

Why do People Wear Active Badges?

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ABSTRACT

This paper reports findings of an analysis into active badges as sociological phenomena. It examines the symbolic meaning given to active badges, the normative constraints underpinning attitudes to active badges; and the relationship between normative constraints, meaning, use, and the moral order of a workplace. It will be suggested that active badges can usefully be viewed as totems. The materials discussed derive from ethnographically informed interviews of 44 members of a corporate research institution. Similarities between this setting and other workplaces will be remarked. The role of sociological reasoning in design will conclude the paper.

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INTRODUCTION

At E-CSCW 91 there was much informal discussion of active badges¹. This derived in part from Newman et al's Pepy's paper (1991), and in part from the potentialities - both negative and positive - of active badges². In CSCW 92, these discussions continued in a more focused way. The workshop on privacy effectively confined itself to badge related issues, and the conference panel on privacy and open information spent a large part of its time trying to answer the question "Why do people wear active badges?" Numerous contributors to the panel discussions explained that, although taken as whole, people had very strong opinions about badges, many reasons were offered for these opinions. Consequently, it was a problem making sense of them. Were some views more true than others?; Were some opinions more representative of the views that one might

find in the "general public"?; How does one interpret responses to active badges?³

I, too, have been conducting research into the question of why individuals do or do not wear active badges (or badges for short). I have found, like the discussants at CSCW in Toronto, that the reasons offered are often complex. People do not simply say "Yes, I will wear a badge" or "No, I won't." People, whether 'users' or not, have a great deal to say about badges. People will wear a badge because, and for example, it will allow a phone call to "follow them around" *and* because "badges are what we should be researching"; some people think tracking is a "good idea" but won't wear a badge because they are "worried about what their colleagues will say." There is then, no *simple* answer to the question why people wear badges.

How is one to deal with all the reasons people have? Does one list and categorise? Does one appeal to statistical inference, collect a large enough survey sample and infer which 'reasons' are 'significant' from those which are not? To my mind, for reasons that cannot be discussed here, these possibilities do not seem to hold much promise.

What I would like to argue, however, is that one can interpret what people say about badges *sociologically*. To date, there have been a number of inquires into the usage of sociological reasoning in CSCW (see for example Goodwin & Goodwin, forthcoming; Heath & Luff, 1992: 69-94; Harper, 1990; Harper et al, forthcoming). But it is worth reminding ourselves what sociological reasoning involves. Clearly this is not the place to fully exposit this but we can outline the essentials.

Sociological reasoning should not be viewed as simply or solely concerned with the influence of groups on the individual. A sociological view means considering human action in a particular way, based in certain assumptions.

Amongst these, and following Weber, the fundamental unit of sociological analysis is the *social act*. This refers to behaviour that is meaningful, value oriented and motivated.

¹ Active badges are location sensing devices designed to be worn during the course of work. Developed by Olivetti Research, they measure about 5cm square and are worn like normal security tags. Each badge has a different identity code, which it emits every 15 seconds or so using infra-red signalling similar to the method employed in TV remote controls. This code is picked up by receivers installed in the rooms, hallways and stairwells of the buildings. Roughly once per second, a polling computer interrogates each receiver for recently detected badge codes. When a badge is detected at a new location this event is stored in a record that includes date and time, the badge identity code and the old and new locations. A server makes these records available for a variety of applications. See Want,R. (in press)

² For an overview of active badge research see Pier,K. (Ed.) (1991).

³Furthermore, some discussants openly admitted that their concern was to build active badge based technologies in the future. They needed to know how to "guarantee social acceptability." The problem for them was very practical and real, and not something that could satisfactorily be dealt with by the musings of a conference panel.

Further, and I am thinking of Parsons here, patterns of meaning, purpose, values and motivations are *normatively constrained*: social acts cannot have any meaning; individuals cannot have whatever motives or purposes they wish, and individuals cannot allocate value as they see fit. Instead, their membership of society is predicated upon normative constraints. An individual's motivations - and for that matter those of a group - are judged against socially maintained criteria: persons behave badly, or well, appropriately or unskillfully, and the basis for such judgements are commonly known, shared and socially accepted *moral systems*. These moral systems are argued about, disputed and can and do change over time as well as vary across societies.

Third, and following Durkheim, these moral systems, the social integration they depend upon, are cohered in numerous ways: systems of affiliation such as the professions and religious community; through family and kinship structures and through the the existence of *totems*. Totems are the focus of meaning, symbolically representing community, goals, moral values, purpose and intent, as well as claims to ownership and responsibility. Totems supercede political and organisational frameworks.

These assumptions enable sociologists not so much to determine 'what is' but provide ways of reasoning about social life. A sociological inquiry involves treating some social setting with these assumptions in mind, and investigating what reference to these assumptions draws attention to and highlights.

In this paper I investigate the social act of wearing an active badge and hence the symbolic meaning given to these objects. In addition I consider how normative constraints might underpin attitudes to active badges; the relationship between normative constraints, meaning, use, and the moral order of a workplace. These discussions lead me to suggest that one might usefully think of active badges as *totems*.

I will not be arguing that active badges *are* totems. And I am certainly not devaluing them. Indeed to think of them as totems is to underline their significance. But the suggestion allows me to understand the meaning of badges in reference to such things as community, rights to technology and expertise, space, and even personal presentation. In other words, it allows me to think of active badges as sociological objects.

Moreover, in so doing, it is my argument that active badges can be placed in a context of interpretation allowing designers (and others) to get a 'perspective' from which to judge courses of action that are appropriate, sensible, and practical, from those which are not.

THE RESEARCH

My case is based on 44 ethnographically informed interviews. These were conducted in a corporate research institution. This institution has approximately 300 staff. Of these, about 200 are researchers, and the remainder,

administrators or support. The institution was, at the time of the research (1991), divided into five distinct 'labs'. All but 5 of 44 interviews were conducted in two of these labs. The first had about 40 members conducting research into hardware and system architectures. 18 interviews were conducted in this lab. The second had about 70 persons, further subdivided into groups specialising in such things as multimedia technology, interface design, and artificial intelligence. Twenty interviews were drawn from one of these groups; two from a second. One interview was made in a third lab. Three interviews were conducted with staff with administrative responsibilities for the institute as a whole.

The interviews were informal. Topics discussed included the character of the work in which individuals were engaged, respective responsibilities and roles, the nature of working relations and their ideas about active badges, and possible badge-based applications in the future. Whatever was discussed, the views elicited were treated by me as 'instructions'. That is to say, not as objective descriptions, but as means whereby members of the labs expressed and attempted to validate their own views, attitudes and purposes. I responded to the particular version or perspective offered by each individual by way of reference to what, on the basis of my more general observations, I estimated to be the 'social role' of the individual in question. In some cases these responses were made in the initial interview, sometimes in subsequent ones. Interviewee's comments on these responses were then used to confirm or correct my emergent understanding of active badges as sociological phenomena.

Some final remarks on the setting. Although, as noted, it is divided into five labs, it would not be unreasonable to assume that individuals from all these labs find themselves, more or less, in the same physical and organisational environments. Members of one of these took up the opportunity to have active badges, while members of another were - and continue to be - very vocal in their opposition to any use of badges. Moreover, though an active badge infrastructure was installed in the lab keen on active badges, it covers only the part of the building occupied⁴. Consequently, no badge-based applications run effectively⁵. But members of this lab continue to wear badges. In other words, individuals in this workplace choose to wear badges, or not to do so, irrespective of any practical functionalities active badges may have. This is a case of two groups within the same workplace with opposed views.

⁴Active badges were made available to whoever wanted them and 40 individuals, nearly all from that lab, took up the offer.

⁵ In very simple terms this is because currently available badge based applications need consistent and accurate data. For more discussion see the technical papers mentioned above.

Apart from these views, these two groups are virtually identical⁶.

THE SOCIAL ACT OF WEARING A BADGE

I shall begin with comments from the the lab that favours active badges.

"I am always a badge wearer. I occasionally try and use (the Locator) but it is not very accurate, there are not enough sensors. There is sensor coverage in this part of the building but elsewhere there aren't any. I have never found badges objectionable. I wear them because I trust the environment. In other places it would be different. I perceive this as a research lab and this means a place to uncover what uses things like this have and what are the disadvantages. I would not want to wear a (company identity) badge. I used to work for (another computer company) and would not wear an ID badge there. But I will wear a badge here, I mean an active badge. There is a funny difference between wearing a badge for research and wearing a badge to identify your company. It is not the same thing. People wear a badge here because they are using them as part of their own project. Badges are our project, they are about information and that is about what we are interested in. All the benefits of researching badges come to us and not to the other labs here. Here we are all interested in the engineering issues, not the social ones. In (the other labs) they are only interested in the social issues not so much the technical. You know the other labs think we are bulldozing our ideas throughout the building. You know they view badges as () (the name of his lab). I think that is wrong. I mean, these are everybody's not just ours." (Researcher)

"I think badges are great fun. They are much better than phones. I mean if the phone tracking worked. The trouble is there is limited coverage. I don't care if people now where I am. I don't do anything secretive here. I don't know why people object to wearing them. It's funny you know, I would not like to wear an ordinary badge, like a company badge. Wearing active badges is our idea, it is not some bureaucracy's idea. I mean, we want to wear badges. I don't have a need to wear a badge at the moment because there aren't enough sensors. I wear it because (pause) Now why do I wear it? I wear it because I want to be a good citizen. To encourage badge research. I expect people to research into the use of things so as to make things great to use. What we need is something that would make badges really useful." (Researcher)

The first assumption of sociological reasoning I mentioned was that human conduct is meaningful. Here we can see that the wearing of a badge is full of meaning. It is a particular kind of social act.

⁶ The paper compliments my previously reported work on the social organisation of research laboratories. Harper, 1990; 1992: 330-38. Also Harper, Lamming & Newman, 1992: 343-363.

To put on an active badge is "not the same thing" as wearing a company badge. What is being alluded to is that one "has to wear" a company badge to get "past security," and so on. But here, wearing an active badge symbolises one's relations to a particular group *within* a larger company. It is still, in a sense, a 'badge of identity' like a company badge. But in this case, it differentiates one group from within a larger one. At its most simple level, it symbolises a community within a community. The badge is, if you like, a symbol for a particular tribe within a large 'nation'. This tribe identifies itself, in part, by the fact that its members typically wear a badge.

But this is rather curious. For wearing a badge is more or less isomorphic with being a 'formal' member of this lab. People who wear a badge in this place do not associate entirely voluntarily since the organisation has already grouped them together as a 'lab.' So why then the need for this symbol? Is not being a member in the eyes of the institution enough?

The symbol in question must then be complex. In other words, badge wearing needs to be thought of in terms of how this act conveys a composite of meanings.

What the interviews show is that members of this group want to say something about themselves and the things they do *over and above* the identity the organisation has bestowed on them. Individuals want to wear an active badge not just to show membership of the group, but because, in and of itself, active badges symbolise things the group wants to celebrate and advertise about itself. These include the claim that the group researches "interesting technology," things that generate "new kinds of information" and so on.

At the same time, it is recognised by members of this group that what they want to celebrate, what they view as a positive thing, will be not necessarily be viewed similarly by those in other groups. It is recognised that people "elsewhere in the building," in "other labs" view badges differently. For these other people may not hold the same value system; they may not place such a premium on investigating "interesting technology."

I shall have more to say about this. But for now I turn to describe the meaning system in the other lab investigated.

"Do I wear badges? No way. I am completely against wearing badges. I don't want management to know where I am. No. I think the people who made them should be taken out and shot....it is stupid to think that they should research badges because it is technologically interesting. They (badges) will be used to track me around. They will be used to track me around in my private life. They make me furious. I mean its emotional and its organisational. The whole thing about badges is that they are social things. I mean the social matters should be investigated first." (Researcher)

"I am against badges. We all feel the same about it. It is all to do with who owns the project. They (the other lab) wanted to ram badges down our throat. The difference between what we do down here, our media space in particular, is that it is all in one place. I mean it is not invasive. You know where it is and so you can deal with it. But badges are every where, a room a worksite, they follow you around. Badges are not like our research. The point is (the other lab) should investigate the social impact of these things before anything else. They don't." (Researcher)

In this lab we have an opposite view. People will not wear badges in this place. From a sociological perspective, this 'non-event' is still a social act. Not wearing an active badge conveys something.

But it must be realised that what it means is, in a deep sense, negative or inverse to the meanings given to badge wearing in the other lab. In making it their symbol, the badge wearing lab has defined in large part the meaning of a badge. So if members of another lab choose not to wear one, it will be in part as a way of expressing things which specifically differentiate them from badge wearers⁷.

One obvious purpose will be to announce membership of another group. Not wearing an active badge indicates what lab one is a member of. It is, if you like, an invisible symbol, an identity tag, which works though its very invisibility⁸. In addition, not wearing a badge symbolises disapproval of things specifically associated with the badge wearing lab. These include, for example, the research philosophy avowed by badge wearers. Not wearing a badge announces disapproval of researching things "just because they are technologically interesting." Complimenting this disapproval, it symbolises belief in investigating the social consequences of technology "before researching the technical aspects" of technology.

So, to say again, active badges 'mean' various things. It should not be thought however that these meanings are fixed, or have rigid boundaries. 'Meaning' or, to put it another way, the concepts associated with an object that give it meaning, will change over time. It is important to

⁷ Of course, it may well be the case that the non-badge wearing lab has its own symbol(s), the meaning of which it has defined. Analysis of such a symbol, if it exists, would be more likely to uncover the full richness of what community, research philosophy, and so on, means to this group. Consideration of such an object as a totem, as I am wanting to do with active badges may also be sociological worthwhile.

⁸ In other places the meaning may be different. I have been conducting interviews in an academic computer science laboratory. Here one of the faculty, who did not wear a badge, was asked by two students whether he was a permanent member of staff. He was taken aback by this and asked "Why do you ask?" "Because you don't wear an active badge," they replied.

recognise also that meanings and interpretations are disputed and argued about. The success of any 'view' over any other depends upon a whole range of factors, class, power, organisational hierarchy, being amongst them. Even a single individual, persuasive enough, may find that his or her arguments transform the views of a group - think of the role of charismatic individuals in society. Further, systems of meaning will intersect and overlay one another; changes in one area may alter areas of meaning in other parts of a meaning system.

In this case, as I say, one of the significant components of the meaning systems of the two labs is their interdependence. But the issue is more than simply a case of one lab differentiating itself from another. I have mentioned the question of signifying support for particular research policies. Why should this be so important? Why do the members of the two labs feel as if this is a consideration that is worth worrying about? If another lab wants to research in one particular way, why does it matter to any other lab? If members of one lab want to wear badges why should members of other labs care? Yet, as I said at the beginning, members of the lab who do not wear badges are very vocal when it comes to explaining themselves. They want their colleagues "down the corridor" to know that they are "opposed to badges." Members of the lab who do wear badges equally so. Why is this? Why the 'big deal'?

I suggest that there is an aspect of the meanings given to the social act of wearing or not wearing a badge which has to do with tensions in the relationship between the two labs. These are at a 'group level' and for this reason may be thought of as macro-sociological. Before I examine them, and I will argue they are most important, I will discuss how the views of any one group as regards badges are controlled within the group. It is on this basis of control that the tensions just mentioned can occur. In addition, and by way of a contrast with the macro-sociological considerations I subsequently turn to, I discuss some of the micro-sociological issues affecting the wearing of a badge.

CONTROLLING MEANING

A second assumption of sociological reasoning I mentioned was normativity. Patterns of meaning, purpose, values and motivations are controlled: social acts cannot have any meaning; individuals cannot have whatever motives or purposes they wish, and individuals cannot allocate value as they see fit. Instead, their membership of of any group, and indeed society as a whole, is predicated upon normative constraints. An individual's motivations - and for that matter those of a group - are judged against socially maintained criteria; persons behave badly, or well, appropriately or unskillfully, and the basis for such judgements are commonly known, shared and socially accepted 'moral orders'. These moral orders relate to such things as the meanings given to objects within the social world; like the meaning given to the wearing of active badges.

In this case we can see that both labs have a particular way of interpreting active badges. The wearing of them in one lab says certain things; not wearing them in the other says a closely interrelated, partially distinct set of things. In both cases, the social act in question means showing commitment to what the group "ought to be," "should be," or "is" doing. Moreover, the symbolic meaning implies that there is a consensus of opinion. In one lab the consensus is in favour of them; in the other the reverse holds true.

When the term consensus is used it must not be thought I am saying there is a uniformity of opinion. It is, rather, that the particular symbolic system in each lab incorporates a definition of what is the socially sanctioned view and what is not. The statistical facts are irrelevant here. It does not matter how many people are against badge research or in favour. If the meaning is that there is a consensus, one way or another, then that is how the wearing of a badge is interpreted⁹. Those who do not hold the sanctioned view are 'deviants.'

Here are two examples of the views of deviants. The first is of a member of the lab that supports badges.

"I do not think we should research active badges. I think that there are too many socially undesirable consequences. I am in the minority here, I don't want to upset people but I think it is a matter of principle. I think people understand. May be some of them think I am a little eccentric." (Researcher)

This quote indicates what may be thought as the 'gentle' sanctions deployed against those with deviant views: the labeling of that person as an "eccentric." One can imagine far worse descriptors, just as we can imagine far worse sanctions. Consider this from a member of the lab that disapproves of badge wearing.

"Badges are a good idea. Tracking people for business purposes is a good idea. I mean I would quite happily wear one. I would not wear one round here though. I would get shouted at." (Administrator)

Here we can see that there are far more demonstrative sanctions than the mere labeling of someone as eccentric. Shouting is verging on violence. Whether the person in question ever would get shouted at is a debatable point, but that she says she would indicates just how 'deviant' her willingness to use active badges is, when perceived from the moral order of that lab.

PERSONAL PRESENTATION

We have seen how in the institution reported here, whether one wears a badge or not indicates which research lab one is

a member of, as well as one's preferences in what I have called the philosophies of research. There are many other components of the meanings of badges that I have not attended to, being less important. They should not be forgotten entirely however.

For some individuals, whether one would wear a badge depends upon what one wants to say about matters of personal department and presentation. Here are the reasons two individuals give for occasionally not wearing a badge. They are both members of the 'badge wearing' lab.

"I wear one. I think they are really interesting.....I don't always wear one though. I won't put one on if I have a silk suit on. You know I make my own clothes, Richard, I am very proud of them. Everyone knows that. I wouldn't want to ruin them with a badge." (Administrator)

For this individual, that she makes her own clothes and values them, is 'reason enough' to sometimes forego wearing a badge. According to her, "anyone can see" she wears hand made clothes and so will understand why she sometimes doesn't have a badge on.

Not all the reasons offered for not wearing a badge are so self evident, however. In the case of this administrator, the elaborateness of her clothes drew attention to the likelihood of clothes 'meaning a lot to her'. Yet another person I interviewed, who did not seem to have the same sartorial concerns, explained that he too, sometimes did not wear a badge.

"Definitely, I wear one.....In the mornings though if I am going to wear my best Tshirt I don't like to wear a badge. It kind of leaves a pinch mark. So I don't always wear one." (Researcher)

Personal presentation is also related to matters of space. An individual may wish to signify membership in places where it is 'appropriate'; not bother to do so where no-one would notice; or may want to hide that membership in places where the consequences of doing so are, in one way or another, undesirable. This holds true here. The two labs have their own work areas, a physical space they call their own. Other areas of the building are either 'somebody else's,' for example, one of the other three labs, or public, (as in the case of the corridors in between the lab's and the dining and administrative areas.) When going to the public spaces some people think twice about wearing a badge. Here is an administrator from the badge wearing lab.

"I normally wear a badge. I have begun to take it off though when I go to lunch. You know the trouble is if you meet someone from () (the non badge wearing lab) they stop you and say 'what are you wearing that for?' I mean it is a big issue for them. I don't what to deal with it. Do you know ()? (a member of the other lab in question) You know she always stops me. I don't want to deal with it. I mean it spoils my lunch. I take it off now before I go."

⁹ Leading me to the observation, earlier on in the paper, that statistical means of analysis are inappropriate for this task.

Sometimes I forget and if I see her I try and hide."
(Administrator)

The question of space and personal presentation brings us back to the relationship between the two labs. It is to that I now turn.

TENSIONS BETWEEN THE LABS

I suggested earlier that these types of micro-sociological concerns are of less significance than those deriving from a macro-sociological level. In particular I was thinking of tensions between the two labs. I can begin to elaborate what I meant with the words of one of the administrators for the institution as a whole. This individual had "no opinion" on badges, but he had a lot to say about the relationship between the two labs in question.

"You want to know why some people wear badges and some don't? Do you mean why does (the badge wearing lab) and (the non-badge wearing lab) fight over this? Well, how long have you got? The issue about badges is not about badges you know. It is about the history of the two labs. Look, in this place, these labs are competing, aren't they? Let's not talk about the other labs, they are so different that they don't come into it. I mean they do things that are so different that there is no competition. But these two labs, well that is a different matter. How much do you know about the history of this place? Those two labs have been competing since, well long before I came here and I have been here, one way or another, since heaven knows when. The point is they have got to make themselves seem different. If one invents the personal computer then what does the other do? It invents the collaborative computer. You know what I mean? Look, I am not saying it is as simple as that, but this badge stuff is all the same thing: it is about personality and power, and fame and research funds. It has got nothing to do with badges. Well if it does you would never know it. I mean a stranger might but if you have been around here as long as I have you never take an argument about some research project at face level. Think about the hidden agenda that is what I say."
(Administrator for the institution)

One does not have to buy in to this version of the relations in the institution. But what the comments remind us of is the importance of thinking about the variety of meanings intersecting in and around badges.

It will be recalled in the interviews cited earlier that badges were talked about by one lab as "our project", as "what we are interested in." Members of the other lab said of badges that they were "rammed down our throat." In other words, badges are viewed as things that one group owns. They are, if you like, the 'property' of one of the labs.

The issue here is not stealing and borrowing, concepts that often go hand in hand with ownership, but I suggest, to do with who owns *research*. If a lab owns badges, then that lab also 'owns' the outcome of the use of badges: research

findings. So badges are about a particular set of implications about ownership.

But more than this. Here are notes from another interview, with a researcher in the lab that supported badges.

"I wear one. We don't have enough sensors down here. Also we have (got another labs) code. You know when we put the badges in we went down to the other they just said no. Down here, well one or two people are not so happy. No-one seemed to object to them, I mean, people wanted them down here.. We are nuts and bolts people down here. Badges are our project, we should research badges because it is technologically interesting." (Researcher)

So, this lab is made up of "nuts and bolts people." Why should such a term be used? I suggest it is because it labels types of research that the lab members want to claim as theirs. This lab *owns* "nuts and bolts" research; its enquiries "properly" focus on "technical" matters.

So, and put another way, a research group can be said to 'own' the technology it uses in its research as well as the outcomes of that research; and finally, a lab can claim particular expertise in research.

Now let me recapitulate some of my earlier arguments. I noted that it should not be thought that meanings of badge wearing are fixed, or have rigid boundaries. The concepts associated with an object, that give it its meaning, are disputed and argued about. I have also noted that the issue of signifying support for particular research policies, in and through the wearing of a badge, is of considerable importance in this setting. Members of both labs feel that they have a lot at stake. Finally, I observed that badges were a symbol - a symbol that one lab had claimed as its own. Now in this last section, I have completed specifying just what that symbol signifies. It signifies not only a group; not only particular objects, but also, and here I think lies the rub, areas of claimed research expertise.

It is in this last area that I contend the "problematic" of badges resides. I mentioned at the outset that numerous discussants at CSCW '92 had difficulty making head or tail of the various reasons people offer for either wearing or not wearing active badges. It is my case that if one thinks of badges as totems, then these reasons begin to become clearer.

In thinking of badges as totems one's focus is drawn away from the physical properties of the object. These properties are irrelevant. A totem can take almost any physical form. Its corporeal features are not at issue. It is, rather, the social meaning that is important. Furthermore, totems do not 'merely' signify a group, they transcend groups. They represent values, goals, ownership of expertise, and skill, over and above mere political and organisational affiliation.

And it is in this sense that one can begin to see why badges are such a big deal. They aren't just about the badge

wearing lab, they are not just about badges as technology. Active badges can be thought of as a totem that covers a large range of issues. Some of these issues are subject to fierce debate over ownership. In short, the totem covers disputed territory.

We can see this if we look at what the lab that opposes badges claims as its own research area. Here is one of the researchers in that lab.

"Badges aren't so bad. I mean if they were researched properly. The trouble with (the lab that supports badges) is that they are all techies. You know, all nerdy types. They say they want to research the social issues but they can't. They haven't got anybody. They are just technical. Now if someone were to do badge research it should be us. We are the ones with the social scientists. But it isn't us. So there shouldn't be any badge research."

CONCLUSION

At the outset I argued that a sociological analysis can place active badges in a context of interpretation allowing designers (and others) to get a perspective from which to judge courses of action that are appropriate, sensible, and practical. It is my case that here, the reasons why persons choose to wear a badge, or not to do so, have virtually nothing to do with the technology itself. They are almost entirely connected to the organisational setting in which those persons find themselves. This is why I suggested viewing them as totems.

Consequently, if one is in the business of designing for this research institution, then what should be of interest are organisational frameworks, processes, and the protocols of research collaboration between laboratories. The technology of badges is of little import, as are the applications that can operate on badge derived data. In other words, my analysis recommends design of social matters, not technological ones.

Of course, it must be remembered that this reasoning holds true first and foremost for this corporate institution. In other workplaces a different set of recommendations, on the basis of a similar examination, might be appropriate.

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