"Finding out what users want" – Articulation and Translation at the Library Help Desk

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ABSTRACT

This position paper reflects on an ethnographic study of help-giving in the library. It focuses on the arrangements of collaboration involved in "finding out what users want". This is a common situation in library settings. It does not mean that users have no idea of what they want, but rather, that they frequently encounter a situation in which they do not know how to articulate what they want in technical terms of the library system that organizes information and provides for its identification and retrieval. What users and help desk staff are together concerned with here then is the articulation and translation of user needs (the 'problem' as it were) into technical terminology of the library system. This articulation and translation work enables help desk staff to make sense of user needs in terms of the library system and thereby identify and address user needs. The broader implication to emerge from this study is that the development of computer support for remote help-giving in diverse contexts will be greatly enhanced by factoring in support for *articulation and translation work*.

Keywords

Ethnography, library, help desk, collaboration, articulation and translation work.

1. THE CONTEXT OF HELP-GIVING IN THE LIBRARY

Libraries have long been a site of technological development. Work-practice at the site has seen the transition of bibliographic and indexing systems in the 18th Century, from relatively simple inventory lists to complex cataloguing systems for organizing large collections, and printed catalogues indexing system content in the 19th Century. The turn of the 20th Century and the explosion of printed materials brought with it the development of card-based index systems in the library. And with the development of the computer in the 1960's, work-practice in the library saw the widespread implementation of the Online Public Access Catalogue (OPAC) in the early 1970's.

The original emphasis in the design of OPAC systems was placed firmly on in-house control of bibliographic items by librarians. OPAC systems were not so much designed for public use but for the management of public actions with regards to library content. Developments in the professional field of Library and Information Services (LIS), or Library and Information Science as it is sometimes referred to, saw a marked transition in the orientation of design, however: from household management to widespread public access to information, and this is a trend that continues today through the ongoing development of the digital library in the 21st Century.

The canonical work of Robert Taylor [8] was instrumental in bringing about the shift from control to access in library systems design. Taylor transformed the prevailing conception of the time that libraries were static warehouses from which users extract information by querying catalogue systems, physical or digital. Taylor argued that this conception ignored the *communication functions* of libraries and information centres more generally. If the effort to foster public access was to be at all successful then the development effort needed to appreciate how libraries function to communicate information.

For Taylor, this meant that the concept of the technical interface had to be extended way beyond its usual concern with 'ease of use' to include the subtle relationships that maintain between users and the library system. Extended, that is, to the *social interface* that exists between users and library systems (the socio-technical interface). Taylor's injunction, an inspired and visionary one for the times, is that design needed to pay more attention to the social dynamics of searching in order that it might become critically aware of the relationships that hold between library system and library users; relationships which make the library 'work'.

Taylor identified two main elements of the socio-technical interface, both of which revolve around the practical matter of *articulating the search for information*. This includes *self-help*, where users attempt to sharpen the search by querying the library system and catalogue contents, and failing this, by working with and through a *human intermediary* (a librarian) in order to articulate the search and identify information of relevance. Taylor's interest was in the latter form of practical action – intermediation – insofar as it is here that the communication functions of libraries are pronounced, made visible, and otherwise become transparent. Investigating collaboration at the 'help desk' would, then, shed light on the social dynamics of searching and furnish new insights which might be exploited to inform design.

Taylor conducted a series of unstructured and informal interviews with help desk staff to unearth the social dynamics of searching. As a result, Taylor noted that 'reference librarians' have developed

> ... *rather sophisticated methods of interrogating users. These methods are difficult to describe, indeed some believe they are indescribable ... [Because] we are dealing here, of course, with a very subtle problem – how one person tries to find out what another person wants to know, when the latter cannot describe the need precisely ... The negotiation of reference questions is one of the most complex acts of human communication. In this act, one person tries to describe for another person not something he knows, but rather something he doesn't know.*

Taylor subsequently developed what can only be described as a heavily cognitive model to account for the 'sophisticated methods' devised by help desk staff to negotiate reference questions. The model suggests that help desk staff exploit five distinct 'filters' to articulate and translate user needs into *descriptions that 'fit' the library catalogue* and permit the identification of candidate solutions to the problem situation.

While little issue can be taken with Taylor's conception of core design challenges – particularly the need to understand the social dynamics of searching, the central role of help-giving, and the articulation and translation of descriptions which help-giving turns upon – the argument can be made that the approach adopted by Taylor to account for the social character of searching's work loses the very phenomena it seeks to capture and understand. As Garfinkel [5] puts it,

> *The principal formal analytic devices currently in hand, of paying careful attention to the use, the design, and administration of generic representational theorising – models, for example, get a job done that with the same technical skills in administering them lose the very phenomena that they profess ... immortal ordinary society evidently, just in any actual case ... is only discoverable. It is not imaginable. It cannot be imagined but is only actually found out, and just in any actual case. The way it is done is everything it can consist of and imagined descriptions cannot capture this detail.*

An alternate approach might instead be adopted that replaces a concern with the development of formal analytic models of practical action with a concern to produce real-world, real-time descriptions of the *lived work* of collaboration to identify and explicate the subtle methods that members – help desk staff *and* library users in this case – exploit to get the search *done* and locate information of relevance.

2. REAL-WORLD, REAL-TIME COLLABORATION AT THE HELP DESK

In 1996 the use of formal analytic models was suspended to investigate the collaborative nature of searching on behalf of the British Library Research and Innovation Centre to inform the development of the digital library [6]. The research was carried out by members of the Cooperative Systems Engineering Group at Lancaster University and exploited ethnographic study [3] to generate rich descriptions of the lived work of searching in the library, including collaboration at the help desk [1].

The particular help desk that was the focus of the study, a university library help desk, was organized into two distinct sections. One dealt with the mundane "supermarket work" involved in checking books in and out, the other with search inquiries and the management of restricted access materials. Help desk staff were members of other work teams, such as registration, reservations, cataloguing etc., to which they returned in between help desk work. Staff worked in both sections on a rota basis and characterized their job as one of "helping" or "giving assistance" to users. They described "a lot of the work" as consisting of "finding out what people want", as "getting details out of people", as "trying to find what they are looking for", or more generally and formally, as "filtering work".

Filtering work is a major part of the day's work at the help desk and essential to the accomplishment of searching in the library. The lived work that staff and users together engage in to produce an understanding of the information requirement is considered here in details of the talk of library staff and users. Following Lynch [7], methodological emphasis is placed on the work that talk accomplishes however, rather than the talk itself (*pace* Conversation Analysis), In taking this methodological stance the purpose is to elaborate the concerted methods or work-practices help desk staff and users actually *engage in* to develop concrete understandings of information requirements.

Users often turn to the help desk for assistance when they are experiencing difficulties in finding materials that might satisfy their information requirements. In formulating a search query at the help desk, users initially give a *specifically vague description* of their information requirements. This seemingly paradoxical analytic category refers to the opening sequence of interaction where help desk staff and users have yet to work out just what is being searched for. Specifically vague descriptions initiate a collaborative search and announce that just what is being searched for will become apparent over an ensuing course of collaboration. Specifically vague descriptions have a prospective sense then, what they mean will become clear as the speaker and listener proceeds. The following sequence of naturally occurring talk at the help desk involves two users and two members of staff. Their talk makes available the lived work involved in *transforming* specifically vague descriptions of information requirements into more precise descriptions that fit the catalogue and produce useful results.

Library fieldnote extract #1.
1. Sarah: Could you tell us where market - what was it - market intelligence?
2. Lisa: Yeah.
3. Sarah: Market intelligence
4. Sylvia: Marketing is C floor. (Points to OPAC located at help desk) Do you know how to use the screens?
5. Lisa: Yeah but
6. Sylvia: You need to find the classmark for the book.

The provision or elicitation of a specifically vague description is the first action in an unfolding course of collaborative work. Here, the library users say that they are looking for something on 'market intelligence'. This is a very vague description insofar as it covers many things and so just what is wanted is not at all clear but, at the same time, and without contradiction, it is also very specific as the information required is, in some yet to be articulated way, nonetheless understood to be connected to 'marketing'.

Library users furnish help desk staff with such descriptions as a matter of course, thereby circumscribing the search area.

Furnishing a specifically vague description does not provide for the accomplishment of the search however, only for the undertaking of a search in collaboration with help desk staff. In order to find and retrieve information that satisfies the users' information requirements, the connection between the search area (e.g. marketing) and the information requirement, which is (in part) in the user's head, needs to be articulated:

Library fieldnote extract #1 continued.

Sylvia leaves the help desk, leads the two users (Lisa and Sarah) to a free OPAC terminal nearby and initiates a 'title' search.

7. Lisa: It's not a book.

8. Sarah: It's like information, information about these particular products and services. It's called market intelligence and leisure intelligence et cetera et cetera.

9. Sylvia: And is that the name of

10. Sarah: That's the name – market intelligence and leisure intelligence. It's not a book as such. It's usually in the reference library.

11. Sylvia: Is, is it a serial?

12. Lisa: Yeah.

13. Sylvia: It's a serial. Sylvia initiates a 'serial' search on OPAC

As the talk makes available, articulating the connection between the circumscribed search area and the information requirement in the users heads consists of a course of *categorisation work* in and through which descriptions are elicited and made intelligible in terms of the online catalogue's organization.

In accomplishing this work, help desk staff and the users together orient to and employ OPAC search categories to elicit and furnish library-relevant descriptions of the information requirement. Thus, over the course of OPAC use it is concertedly established by staff and users that the information requirement is not a book but a serial, which provides a rather more specific sense of just what is being searched for: not just something in the area of marketing but a marketing serial. In terms of work-practice, the use of OPAC consists of the *joint formulation of preliminary information requirement categories* (e.g. 'books', 'serials', 'journals', 'maps', 'tourist guides', and the rest).

As a routine matter of work-practice, preliminary information requirement categories are, in turn, used collaboratively as resources for articulating the information requirement in even finer detail and, at the same time in such detail, for purposes of working up potential categories of candidate solution:

Library fieldnote extract #1 continued.

14. Lisa: It's a journal.

15. Sarah: It's not so much a journal but it does come out every few months. Sylvia browses the 'serial' search retrieval list

16. Sylvia: Is it marketing intelligence and planning? Is that the one? Sylvia points to an item on the retrieval list

17. Sylvia: T6 – it's a journal.

18. Sarah: No. It's not a journal.

19. Sylvia: Do you want to check at that and find the journal itself? Sylvia points to the item's classmark on the OPAC screen

20. Sarah: Been there.

21. Sylvia: But have you actually looked at the classmark?

22. Lisa: Yes.

23. Sarah: Yes.

24. Sylvia: You've looked at that and it's not what you're looking for?

25. Sarah: It's not what I'm looking for.

26. Sylvia: Right. But that's the title of the book you're looking for - marketing intelligence?

27. Sarah: Market intelligence, and its got a list of all the products and services - its basically a reference book - and it tells you about particular market products and services and what to look for.

28. Sylvia: You've checked in the reference area?

29. Lisa: Well, no.

30. Sylvia: Right. Sylvia takes the users to the reference area, returning alone to the help desk some three or four minutes later.

30. Staff: What was it she wanted? What did she ask for?

31. Sylvia: Marketing intelligence.

32. Staff: Marketing intelligence?

33. Sylvia: Which is a joke [inaudible]. She didn't want that. I eventually got out of her that it was breweries, which we've got in the reference area.

Articulating the information requirement in even finer detail consists of establishing a more precise sense of just what is being searched for. In terms of work -practice, establishing a more precise sense of just what's being searched for consists of the *joint formulation of more specific information requirement categories*. Although a marketing serial is being searched for, it is concertedly established in orienting to and working on the basis of preliminary information requirement categories, that the information required is not in 'a journal' but a 'reference book'. With this information in hand, staff can act appropriately, in this case taking the users to the marketing section of the reference area in the library and (thus) to a finite collection of potentially relevant materials.

The fieldwork material confirms Taylor's suggestion that filtering work is all about articulating and translating information requirements in terms that fit the library catalogue. More importantly it makes Taylor's 'filters' visible in observable and reportable details of their production: we can see how they work and what work they accomplish. Thus, it can be seen that articulation and translation work consists of the situated accomplishment of concerted work-practices that provide for the formulation of specifically vague descriptions and the transformation of those descriptions through the concerted formulation of preliminary information requirement categories and specific information requirement categories that refine the search. The production of these categories enables users and librarians alike to focus down on a manageable and sufficiently small collection of information in the catalogue and from that point, to identify and extract information of personal relevance to the user.

It is also worth noting that in the course of accomplishing filtering work, the OPAC system is used in ways it was not designed for. OPAC is intentionally employed by staff and users working together not only to categorise information requirements in terms that fit the library catalogue's organization but also, and iteratively in accomplishing that work, as a resource in the ongoing collaborative formulation of reference questions and the production of candidate categories of solution. This use is an improvised use in which staff and users order their interactions around the OPAC terminal to 'work up' increasingly more precise information requirement categories [2]

3. SOME IMPLICATIONS FOR REMOTE HELP-GIVING

So what has a study of face-to-face help-giving in a particular context – at a library help desk - got to say about help-giving in diverse remote contexts? Several important issues of general utility come to mind, each of which will be briefly discussed in turn below.

3.1 Understanding the Socio-technical Interface

Whatever the properties of technological systems, and no matter how activities and tasks may be automated, they will always be *embedded in the subtle relationships* that maintain between users and the system. The need to develop an appreciation of the socio-technical interface extends beyond the library then, physical or digital, and there is a need when developing remote help-giving systems to understand the social dynamics of seeking and giving help in particular contexts. This will require that the developers of remote help-giving systems develop an understanding of the members involved in help-giving situations, that they take all the cohorts into account and not just see the help-giving situation from the point of view of the expert or professional help-giver (as solutions are likely to be cast in terms of that point of view and so ignore other equally important aspects of the work).

Understanding the socio-technical interface requires that we develop an understanding of the *concerted character of help-giving* in particular contexts then. With that goes the need to develop an appreciation of the specific arrangements of collaboration that occur in particular contexts, of the particular ways in which people work together, where they work and with what. This, in turn, will enable the developers of help-giving systems to identify the concerted work-practices that help-giving relies upon in particular contexts, to understand the practical troubles that people encounter and the artful ways in which they together resolve them.

3.2 Supporting Articulation and Translation Work

While there is a need to attend to the local, the particular and the specific when developing help-giving systems in diverse contexts, one point to emerge from the library study seems to be of general purchase: the occurrence of and need to support articulation and translation work. It is hard (if not impossible) to imagine a help-giving situation in which the person seeking assistance does not have to articulate what 'the problem' is. Furthermore, it is similarly hard to imagine that those problems do not need translating in some way and to some degree in order to address and resolve them.

Help-giving in the most mundane circumstances involves articulation and translation work [4], and there is no reason to suppose that the burden will be reduced in technologically sophisticated settings. On the contrary, it seems reasonable to suggest that articulation and translation work will increase the more technologically sophisticated a setting is. It would also seem reasonable to suggest that there is a need to consider developing support for the cohorts involved in remote help giving situations to provide means of articulating problems and of translating what might be described as 'vernacular' descriptions into more technical descriptions that resonate with the socio-technical system in question.

3.3 Designing for Improvisational Practices

Articulation and translation work might be supported by paying close and careful attention to the concerted character of help-giving and the *improvised ways in which technologies are used* by cohorts to 'work up' solutions to problems. In other words, design might pay attention to the resources cohorts exploit to accomplish articulation and translation work. And, of course, designers may go much further than that and develop resources which resonate with the work that goes on in help-giving situations, providing novel means for cohorts to articulate that situation and translate it into terms facilitating professional advice.

In future and emerging digital environments the possibility exists to *record* 'troublesome' events, to *replay* such events to remote help-givers, and to *represent* and *re-represent* those events to various cohorts. The possibility exists, then, to augment articulation and translation work by designing resources that support improvisational practices, where the technology in use becomes a vehicle for negotiating the question to hand. It is not hard to imagine, for example, how the recording of user interactions with OPAC might become a resource for intermediated assistance and how, in turn, new representations might be generated to propel searching in the distributed digital library.

4. REFERENCES

[1] Crabtree, A., Twidale, M.B., O'Brien, J. and Nichols, D.M. (1997) "Talking in the library: implications for the design of digital libraries", *Proceedings of the 2nd ACM International Conference on Digital Libraries*, pp. 221-228, Philadelphia, Pennsylvania: ACM Press.

[2] Crabtree, A., O'Brien, J., Nichols, D., Rouncefield, M., and Twidale, M. (2000) "Ethnomethodologically informed ethnography and information systems design", *Journal of the American Society for Information Science and Technology*, vol. 51 (7), pp. 666-682.

[3] Crabtree, A. (2003) *Designing Collaborative Systems: A Practical Guide to Ethnography*, London: Springer.

[4] Fischer, G. and Reeves, B. (1992) "Beyond intelligent interfaces: exploring, analyzing, and creating success models of cooperative problem solving", *Applied Intelligence*, vol. 1 (4), pp. 311-32.

[5] Garfinkel, H. (1996) "Ethnomethodology's program", *Social Psychology Quarterly*, vol. 59 (1), pp. 5-21.

[6] Investigation of Collaborative Browsing and the Consequences for Library Systems Design, www.comp.lancs.ac.uk/computing/research/cseg/projects/ariadne/docs/bl.html

[7] Lynch, M. (1993) "Molecular sociology", *Scientific Practice and Ordinary Action: Ethnomethodological and Social Studies of Science*, pp. 203-264, Cambridge: Cambridge University Press.

[8] Taylor, R.S. (1968) "Question-negotiation and information seeking in libraries", *College & Research Libraries*, vol. 29 (3), pp. 178-94.