff meeting", "patent meeting," and "lunch." It was essential to understand why these events were important for the informants and I did that by triangulating data from interviews, observations, and archival data (Table II lists different events identified). As I discuss below, these events or situations were important because they served as frames for interpretation and meaning making about their "world" in action, and one of the things they made meaning about was their coworkers. Based on this conception, I re-coded interview and observation data to enumerate the different frames present in the organization and how they shaped interpretation.

Expertise impressions and team formation in Techlab

Researchers at TechLab performed multiple functions as part of their work including writing, publishing, undertaking research studies, building prototypes, and filing for patents. As one informant explained, "Some days I'm actually coding prototypes […] Other parts involve working on patents, that's another […] we create these inventions and then we work with lawyers to create patent applications, so that's another chunk of time. Then, we spend a lot of time discussing designs for prototypes and trying to get things built in ways that we can deploy them." The sentiment that their work varied was echoed by most researchers, "I do a wide amount of work. I mean, typically it revolves around research and inventions […] maybe implementing an idea on the computer, building a prototype. Communicating is very important. Do a lot of paper writing. Do a lot of presentations and proposals to other people in the lab, as well as the

Frequency of occurrence	Type of interaction	Number of observations
More than once a day	Interaction in the kitchen	Over 80 for each of these (i.e. at least once everyday)
	Copy room	
	In offices	
	Electronic bulletin board	
	Hallway	
	Intern room interactions	
Once a day	Coffee at the trolley	10
	Lunch at the trolley	20
	Lunch at the cafeteria	10
Once a week	Staff meeting	10
	Friday lunch	10
	Bagels	12
	Asian lunch	–[a]
	Running	–[a]
	Language class	10
Every two weeks	Project group meeting	5
Monthly	Project group meeting	–[a]
	Birthday celebration	3
Every 6 months	Semi-annual report	–[a]
More than twice a year	IP meeting	2
	Work-in-progress meeting	1
Yearly	Intern poster session	–[a]
	Intern presentations	3
More than a year	Anniversary celebrations	2
Variable frequency	Job talks	1
	External visitors	5
	Farewell lunches	1
	Drinks outside the office	1
	Asian demo day	–[a]
	Meeting with Asian coworkers	5
	Group lunch	2
	Ad hoc meetings	2
	Trial run of presentations	3
	Visits to other location	1 ([a])
Electronic/technological	E-mail	100+
	Activity reports	100+
	Looking at webpages	5
	Online archival material	5
	Instant messaging	1
	Videoconference	5

Table II.
Example of events and interactions

Note: [a]Indicates that data for this event consisted of interviews and archival material, not direct observations

research community and also our parent company. And tinkering. A lot of meetings. I also do a little bit of project management. So, really a wide number of things." A typical day for a researcher at TechLab consisted of checking their e-mails to start the day followed by conversations and meetings with other researchers, as part of formal group meetings or informal conversations in the hallway. Some researchers went out for lunch together to a nearby café or other eateries in the area. Several researchers had coffee together in the late afternoon. When they were in their office researchers were involved with brainstorming, coding, or writing up research.

As is common across organizations in the twenty-first century (Erhardt, 2011), working in teams was integral to organizational life at TechLab. Although individual contribution and performance were critical to a researcher's success, most work within TechLab was accomplished as a group or team. The overall organization was divided into three distinct areas of research each of which consisted of three to six team projects. There was significant cohesiveness around research areas and topics among the researchers. Given the emphasis on team, forming teams was a central work practice within the organization. It was mentioned by almost all researchers in their interviews and the practice itself was connected to almost everything they did. I conceptualize team formation as a practice because there was a "tacit" understanding about how teams were formed including issues such as who works with whom, how to find people, and how to know who is working on what. The practice of team formation was enacted across a range of activities and processes such as meetings, presenting, informal conversations, writing a plan and proposal, and by participation in them the knowledge necessary for forming a team was assimilated. Overall, forming a team required looking at people and their contexts and meaning making and particularly at expertise impressions, which formed the cornerstone of the practice.

I now examine three aspects of this practice and its linkages with expertise impressions: first, the use of expertise impressions for team formation; second, how information about others' expertise was acquired, and third, the nature of expertise impressions that are formed. In the subsequent section, I will use this empirical data to synthesize a more general framework for impression formation. (Table III).

The use of expertise impressions in forming teams

Given the fluidity of the lab, the process by which researchers came together to collaborate with each other was quite organic. According to one researcher, "There's never any explicit, 'You're going to work for this person,' or, 'Do you want to work for this person,' or 'Do you want a full year-end project?'" Barry, a senior researcher with TechLab, explained, "It's really quite, what's the word I'm looking for […] it's very not explicit how we negotiate those things." He went on to say that the projects involved a lot of different functions and coworkers and that the work performed by each researchers and her expertise got aligned over time, "I think that what it comes down to is that for any of these projects, there's a lot of different things that need to get done and

Practice of forming teams	Impression category	Situational frames	Institutional frames	Impressions formed
Organic process of research and development; people coming together around passionate topics to work on projects	Expertise in area of research, publication or technology development, i.e. their conception of a "researcher"	Look for these in Staff meeting, Patent meeting, Coffee/Lunch: Expertise, New ideas, Invitation for collaboration, Synergy with present work	Required no. of publications; patent requirements; reputation of lab in the field; self-reputation; contribution to research field	"Prototyper" "Idea guy" "Tinkerer" "Super programmer"

Table III. Practice of forming teams and impression formation at techlab

there's a lot of different expertise that goes into getting that done, and we all sort of gravitate towards the things that we like to do or that we're better at." Another researcher emphasized that researchers' interest were important and that the overall process was quite informal, "But, again, I think, I mean to me anyway, like at a high level, there's a lot of informality about how these things happen, who joins what project, and then the trajectory of projects. It oftentimes depends on people's interests in carrying something on or moving on to something new." Ron, another research at TechLab agreed that there was a lot of "leeway" in what they could do but they had to justify it in relation to the work of the parent company, "I think that there's actually a lot of, there's a lot of leeway. We are given a lot of leeway to try to come up with ideas and project ideas and activity ideas that interest us, and part of our job is not just to come up with ideas but to be able to tell a story about how this matters or why this should matter to TechCom." This fluid and organic nature of activity was typical for the lab, and was reflected in how they formed teams.

To understand the role of expertise impressions in this practice I asked researchers at TechLab what they looked for in their coworkers when forming teams. A senior researcher, Adam, replied, "A lot of it is, a lot of things here, it's a combination of a kind of technical competence and personality […] or they don't get it or something, then they're not as easy to work with as someone who does get it, who can then suggest other ideas or is excited about it." Barry was more precise, "So, that's what I'm looking for, two things: do we share enough in common to want to work towards common goals, but also can I find people who are going to complement my skills, because you get a lot more done when you're working with other people who can cover a wider range of expertise than yourself." James preferred people who had strong technical skills, "I guess kind of the bottom line is when you get in the trenches, whether somebody can actually hack code, whether they can sit down and solve a problem, build a prototype, or whether they're just PowerPoint jockeys […] because we're talking about fairly challenging technical stuff, it's almost a literacy thing." Overall, they looked for expertise, technical competence, skills complementary to their own, and common interests. Given the team-based nature of most projects it was critical to establish the technical skills and expertise of each team member as researchers came together around a common interest and then build a team of people with complementary skills. Furthermore, complementary skills played a useful role in distribution of tasks and division of labor, a major requirement for forming teams.

Acquiring information for forming expertise impressions

Researchers at TechLab attained information about other researchers in three ways: by interacting with them – either directly with the target or with others who gave information about the target; by observing them as they engaged in various activities around the lab, formal meetings and informal activities such as coffee or lunch; and lastly, through their artifacts – sometimes paper-based documents authored by them but in most cases through online repositories such as the intranet. I now discuss each in detail.

Direct interaction with other researchers. Researchers reported that the primary way in which they got information about other researchers was by interacting with them. The interactions took place face-to-face or via technology-mediated communication. Given the small size of TechLab US face-to-face interaction was common and interactions took place in hallways, offices, conference rooms, and cafeterias. Some of

these interactions were formal, in the sense they were set-up in advance such as meetings, and others were quite informal. The nature of conversation ranged from brainstorming sessions, working together on code, to just social chit-chat. In these interactions coworkers often talked about other projects and coworkers. Most technology-mediated interactions took place over e-mails. In addition to individual email messages there were group messages and several mailing lists. Some people were part of mailing lists that were separate and they shared information on these lists that they did not share over lists that had a broad audience. Different situations led to different kinds of information sharing. For instance, the coffee mailing list, a mailing list of around seven or eight junior researchers, contained a lot more jokes than the staff mailing list. Since I was hired as an intern and had access to most mailing lists I knew the kind of information that was being shared inside TechLab. The sharing of information was determined in large part by the situation – official meeting or informal conversation – and by who was present in that situation. For instance, the conversation at coffee, which was attended by younger researchers, was more jocular compared to any other conversation I heard at TechLab.

With regard to the practice of forming teams, interacting with other researchers resulted in exchange of research ideas and informal brainstorming about research ideas, which were both crucial precursors to team formation. I often heard researchers debate some news piece or article they had read about (usually related to technology) and how that might apply to what they were currently doing. Researchers talked about their travels to conferences or to seminars and interesting ideas they had heard there. In their interviews researchers commented that informal interactions often gave them a chance to understand what other researchers' interests were and if they had common interests. These researchers also reported that in informal conversations "one thing leads to another" and therefore they are a fertile ground for idea generation and exchange, and even if they do not participate heavily in the conversation themselves, they still got new ideas and learned who had similar ideas. Overall, expertise impressions of other were formed through direct participation in activities around the lab and through online communication.

Observing researchers in action. In addition to directly interacting with others, researchers acquired information by observing others in action across diverse situations and activities. The importance of observing others in events such as staff meeting or patent meeting was summarized by Brian when he said, "I mean, after being here for a while and sort of seeing people present what they're working on or what they've accomplished or what their inventions are […] I feel like the way you really understand what people do is to come and see them present the stuff that they've done." Presenting "stuff" they had done was critical to understand not just the content of research but also the manner in which it was presented. Being able to present was a skill quite admired among this group of researchers. It was part of their professional practices at conferences as well as practices internal to the lab, such as, presenting to the management or to visitors. Therefore, often people were judged on their presentation performance. But it was a holistic judgment that also accounted for how they answered other's questions, for instance, when asked about her impression of a presenter, a researcher observed that, "She presented well and had a very clear orientation […] She gave absolutely perfect answers to Bill's questions. Bill is a straight guy and you can read him [whether he is happy with the answers]."

Research by Berger and Bradac (1982) and Berger and Perkins (1978) lends credence to the preference of humans to be able to observe others and they suggest that while forming impressions perceivers tend to prefer situations in which the target person is actively taking part in an activity, as opposed to being in a passive state. Furthermore, they argue that perceivers prefer situations where the target is interacting with someone, rather than being engaged in a solitary activity, and that this is the case even when we are unable to overhear the conversations taking place. According to them, we learn more about another person by observing them react to others rather than observing them react to objects since the behavior of other persons is a lot more variable than that of an object. With respect to the practice of forming teams, watching other researchers in action was more about seeing their skills in use and less about exchange of research ideas. In some sense this was a way of looking at "implementation" of ideas and the ability of a researcher to convey and show their ideas to others, which are important skills in this profession.

Using online repositories. In addition to direct interaction and observations, researchers looked for information about other researchers using digital resources such as the intranet. As one researcher remarked, "we all have web pages. It kind of says a little blurb about where they went to school, what they do, and what their interests are." The use of online websites and repositories was especially crucial for the practice of team formation. The intranet at TechLab contained information about researchers' publications, their patents, as well as ideas on which they were working. It also contained all information about their past work and affiliations. Although none of the informants mentioned the Intranet as the primary or only resource for getting information about others, the intranet was a great complementary resource for researcher to learn about their coworkers.

The use of online repositories played an important role in forming teams as they contained archived information about what researchers had done in the past and researchers could use them to look specifically at projects that were done earlier and to establish if they were similar to their projects or ideas they had. They could learn who worked on them, what they did, and how the new idea might extend or enhance previous work. It also gave them an idea if they could use part of the previous technology in the newer project and who will be the person to contact if they wanted to learn more about a previous project. Since it was quite common among researchers to use interfaces and software code from prior projects, this information was quite useful. In essence, they were able to get information both about people and what they did which is critical for expertise sharing (Pipek *et al.*, 2012).

Nature of expertise impressions: emergence of localized categories

Within the milieu of impressions there is a great variety and types of impressions people can potentially form of each other such as honest, trustworthy, and well-dressed. They can use diverse sources of information such as physically observable characteristics, conversations with others, or textual cues (Fiske and Neuberg, 1990, p. 9). Often impressions can be categorized such as personality, behavior, and so on. At TechLab, impressions and the categories of impressions were not normative or generic but highly tied to the activities of researchers. They emerged in work practices and the categories, and their meanings, were specific to their work (Hall, 2004; Schegloff, 2007). Therefore, their usefulness derived not necessarily from their categorization, but their use in action – in the practices of TechLab. This quote from

Ron about Adam underscores this point, "So, for example, Adam really started the [X-Tech] project and he's kind of a brilliant prototyper and idea guy, and he's got just boundless energy and creativity and he's always trying to build something." Similar remarks were made by other researchers about their coworkers, "Lee is good with taking these ideas and turning them into invention proposals. And he's good technically with audio, recording audio, so he's been very helpful in that regard. And Robb is a media analysis guy, and so Robb's expertise is really useful for that" and "Well, like Rudy is going to be building this […] I mean, Rudy is one of those super programmers, he's really good."

These findings suggest that in this real world work setting the impressions people had of other researchers were quite different than personality traits and attributes and were situated intricately in what they did. Within the context of their work, researchers did not refer to each other, or talk about other researchers, in terms of trait values but in use terms like "prototyper," "idea guy," and "super programmer." These words had significance with respect to the work performed by the researchers.

A process framework for construction of expertise impressions

In the previous section, I discussed the importance of the practice of forming teams at TechLab, the role of expertise impressions in that practice, how information for forming those impressions was acquired, and, finally, the nature of expertise impressions. This prior discussion leaves out one critical aspect of the process – sensemaking or interpretation of interpersonal information that leads to expertise impressions. I now discuss this issue and propose a framework that can be applied more broadly to understand how impressions are formed across contexts.

Situational and institutional framing of interpersonal information

The initial findings show two aspects of the context were significant for coworkers' impression formation about expertise. At a micro level, researchers related to different meetings and interactions they had with each other and talked about staff meetings, patent meetings, and conversations during lunch and coffee. While at a macro level, workers' understanding of the organization and the larger field within which the organization was embedded played a significant role in their lives. For instance, during interviews researchers brought up issues of their research field and other industrial research labs in the surrounding area. Overall, framing operated at a dual level and distinguish between two types of frames – situational and institutional – that guided interpretation at TechLab. Identifying and distinguishing between the two kinds of frames helps ground the central role of practices in organizational life. The support for the criticality of practices at TechLab also comes from the observation of who did not participate in these practices – workers who were not researchers, such as, technical support staff and administrative staff. For instance, even though the administrative staff and technical support were often present in the same events and activities, the frames they employed and their meaning-making process differed when it came to forming impressions as their individual roles, goals and expertise differed. Whereas other researchers looked for cues to new projects or ideas, for instance, administrative and technical support staff was often keen to learn more about the next office party or social event.

Situational frames. Situations are the immediate surroundings within which people do their work and interact with others. Although situations are recurrent, they are of a

temporary nature, and provide "an environment of mutual monitoring possibilities, anywhere within which an individual will find himself accessible to the naked senses of all others who are 'present,' and similarly find them accessible to him (Goffman, 1974, p. 3)." They go beyond the physical aspect and become "people-processing encounters (Goffman, 1983, p. 8)"; for instance, placement interview, courtroom, and psychiatric diagnostics, and such processing encounters embody "certain indicators of status and character, thus appearing to render persons readable (p. 8)." Overall, there is an understanding among participants of what each situation is and when information is exchanged or interpreted it occurs within this situation. Therefore, the situation provides a frame for interpretation referred to here as a situational frame. For instance, at TechLab interactions such as staff meeting and patent meeting reoccurred and had some predictability, which, in turn resulted in certain expectations about what would happen. Information about others' expertise was interpreted based on these localized situational frames. Situational framing alerts us that the mere availability of information has little effect on impression formation. The critical element is the sensemaking apparatus within which that information is interpreted.

Within the context of the practice of forming teams at TechLab different events and activities, and the corresponding situational frames, played a role in the formation of expertise impressions (see Figure 2). For instance, new ideas were discussed within weekly staff meetings and were interpreted as very early ideas that might become potential projects but that would take time to mature. Ideas and prototypes presented during intellectual property meetings, on the other hand, were seen as more matured ideas that might offshoot in other products and projects rapidly. Researchers' looking for projects to work on paid attention to these signals and researchers associated with the ideas and researchers looking for project members presented the ideas in a way that others would find the ideas attractive. The event or activity for presenting them was selected depending on the maturity of the idea.

Institutional frames. When Goffman (1974) talked about frames his concern was primarily with "what is going on here." To understand the construction of expertise impressions, it is also important to examine why does "what is going on here" matter – what does this situation or event mean for people (an issue also raised by Clancey, 1997, pp. 271-275). As discussed in the previous section, it is this use of an impression in action that derives impression formation and in addition to situational framing it requires an additional level of interpretation. At a higher level, institutional factors

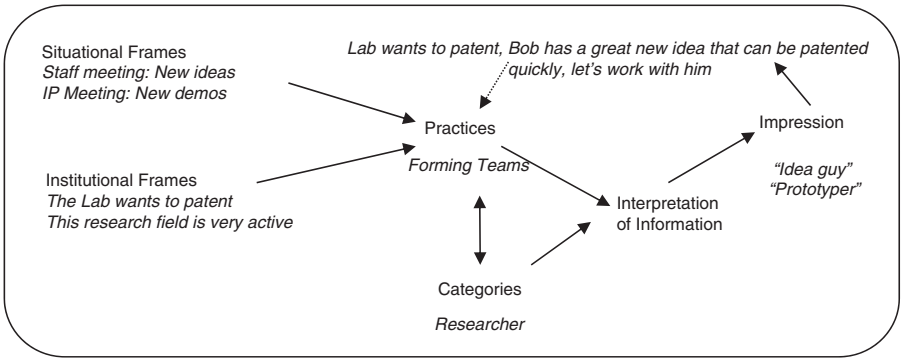

Figure 2.
The practice of forming teams at techlab

(Scott, 1995), and associated field-level factors, shaped the working of TechLab. Institutional embeddedness "highlights cultural influences on decision making and formal structures. It holds that organizations, and the individuals who populate them, are suspended in a web of values, norms, rules, beliefs, and taken-for-granted assumptions that are at least partially of their own making (Barley and Tolbert, 1997, p. 93)." The institutional forces that shape the organization act in a dual manner, they constrain individual action, "constraints that are open to modification over time (p. 94)," and on the other hand they provide rational boundaries within which humans can act (DiMaggio and Powell, 1983). A shared understanding of rules and categories of an organization gives rise to institutional frames. At TechLab, researchers were always tied to their disciplinary academic community, to other labs in the region, and to the future direction of research as perceived by individual researchers and the lab managers. Within the context of the practice of forming teams at TechLab, institutional frames directed researcher's attention towards goals that were important to the lab (Figure 2) – usually the long-term goals. For instance, the ability to file patents was deemed critical for the lab's long-term success as an industrial lab and therefore researchers' attention was directed towards projects and teams that had the potential for creating intellectual property. Within the lab certain research areas were also signaled to be of importance and researchers also used this information in interpreting information they received in specific situations.

Overall, information about a target's performance, information about TechLab's research direction, and researchers' personal goal all come together to help interpret the relevant expertise impression in action – the process was a combination of a situational frame (which helped make sense of current action) and an institutional frame (which helped take into account future implications) (see Figure 3). Furthermore, impression formation process and nature of expertise impressions were not static but changed with time. As organizational policies changed, the interests and objectives of individual researchers changed, and so did the expectations from researchers. For instance, one significant shift in the product expected from researchers was the number of patents the researchers were required to file. This number increased with time and at the time of this field study the expectations of intellectual property and patents were at their highest in the ten years of TechLab. This had an indirect but not insignificant effect on forming teams. This change brought about a change in the characteristics researchers looked for in each other and the process and activities where this information was acquired. In this case the patent meeting became more important and

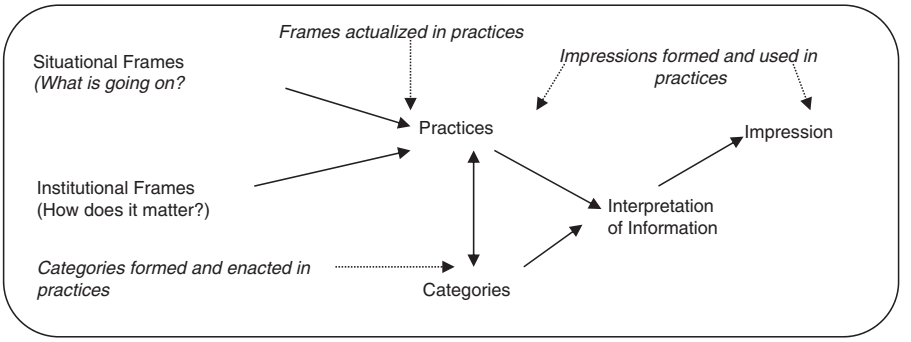

Figure 3.
Situational and institutional framing of impressions

the ability to have new and novel ideas and prior patents emerged as new categories of impressions. This led to recalibration of impressions – this researcher is good at publishing but not at patenting. Most researchers did not even perceive these changes had occurred and only thought so when prompted to think about "how things were." Such tacit changes are a hallmark of practices within firms. They shed light on an important aspect of the nature of impressions – impressions that help people move from peripheral to full members in a community of practice (Lave and Wenger, 1991). The change in impressions with changes in practices is a critical aspect of the model I propose.

Given the significance of events in the impression construction process there is always the question of how events end up taking the shape that they do, there has to be a start somewhere, and what determines that first instance of an event. Through interviews about the initial time period of TechLab I was able to ascertain at least one manner in which events started. The answer, not surprisingly, is institutional isomorphism. The initial researchers had moved from another R&D lab and they brought with them some customs and mandated that certain events – such as brainstorming will happen in particular ways. Over time, these events and interactions changed a lot and some informants commented, somewhat nostalgically, that they did not resemble the earlier events at all. They had morphed and changed and that this was a continuous process. Not only events, this was true of certain practices as well – such as patenting.

Discussion

In this paper I examine social construction of expertise impressions (Gergen, 1985) using a field study and present an interpretive explanation (Yanow, 2006) of how researchers constructed impressions of their coworkers' expertise. This is one of the few studies that look at impression formation within an organizational context (Johri, 2012). Central to my argument is the claim that the process of impression formation followed by researchers was enacted in their practices (Bourdieu, 1977; Lave and Wenger, 1991; Orlikowski, 2002; Wenger, 1998) – expertise impressions are active constructions. The construction of impressions was shaped equally by situational frames derived from the micro-level interactions among coworkers and by institutional frames at a higher organizational level. These frames shaped interpretation of information about others and consequently impressions of their expertise. I use one specific work practice – team formation – as a case study to show how impressions were formed. For forming teams coworkers looked for expertise such as prototyping capabilities, publication expertise, and writing invention proposals. In addition to impressions about publishing and presenting, categories such as "prototyper," "demoer," and "idea guy" were mentioned.

Overall, a practice-based view forwarded here argues against a disproportionate focus on personalities to understand behavior within firms and shows that categories that determine communication and collaboration primarily emerge as workers participate in practices and these categories in turn shape future practices. Smith and Semin (2004) make a similar argument about the use of self-report measures to test categories and constructs without specifying context, "Thus, participants might be asked to indicate how favorably he or she evaluates Asians, or to state to what extent he or she is generally honest or happy. Although such measures are so often used and familiar that it may be difficult to see the problem, in fact by failing to specify a context they require the participant to develop one on his or her own (p. 88)." This has

important implications for work on personality types and cross-cultural studies. There is an attempt to categorize people and a situated view shows that important categories are context, and practice, specific and that categories arise as part of practice. In addition, categories change often within organizations. The findings also highlight the malleability of categories such as an "expert." In the early days of TechLab expert and expertise were about domain knowledge but later on it encompassed skills such as filing patents. The findings from this study show that caution should be used when generalizing across populations and organizations in terms of workers and what is needed for people to work well. It also shows that even things like expertise might have different meanings across cultures. This work also cautions against generalizing of cultural differences solely on the means of factors such as "nationalistic" culture. It might be one of the elements but impressions linked to practice are more critical for the workplace, especially when it comes to assessing expertise. Although lack of interpersonal knowledge and participation in practices might increase the significance of categorical impressions, especially nationalistic one, they often become a self-fulfilling prophecy. People find them because they go looking for them. The findings from my work support this view as I show that categories emerge in practice and transform with time.

My longitudinal participant observation underscores another potential limitation of experimental research on impression formation – the emphasis on first impressions (Dougherty *et al.*, 1994). One of the strongest findings in the research on impression formation is that first impressions form fast, are strong, and last long. Moreover, some work even shows that it is almost impossible to overcome first impressions. In an experimental setting it is easy to set-up a situation where there is a "zero" impressions of a target. Before reading about someone or looking at their photograph or whatever the stimulus is, it can be assumed that the perceiver did not have any information about the target. Yet, in an organizational setting the questions often becomes what constitutes a first impression. The findings from this study show that insiders always had pre-formed impressions of newcomers when they joined the organization. This was especially true for the team or group with which the newcomer was supposed to work. For instance, in the case of one newcomer the insiders had met him before at the annual conference of their professional community and therefore when he joined he was strongly associated with his area of expertise. Another newcomer was known to have worked in a big multinational firm. Some others were associated with their schools, and so on. Given the rigorous interview process to get a job at TechLab it was not surprising that a lot of background information about candidates was known to insiders and led to impressions at organizational entry. Furthermore, when people are in any organization for an extended period of time their impressions about others change. First impressions are strong but it does not take a lot to change them subsequently.

When I look back at my field notes from the first few weeks and then compare them to field notes I took during the middle and end of the research, there is a marked difference in how I refer to people at the start compared to the later stages – in other words, my impressions of informants changed and evolved over time. This is consistent with other findings in the literature. For instance, Welbourne (2001) found that as cross-situational familiarity with a person increased, impressions evolved from evaluative and descriptive consistency to highly organized impressions with complex structures. In other words, with contextual diversity came more developed, descriptive, and explanatory impressions. Moreover, with increased cross-situational acquaintance

perceivers also develop causal theories to explain the target's behavior. According to her, "that we perceive unity in individuals has generally been limited to assessments of first impressions (p. 1072)." She suggests that perceivers recognize the existence of contradictory characteristics within themselves and within others with whom they are well acquainted and therefore change their impression over time and across situations to account for additional information that they get about a target. Moreover, she emphasizes the importance of contextual diversity and suggests that it might provide unique information for impression formation beyond what is provided by the length of time an individual is known. This might happen specifically because interaction with a person across different types of situations provides exposure to different (even opposing) aspects of the person.

Limitations

There are certain limitations of this study. The study has examined impression formation in only one setting; given the goal of the study to look at the process in-depth this was seen as a necessary trade-off. Another limitation of the study is R&D is not a typical work function and has its own idiosyncrasies. The process examined here – forming teams – might be more common in R&D and innovation. Furthermore, the process described here relates primarily to work settings and may not be applicable to other settings and relations such as romantic or familial ties. Yet, my overall argument, that it is through action and interaction that actors create and construct expertise, still stands. Finally, as Angrosino and Mays De Perez (2003) argue, all participant observation research is intrusive to a certain extent and similarly I make no claims to an "objective" understanding of the process. My interpretations are colored in the same manner as those of my participants.

Conclusion

In this paper I present findings from a field study to demonstrate how conceptions of expertise within the workplace are socially situated – expertise impressions are formed and enacted in the context of work. This study has implications for research on expertise – it provides empirical support to several theoretical claims about the nature of expertise. The findings from this work have significant implications for our conception of expertise as it demonstrated the socially constructed nature of expertise formation and also its situatedness within a specific context. The nature of expertise impressions at TechLab and their formation emerged out of researchers' participation in lab practices and the impressions were also relevant for and used within their daily lab related activities. This study extends prior work by demonstrating that frames act at multiple levels. The situational framing acts in conjunction with institutional framing to allow not only the interpretation at the level of the activity but also at a larger and long-term level with implications for what is important for the organization.

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