

Maps & car journeys : an ethno-methodological approach

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Abstract

The notion of the ‘cognitive map’ has long been central to studies of maps, wayfinding and navigation. In this paper we provide an alternate approach to what are often mistakenly taken to be private mental processes which re-situates them as shared social and cultural practices. Our study draws on the corpus studies of ethnomethodology and conversation analysis. We use video data of two episodes of naturally-organised map reading to explore how journeying with maps is inevitably and unavoidably part of the in situ organisation of other matters such as workplace tasks, means of transportation, having a ‘nice day out’ and maintaining friendships and so on. In our first clip a saleswoman consults an A-Z while stopped at traffic lights in order to plan the journey ahead. In the second clip, a group of friends consult a map as they set off for a daytrip together in a car. We use these clips to provide thick descriptions and to explore the logical properties of actual sequences of map use.

Introduction

Let's get lost to find our way back again

Looking at maps without looking at people looking at maps leads us to a peculiarly thin description of how we find our way with them. Miroslav Holub writes of an army becoming lost in the mountains:

The young lieutenant of a small Hungarian detachment in the Alps
sent a reconnaissance unit out onto the icy wasteland.
It began to snow
immediately,
snowed for two days and the unit
did not return.
The lieutenant suffered:
he had dispatched
his own people to death.

But the third day the unit came back.
Where had they been? How had they made their way?
Yes, they said, we considered ourselves
lost and waited for the end. And then one of us
found a map in his pocket. That calmed us down.
We pitched camp, lasted out the snowstorm and then with the map
we discovered our bearings.
And here we are.

The lieutenant borrowed this remarkable map
and had a good look at it. It was not a map of the Alps
but of the Pyrenees¹.

Holub's poem reminds us that maps are used to do so much more than merely reading and navigating. When we pull them out of our pockets they can calm us down, give us confidence, and make us march when we might have huddled together in dissent or despair. They can just as often drive us crazy with frustration, disorient us and make us cry. For the Hungarian detachment it made no difference whether the map corresponded with the place in which the unit were lost. It is that part of the poem that delights us and makes us laugh, that having the wrong map we might still find our way home. By way of contrast deliberately bringing the 'wrong' map of, say, Paris to find their way around London, is a favourite ploy of radical urbanists, the Situationists, to help them get lost and discover new ways around well-known cities. Their problem is that spectacular cities prevent them from getting lost, inscribed as they are with suggested itineraries, tourist routes, shopping precincts, commuter lines and so on.

For us, as researchers, when the unit arrives at the end of the journey, do we simply conclude that they read the map wrong, while when the Situationists get lost they have read it right? Or, equally, by counting upon the 'result' that the unit followed the map home or equally that from a survey Situationists get lost in cities while using maps 93% of the time. How can we not be missing what <following the map> could

¹ Originally published in the TLS (1977) and quoted, p54 in Weick's (1995) book on organisations.

possibly consist of for either mortally afraid reconnaissance units or bored urban critics on a day out? Might there be another line of investigation that returns to the course of events to provide answers to the poet's questions about what *actually* happened : 'where had they been? how had they made their way?' Whilst they entertain us, we do not need to use spectacular cases to learn about map use, and their very extremity may well distract us from far more ubiquitous experiences. What we are suggesting is to turn to examining actual instances of map use because there are orderly phenomena there we cannot locate elsewhere. As Garfinkel puts it:

It is not possible to read from the map the work of following the map in a way finding journey. The traveler's work of consulting the map is an unavoidable detail of lived, ongoingly, in-its-course, first time through, travelling body's way-finding journey that the map is consulted to get done (Garfinkel 2002: 130)

The prevailing tenor of studies of map use and journeys, be they finding the way or habitual commutes, has been to provide explanations based in cognition, behaviour or social factors (Kitchen 1994; Golledge 1999; Kitchen and Freundschuh 2000). To turn to the first of these, cognitive or 'mental maps' (Tolman 1948), they are 'the internal spatial representation of environmental information' (Golledge 1999: xiv). And they might or might not have correlates in neural structures. 'Behaviour' is equated with a downgraded form of action. It is taken to be separate from knowledge, so there is no 'know-how', and is more or less synonymous with a mechanistic conception of action (the body that is told what to do by the mind/brain). For instance, at the end of a recent collection of cognition studies, in mapping out future directions for research, Kitchen and Freundschuh note that their contributors argue that 'more work is needed to try and understand the relationship between spatial knowledge and spatial behaviour (action)' p253. There are probably other better examples of this division between knowledge as an inner stock of representations of the world and human spatial behaviour as, mainly, 'route choice' and 'path decision-making' but this one will do to give a sense of the division. In the classics of the cognitive literature the map and the process of wayfinding are so prioritised that at some points a casual observer could be forgiven for thinking that they occur in a vacuum or that persons drop all other activities to follow the map. The workplace, situation-specific and contextualising nature of map use has been ignored as the focus has remained on the paired-down, context-free and indirectly accessible mental comprehension of a lone map reader.

Recent developments in computing use 'ontologies', and we won't go into the technicalities here, but note that it is a technical term for an entity in computing. It offers a useful shift toward concepts and the definition of tasks, accepting that these will form multiple perspectives. In other words while it seems that we are no longer locked inside an individual's skull. Nevertheless in research on wayfinding very quickly there is a return to 'behaviour' and 'decision-making' as the central concepts for such inquiries. Moreover there remains a strong mentalist streak evinced in the search for models which lie *in* the human mind:

Ontologies of wayfinding reflect human models of the domain of wayfinding. When we speak about the world, we speak about models of parts of the world that are constructed by the human mind (Timpf 2002: 10)

We would not wish to discount using a model entirely since it is possible that it could be a resource that certain travellers have in finding their way but that remains to be discovered in actual incidences of map use. Timpf's work (Timpf 2002, in press) is promising in its patient examination of the on the ground logic of travel and wayfinding activity. Our criticism of the "ontology" approach can be allayed by the divergent aims of our research since Timpf is looking at improving computer-based navigation system semantics. What we can say with some certainty is that building and using models is a worksite feature of numerous research projects. Mind, on the other hand, to paraphrase Ryle (1949) is not anyone's possession nor is it the software inside the brain. By contrast Harvey Sacks:

...demonstrated *in detail* the public availability of mind in his analyses of mental predicates in terms of culturally-methodic practices as embedded in ordinary conversational interaction. ... He was concerned also to show how interlocutors could commensensically display their actions in situ as reasoned and motivated in particular ways, and, similarly, could inspect others' actions for their reasoned and motivated character (Watson 1999: 213)

Finally map use is taken to vary by social categories, e.g. sex, age and class and so on (Self and Golledge 2000; Montello et al. 1999; Golledge and Stimson 1997). However these are the analysts' imposed and often 'ironic' categories rather than categories made demonstrably relevant by the persons involved in map use (Sacks 1963). While the use of categories is undeniably fundamental in wayfinding and the following of maps which categories are used in situ and how they are used is obscured by the importation of pre-selected classes and formalised methodological procedures of coding or indexing the study. Holub's poem brings to our notice that groups of people are never simply categorisable as 'map users', nor though should we assumed that they are acting on the basis of gender, race or age. They are acting for all practical, moral and perhaps mortal purposes *as* 'a lost reconnaissance unit', *as* Situationists, *as* commuters, *as* taxi-drivers, *as* tourists, *as* teachers, *as* mountain rescue teams and as these sorts of cohorts they have their cohort-specific jobs to do. They will try fillet from over-boney and over-fleshy maps *just* the bits that they need for planning or for 'right now' as their journey progresses. They will be 'delivering a sofa', or 'doing a daytrip', or 'doing being friends' or 'doing mountain rescue'.

The foundational bifurcation into either mental or social explanation has been abandoned in a collection of empirically informed irreductive endeavours (Latour 1988 (orig. 1984); Lynch 1994). These approaches explode concepts such as 'knowledge' and 'proof' into the multiplicity of settings where *knowing* and *proving* occur as heterogeneous embodied local accomplishments whose criteria for recognition arise from endogenously ordered, accountable, constituted and reasonable courses of action (Livingston 1999). They are variously: the ecological approach (Ottosson 1996; Hutchins 1993), situated cognition (Hutchins 1993; Hutchins 1995), actor-network theory (Law 1995; Latour 1999; Hinchliffe 1996), computer supported cooperative work (Bowker et al. 1997; Suchman 1994) and ethnomethodology (Livingston 1986; Lynch 1993). It is to the last named and perhaps oldest of those approaches, ethnomethodology or ethno-inquiries, that we will now turn (for one of the most accessible introductions see: Livingston 1987).

Ethno-inquiries - descriptions of members' methods

The re-engagement of apparently theoretical matters (such as wayfinding) with ordinary members' methods and the study of members' methods has long been the province of ethnomethodology and conversation analysis (Garfinkel 1962; Garfinkel and Sacks 1970; Lynch 1993; Livingston 1987; Sharrock and Anderson 1986; Sacks 1992). Planning and seeing, for instance which are treated as mental terms by cognitivists, will be examined as parts of speech and gesture involving maps. We will pursue, then, how the consulting of maps during journeys is bound up with *talk* and *gesture*, whether this be asking for an address, or finding something on the map or organising who knows what or where we go next.

Conversation analysis (CA) has made many inroads into the publicly available reasoning by which people analyse their environment and use the products of their analysis in producing plans and actions (Silverman 1998; Suchman 1987)². Members' analyses of location and place has been extensively studied in conversation generally (Schegloff 1972), in the construction of geography as a school subject (McHoul and Watson 1984), in religious accusation (Drew 1978), in accusations of troublemaking (Lepper 1995), as part of giving directions to taxis and emergency call outs (Psathas 1991; Psathas 1995; Psathas and Henslin 1967; Ikeya 2003; Zimmerman 1992), doing book searches in libraries (Crabtree 2000) and highly relevant to our second example, while giving tourists directions (Mondada forthcoming).

To reiterate, while a great deal of *professional* analysts' attention has been devoted to cognitive or behavioural abilities and social categories as *explanations* of skill and performance levels in wayfinding. *Members'*³ constitution of the sense of maps in interaction and their part in the ongoing relentless making of sharable, publicly available 'knowledge in the world', remains its under-researched alternate. To put it slightly differently, while the professional cognitive scientist's notion of 'modelling' reigns supreme, there are, by contrast, precious few studies of how maps are methodically consulted, followed and are bound into particular group's planning, organising, disputing, agreeing, travelling and so on, as vernacular spatial sense making (Büscher 2001; Mondada forthcoming; Garfinkel 2002).

Methodological notes

The data we will discuss may seem unusual for those who are familiar with the existing literature on cognition and wayfinding. To provide access to the identifying details of particular kinds of map work we are looking for we will use two video recordings of episodes of map consultation. These episodes happened during ethnographic fieldwork we were conducting on other topics (mobile officework and tourism) which we have published elsewhere (Brown and Chalmers, 2003; Laurier and Philo 1998). While we would not argue that having a camcorder trained on a setting does not change elements of what happens in such a setting we would suggest

² For a formal discourse based version see: (Prévoit 2001)

³ 'Members' is a wide ranging marker term commonly used in ethnomethodology for social actors, persons, people, groups, communities and so on. What is key to note is that fields of practice offer the possibility of members. This is a reversal of how we might think about agency very similar to that of actor-network theory, where agency is distributed and relational rather than possessed by a naked human subject. For a suggestion of the term's limits see (Blum and McHugh 1984).

there is less self-consciousness than one might expect in the map use we recorded. One reason is that in each of the clips that we will follow we had been filming the subjects in advance to get them used to the presence of the camcorder, for several days with the mobile workers, and several hours for the day-trippers. Moreover the filming was done in a low key way, which also explains some of the poor quality of the framing since only one mini-camcorder was used and the authors would get involved in other tasks while holding it.

There is a further spontaneity to the map use since maps and wayfinding were not understood by the subjects to be the focus of our study, nor was it at the time we were filming. As we noted above one project was on officework in the car and the other on tourism in the city. Indeed the fact that we have examined map use without it being part of the a priori aims of our projects gives the material a certain strength. CA tries where possible to listen to conversations, at least at first, in an 'unmotivated manner' (Have 1998; Sacks 1992) in order to hear what is there, rather than to begin by, say, searching for a research project's object and then counting instances of items which correspond to that object (e.g. numbers of times X points at the map).

Our aim in explicating the episodes has not been to add a generic explanatory model to the spatial and social sciences, instead we seek to show these events with maps as 'being locally produced, then and there, entirely with the resources their production cohort had on hand' (p9, Livingston 1987). By way of contrast with controlled studies we will describe how maps are 'naturally' consulted and 'naturally' followed during the course of a journey (Heath 1997; Watson 1999). In particular, we will focus on how maps are constituted through gestures, how they are shared, or not, how they are used in planning, how they also are deeply involved in organising the interaction whilst also constituted as part of the self-same course of action (Goodwin 1995).

As will become obvious below our projects' corpora have given us the opportunity to look at maps as they are consulted while travelling, rather than in boardrooms, lecture halls, lawyers offices and so on. There is no particular priority to this setting, though it makes a difference that there should be a 'worldly' setting to studies of maps in use. And we would want to argue that there is a fruitful alternate line of study derived from ethnomethodology in following the map as it followed, explicating how its meaning, completeness followability and logic is embedded within the unfolding journey, in real-time, as it were. To switch to studying maps from an ethno-methodological perspective calls for a radical shift in perspective from *imagined* scenarios, *controlled* experiments or *retrospective* accounts, to examining how maps are consulted in the emerging sequential sense-making of a journey. Our written descriptions of the episodes involving maps was worked out during 'data sessions' where we repeatedly watched the video clips. Transcripts were rendered of the talk and actions occurring during the clips for the purposes of writing this paper using CA conventions developed by Jefferson (1984) and they are listed in the appendix.

Planning work travel without sharing the map

We will begin with the use of ‘social’ categories in the organisation of map consultation. In our first episode of map use there are *two* people journeying together: a saleswoman (Bridget (B)) and a researcher (EL). As we noted in our introduction maps are consulted by members of various collectives (be they constituencies, institutions, communities or whatever) as categorisable members of those collectives such as lieutenants in armies, group leaders in tourists, car passengers as commuters and so on as part of the work that those organised collectives are doing. If all other things were equal, say they were equally experienced workmates, then the categorised responsibility for map reading could quite reasonably be determined by the mode of travel. The car *passenger* looking-up addresses and checking them on the map for the car *driver*. The classes or categories (Sacks 1974) arise as part and parcel of the activity, car-driving producing the categories: driver/passenger. With each category there is a task prioritisation, in that expectably the driver’s primary obligation is to driving and the passenger would take on navigating (Watson 1999). In this first episode the map remains firmly in the hands of the driver, the passenger’s only assistance is at the outset (pre-map) in looking up the client’s address from Bridget’s contact sheet on his lap. The reason for this unusual in-car set-up is not that the ethnographer *as* an ethnographer does not want to interfere with Bridget’s normal demands of map reading by herself, though it is the case that when there is not an ethnographer around to (potentially) help Bridget does have to consult the A to Z alone.

As is so often the case with non-imaginary scenarios all things are not equal. the two people are members of *different* workplaces, added to which there is a further asymmetrical distribution of knowledge. Through their time together during the ethnographic research the two travellers have built up quite ordinary and sufficient biographies of one another. *Viz*, the *passenger* is a *visitor* to London, has been in the city around about a dozen times, though never for more than a couple of days and thus is not expected to be competent in finding his way across London. Whereas the *driver* is a *local* (a ‘Londoner’⁴), has lived there most of her life, driven across it for years, can calculate where she can take her car, where the worst roads are, where she can park her car easily and/or cheaply, has the ‘local geography’ of the streets and Tube at her fingertips (Heath, Hindmarsh, and Luff 1999). This mutual awareness of these bare biographical details, is combined with further workplace asymmetries. The *passenger* as an *observer* of the travelling sales person’s job has an expectedly, even for an inquisitive ethnographer, limited knowledge of the company’s distribution of clients. By contrast, the *driver* as an *experienced employee* has visited all of her clients many times over. In relation to each client she can work out where she can park her car, whether it is worth trying to go by car at all, what the ‘real’ distances are from nearby tube stations.

⁴ The great cities (Rome, Paris, London, New York and so on) provide a particular kind of relationship with them (Blum 2003). A Londoner, given the size of the city for a start, can accept its maze-line character and the common situation of finding travelling across London problematic is something we will return to.

Neither passenger nor driver needs to peer inside one another's heads to check on the complexity, size, accuracy etc. of private 'mental models', they use the occasioned categories of 'Londoner' & 'regional manager', to assess who knows a lot and who not (the 'visitor' & 'ethnographer') in finding their way in the midst of this day's work. While these publicly available categories that assign expertise and responsibilities to Bridget, and thereby assist in organising who can do what and who cannot, each and every occasion of planning a route requires her to do spatial analysis. There is no way around the 'next first time' nature of each consultation of the map. Nor is there a way around the mobile nature of her job which raises the endless problem of grabbing appropriate slots of time while travelling to plan a next section of her daily travels.

Segment 1

Towards the end of a winter's day, Bridget is driving with the ethnographer (EL) through a western district of London. They have an evening tasting in the City. As we join the transcript EL has just given her the address of their evening destination. Bridget has the A to Z in her hand while she drives.

EL: Do you think we're likely to be able to tube it?

B: Oh yeah. We'll definitely tube it but I just wondered which tube stop to get off at, I think it's Bank. But I'm just [double-checking]

EL: +
[Right]



(12.0) ((driving))

(4.0) ((arrive at red light)) ——

B: (So) I don't want to take all these things with us. It's too heavy to carry

(3.0)

EL: Yeah:: You want to dump your:

B: =Fenchurch Street, sixty two, '7E'
((closes index and flicks through pages))

(6.0) _____



So far we have entered into embedded aspects of Bridget's map use though without really detailing exactly how this manifests itself in the flesh. In the above segment we can begin to see how she goes about using her A to Z. Some general points which will apply to this and the second segment: there are a lot of long silences, Bridget never makes eye contact with the ethnographer and her work with the map is interrupted by the pressing demands of driving the car in congested city traffic.

There is a long pause once Bridget has provided EL with notice of what she is doing with the A to Z, where she remains looking at the road (frame 1). The A to Z has been pulled out of the glove compartment and is 'ready' on the steering wheel for her to look at as soon as she can find an opportunity in the traffic ahead. Traffic lights (frame 2) provide just the opportunity she needs to read the index, get to the right map page "sixty two, 7E" where she can begin her double-check. There is a glance at the lights and traffic behind (frame 3), a glance that is used to establish what is happening and whether there is something arising that needs dealing with in the next few seconds. It is thus a glance that falls at the end of searching the index with the page and coordinates said aloud, while she tidies up the dog-ear (the fingers at work in frame 3). A glance that check to see whether she has the time to get on with the next stage in the sequence, looking at the street plan.

A huge quantity of names are collected in the tightly printed index of the A to Z and getting just the right one out is a skilled practice of reading (Livingston 1995). Of course it comes pre-assembled for searching – A to Z, in a *columnar alphabetized layout*. Nevertheless Bridget does not have all the time in the world to browse up and down its columns, she is in a *hurry*; she is squeezing this extra task that organises the next stage of the journey into the opportunity that stationary traffic provides. To find the time to search she has to locate these upcoming pauses in the flow of traffic such as jams and, in this case, traffic lights at red, that she can use to do her planning with the A to Z (Laurier 2002; Laurier and Philo 1998). In the sequential assembly of her spatial inquiry, she now has the street name, a page number and a grid reference to hand for its next more 'spatial' section.

Segment 2

(6.0) ((places thumb on map))

B: Monument. Bank _____

((flips over A-to-Z to look at tube map))

(10.0)



B: Right _____

we'll just get off at Bank

(12.0)

Drives forward and then comes to halt again in short traffic jam, Bridget returns to map reading



B: Get off at Bank and then we'll::

(3.0) _____

(9.0) ((finger to temple))

(2.0) ((flicks over spine for a second before closing the A to Z))



EL: Where are we now? _____

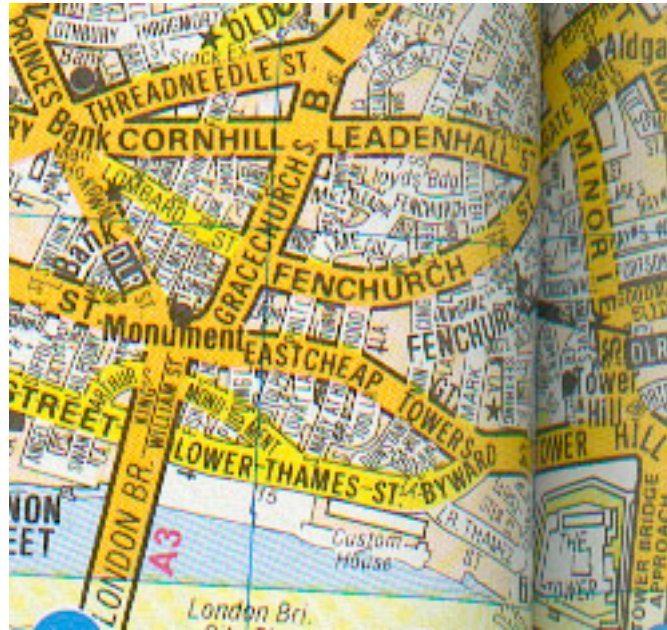
(1.0)

B: We're going to get the tube from Shepherd's Bush on the Central Line



The first use of the street map is to check on the two closest stations to her “147 Fenchurch Street” – “Bank” & “Monument”. Marge’s thumb (frame 1) is used skilfully to both grip the book and as a placeholder for her gaze in the incredibly dense and tangled arrangement of street names (see inset map). Preceding the

placeholdering that her thumbs does, her index finger runs along the grid numbers, then withdraws at the correct square, leaving her gaze on it. Her finger helps her to ‘read’ the grids and then her thumb helps her looking rove around and then return to Fenchurch Street locating the closest tube stations. We can compare this digital overlaying with the way a bookmark or traversing finger helps a child when they are learning the skill of reading lines of text in books. The city street map of London, as we noted already, is considerably more challenging because the text runs at odd angles, cross-cuts and so on. Examining the surroundings of “Fenchurch” requires an ambulatory look around the small zone anchored by the finger.



Once Bridget has extracted ‘Bank’ and ‘Monument’ from the street plan she flips the A to Z inside out to look at the Tube Map. Famously the London Underground map is arranged topologically: each node connected by different coloured lines. It record no comparable ‘distances’ between stations but rather marks out how each is connected to each. As the skilled user of the map knows stations may be much closer or further apart than they appear on the topological map. Bridget does not have to analyse the tube map in all its detail. She looks at it with a Londoner’s learned vision, and sees the lines that Bank and Monument are on as indexing rapidity or delay, sees the good and bad connections between those lines and Shepherd’s Bush. Her analysis of the tube lines is done in terms of a *direct* line to there from here, or *two* lines, and if two she analyses the stations that offer *connections* for the ones that she knows are *good* or *bad* connections. A good connection being, say, stepping off at the same platform as the connecting service arrives at, rather than having to climb steps and walk through a 300 metre tunnel to the other platform (Timpf 2002). What is of great import is to find features of her journey that do not fit well together or will delay, divert or otherwise slow down her intended journey. In other words she knows how to look at the Tube map as Londoners do, in terms of ‘real’ distances between stations, busy & quiet stations (and at what times with what kind of passengers), walks through stairs and connecting tunnels, frequencies, reliability, comfort and current tube problems (repair work, closed entrances and so on). Once again EL has no such local geography of Tube stations and so simply cannot do these kind of calculations.

Once Bridget has located the best tube station in terms of lines and connections from 'here' to the proximity of 147 Fenchurch Street: 'right, we'll just get off at Bank', the next step in the sequence is her return to the street plan for a second time. The demands of driving interrupts as she has to look at the traffic and the road while she drives through the traffic lights. It is not long though before the London traffic comes to a halt. The second check is then resumed: "get off at Bank and then:." What is nice is that again she uses her thumb to hold "Bank" for her looking, though this time withdraws it after a few seconds. We can see her still looking intensely at the area of the map the finger has left (frame 3) with her index finger rubbing her eyebrow – visualising/displaying her 'thinking' and holding EL at bay a little longer. At this point her looking is running back and forth between Fenchurch Street and "Bank" and collecting the names of intervening streets. You can do this yourself by redoing what she is doing using the inset map). If you have looked inquiring into "how to get from "Bank" to "Fenchurch Street", then you should collect "Lombard Street." If you really try to put yourself in Marge's shoes, then you should have extracted instructions for later such as 'third on the left when I come out at the junction' and perhaps 'towards the river', 'Lombard becomes Fenchurch when I cross Gracechurch.'

When we say that Marge is 'thinking' this is nothing special in terms of cognitive processes but rather the 'silent' involvement in a task and the equally silent use of language to produce her instructions. A silent use which you will likely have shared if you tried to do what she was doing at the end of the last paragraph. Her publicly available pre-occupation with her task is exhibited as over in the closing of the A to Z. One way that we can see this in the transcript is EL who has not attempted to speak since being cut-off by Marge's saying aloud of grid squares in segment 1, sees it as that and only then tags on a topic-related query, "where are we now?"

Let us summarise the significant process of the way-finding that Bridget has to do: she has to plan her route by getting items she will need from *several* representational formats and moreover translating them between. This process began before our video segments when the passenger read Marge her client's address which she then took to the index, then, from the index she took the page number and grid reference to the A-to-Z street plan, then, from there, she took the proximate stations to the Tube map, then, from there, she takes 'Bank' back to the street map, then from there she produces relevant indexical directions for recalling when we appear out of Bank station that evening. Clearly it would be misleading here to consider what she is doing as a 'brain comparing internal and external representations', more than anything Bridget as a competent map reader and member of her workplace is transforming and translating between four densely and distinctly organised formal systems (e.g. client list (table), index (alphabetised columns), street map (Euclidean plan view) and tube map (topological map)) The maps have been prepared as stable formatted objects relating and articulating London in different ways and to allow these different operations. By calling the map here a 'representation', by looking for private mental processes of representation, one greatly simplifies the many connections between the map and the streets she will move through, connections which cannot simply be correspondence. In short we lose the very setting which furnishes the sense of the actions and the criteria for their success or failure. The test of whether Marge has done this correctly will be if she gets lost in London not whether she gets lost inside her head. The different maps she uses are different instructions for action in space, instructions fashioned with a mind as to how they will be used to get between places.

Planning a fun day out while sharing the map

In our second episode there are four people travelling together in a car and how they go about using the map is quite different from Bridget and EL. The two backseat passengers are doing the map-reading, the front-seat passenger is shooting the video and the driver driving. Where there were quite stark asymmetries in the last episode of map following, this time around the travellers are on a fairly equal footing. They all have the same 'job' to do – to go on a 'daytrip'. In terms of their categorisation by relation to this territory as 'locals' the backseat passengers are on holiday, the front seat passengers know a little more but not in any great detail about the area they are travelling toward.

In the transcript it is pretty hard to follow what is going on and it is tempting to want to check a map yourself to find out what the correct *answer* is. Even though we ended up doing this ourselves during one viewing of the video record this time we would like to encourage you not to consult map, or at least not yet. To locate the phenomenon this time we will try and stay with how, at the time, with a few suggested places in hand, with the time they had, the day-trippers use their map. This they do without having the answer to their wayfinding problem *first* and their methods *second*. The 'curious property' (Garfinkel 2002: 197-218) we hope then to come on is how the place names which are [recommendations] always leave something missing, are always incomplete, and can never give you exactly what you want. This curious property we find in the in vivo experience of <following recommendations> and we borrow here on ethnomethodology's many studies of the relations between objects and lived local production (e.g. [instructions] & <following instructions> (Garfinkel 2002; Suchman 1987)). In the episode the friends will be using formulations of place given as recommendations and using their journey's orientational properties and the map to try transform the recommendations to be of use their situation (today's daytrip). It is the daytrippers' job organise the daytrip's possible itinerary through conversation and gesture around the recommendations and the map. To paraphrase Garfinkel, they can't just close their eyes and get there. They have to make sense of the road ahead, what is *there*, what is next and importantly what they can do at each there.

Segment 1

At the start of daytrip four friends, the ethnographer Barry (holding the camcorder in the passenger seat), Jane (on the left), Fay (on the right) and Lou are in a car driving out of the city into the countryside. While they drive they are planning what they are going to do with their day. They have been given the names of a few places worth visiting by a friend (Susan). Jane has a large format road map of the UK in her hands.



↓
Jane: Right it's got to be either Loch Ern or Loch Tay

Fay: I know there is a Loch Aber somewhere

Barry: Did Susan give us directions?

The extract starts with Jane looking for one of their recommendations - “Loch Aber” - on the map, she has used the index, and was unable to find a loch of that name listed there. We join her after she has searched the atlas pages covering today’s journey and has again failed to find Loch Aber⁵. “It’s got to be either Loch Ern or Loch Tay” if Jane uses the journey as the device that produced the limited collection of all the lochs in Scotland for the group, then it has *got* to be one of the only two adjoining lochs. And Jane assumes quite sensibly the “journey” is the device that Susan must have used to produce places worth visiting. Fay’s response works on clarifying the import of Jane’s statement by noting that there is a Loch Aber somewhere, where one solution to their troubles is that Loch Aber does not exist at all. Barry offers a further solution – that there might be directions that could be used to locate the place names on the map. His comment is left hanging somewhat by Jane and Fay as we shall see when we return to the transcript.

⁵ For those who really need to know where Loch Aber is... Our transcription deliberately reproduces their category error, “Lochaber” like “Fenchurch” is all one word, is in fact an area, not a loch. We can start to see how that person can recognise mis-hearable words, yet at the same time fail to anticipate a mishearing by their very localness (a Scottish person hearing Lochaber always as a region not a loch and never having considered other hearings).

(continued)

Jane: I think

((Jane looks down at map))

So what was Killin (bit)? where was=

Fay: =Killin _____→

was= _____→

Jane: =Yeah but what's?

Fay: =now she says that's where the, the pub is, is it or? *((does she withdraw her finger on the map?))*

Lou: That's where the waterfalls and the walks are

Jane: Cos the pub was by a loch _____→

Lou: Well there's a loch with a nice pub too

Jane: Is that separate though from Killin?

Lou: =Yeah Killin is (.) further on

Jane: and it must be Loch Ern



A fresh investigation of the map is quickly initiated through Jane's "I think" and her gesture of looking down once again at the map. "Killin" is a further name on the list of placenames they have been given by Susan. Fay steps in with "Killin", a proper noun rather than a pronoun which assists in maintaining the orientation for what will follow. Her audibly unfinished is recognisably completed by her not merely pointing from a distance to the map but touching a spot with her finger, thereby bringing in a closely located "domain of scrutiny" (Goodwin 2003) within the graphical field of the map. As Mondada (ref) notes the action of point is also used for her to maintain her position as a next speaker alongside the topic of her remark. So when Jane asks 'but what's?' Susan's finger continues to hold "Killin" on the map and queries whether the "pub" is there. By doing so she also shifts topic slightly from an inquiry as to where their recommendations are to what they are, though this is already projected from Jane's "what" in the first line of the transcript. Note how Jane (frame 4) has pulled back from her previous posture of close scrutiny above the map. Her position is seeable by its relation to her earlier stance, sustaining an orientation to it while exhibiting that what is being done has shifted away from locating features on the map (Sacks & Schegloff on 'home' position).

Unlike our earlier example it is the driver (Lou) who amongst the group is ‘the local’. Amongst the aspects of the wayfinding in play, unlike Bridget on jam-packed city centre roads, the daytrippers are in fast moving traffic consequently Lou is devoted to traffic. Moreover as we noted above these travellers are members of the same classes – ‘friends’ and ‘daytrippers’. Nevertheless Lou is still involved and once the topic shifts away from where on the map things are, to what can be done at each place she can become involved. Thus once Fay has asked whether there is a pub Lou then add what she recalls is there over her shoulder from the front seat “that’s where the waterfalls and the walks are”. Jane recalls the pub was by a loch and Lou is able to clarify the import of the recollection by revealing that they are dealing with two separate items now: Killin and the loch with a pub nearby⁶. Jane’s next turn displays that she has understood Lou’s two items but also crucially offers a returns to their location as a topic. While there are now two items, are they co-located or are they in two distinct places (e.g. ‘separate’). This is taken up by Lou when she positions Killin as further on from the loch with the pub. At this point from their collaborative recall and locating things are coming together for Jane on the map and she exhibits this as she finds that the loch with the pub “must be Loch Ern”.

There is a lot going on here but let us try and summarise. In their discussion they are producing, as an exhibited and accountable spatial inquiry, the relevant organisational features of their journey which they can use to organise their daytrip (sequence and topic). They have begun to transform the basic list given to them by Susan beforehand into the pub being on Loch Ern (not Loch Tay), Killin being “further on”, where further on could be taken up later for planning, say, lunch in relation to a walk beside the loch. They are assembling what to *do* at particular places (e.g. that place has a pub) and in what order, travelling from ‘here’, they will come upon that place (e.g. that would be our second stop). From the directional properties of their journeying onwards they have essential orientational properties now, of which place comes *first*, and which *second*, and this is the kind of lived work that is required to organise the journey with the map. The first/second sequence is a *transformation* from the map’s relational web of inscribed features to the order they will go through these places, akin to the work Bridget was doing earlier. In describing places, putting them in order, and describing the activities that are available they produce a plan for their day. Note that, after the episode here, the conversation moves away from wayfinding with the map, so that at this point in the journey they have *not* settled on a *destination*. While a lot of analysis, inquiry and map consultation and more is going on, this is not ‘decision-making’, it is not ‘reading’ a map as a ‘representation.’

A specific accountability is manifest in the sequential trajectories of the map’s position in relation to its reading. Jane initially reading the index has the road atlas close, later she opens up the map pages wide. In opening the map wide and low and in moving the map toward the middle of the backseat (see frame 1 segment 1 to segment 2) offers Fay involvement in the map reading. By placement of the object Jane retains the role of the main map reader, yet they are doing it together in a manner that is markedly distinct from Bridget & EL earlier. The reading aloud of the lochs and Killin when done with the map so positioned in relation to Fay’s gaze allows Fay to visually ‘follow through’ and assist in the locating on the map which Jane is doing. In

⁶ See (Hindmarsh and Heath 2000: 546-552) for an excellent exposition of the detection of misapprehension as possible through ongoing displays of orientation to an object.

doing locating on the map together, should Jane make a mistake, Fay can correct her and vice versa. As the 'main map reader' Jane has certain responsibilities: if they get lost, it is she who would be held accountable since she was the one reading the map.. In reading the map there is a '*moral incumbency*' perhaps not as extreme as the map reading of a reconnaissance unit in the mountains yet the day-trippers could find themselves lost in the countryside.

To a casual observer the backseat readers' manner could be taken to be 'hesitant map reading', or even 'vague'. It is vital to realise that as well as map reading, the group are deciding amongst themselves what they are going to do today *as friends* (and not as soldiers nor architects nor engineers (Hindmarsh and Heath 2000)) Talking about the places and activities is part of settling on possible future activities. A statement from the driver for instance about what was where, could be heard as a decision (and an inconsiderate one) about what they will do. The many hesitations are hearable as the friends offering space for each other to shape up the plans for later that day. In raising the different possibilities, opening up what they might do and using listing, yet not finally saying as Bridget would do exactly where they were going, how and by when, they are being considerate of each other's responses. 'Doing friendship' as Harvey Sacks might say (1984).

Conclusion

What we hope has become apparent from the episodes described in the article is that the responsibility for way finding and map consultation is distributed between members using setting and activity generated categorisation devices (Hutchins 1995; Watson 1999). Settings generate omni-relevant categories (e.g. driver and passenger) which come into play alongside those of colleagues, friends, family and so on. The activity of map use generates the main map reader, co-reader, non-readers, holders and so on. Moreover while we do not wish to make too much of the car here (even though it is an amazingly widespread, generic and yet under-studied interactional space (Mondada forthcoming; Miller 2001; Juhlin 2001)) map consultation has to be done in ways appropriate to the mundane spatial arrangement of the car. The particular side-by-side and 'airline seating' interactional space that is the car has made this unusual visibility arrangement incredibly commonplace (Mondada forthcoming). The pointing gestures, glances and looks that we expect in face-to-face conversation cannot be used to organise talk nor to produce convergent seeing in quite the same ways. For the two backseat passengers, sharing the map in our second example, having no driving duties, a quite different form of map use and wayfinding is possible. Nevertheless even they are also in a side-by-side arrangement with their gazes focussed on the map in front of them. The map is 'where the inter-action is' as fingers and thumbs get used in the extraction and constitution of items required for the journey and moreover to organise the conversation between its viewers. Goodwin's (2003) work on archaeologists picking out features in trenches and Hindmarsh and Heath's (2000) work on engineers looking at screens and documents has a similar focus on the uses of looks as directional themselves and as responses to pointing and talk in constituting professional objects.

As Coulter (1999) and Watson (1994; 1998) argue, all too often a multitude of disciplines concerned with human conduct and reason concede various terms associated with human mind and reason to psychology. Cognition becomes the province of those sciences that provide explanations in terms of indirectly accessible yet causative psychological processes. Perception, beliefs, mental representation, decision-making, psychological processes come to replace social situated and local practices of seeing, looking, imagining, categorising, inferring and so on (Lynch 1993). In the meantime exactly what seeing might be, in and as part of workplaces, following directions, driving in traffic, teaching surgery and so on, has only just begun to be described in the corpus studies of ethnomethodology and conversation analysis (Garfinkel 2002; Livingston 1987; Sacks 1972; Goodwin 2000; Heath and Hindmarsh 2002; Mondada 2003; Sharrock and Coulter 1998). In terms of way finding and navigation with maps the over-riding desire is to leap to psychological explanations, models or ontologies of way finding when we might instead examine actual instances. Instances of step-by-step, second-by-second planning, locating and looking at and with maps, their setting and with others around us, that exhibit and accomplish order, reason, accountability and various other topics which science (be it social or natural) treats as its own. As Crampton (2002) notes from a slightly different perspective enquiry into maps and their uses can be 'dominated by a scientific approach that obscure(s) essential aspects of how things are' (p13) (see also Wood, 1987).

When we get the map out, each and every time it is an occasioned inquiry, where the map has what Garfinkel (p206, 2002) calls 'curious properties'. To paraphrase Garfinkel again, the map is intractably problematic whilst simultaneously it offers itself 'for the projects of clarification, of elucidation, of elaboration of all the great enterprises that inquiry promises to be done' (p206) with it. The map has an excess of rambling instructions and far too much detail for seeing the route that you want immediately or without inquiry. The maps that were being examined in this article were not 'occasioned maps' (i.e. sketches, army landing maps etc.) that were drawn for a specific journey. They were the formal and ubiquitous in driving in the UK, 'A to Z' and 'Road Atlas', maps designed to support many and diverse journeys with endlessly emergent and contingent start and end points. Emergence and contingency are not necessarily problems for the study of maps since they can instead be a profitable line of investigation in looking at how various kinds of map users methodically deal with them under a huge variety of circumstances.

Acknowledgements:

Our drivers and passengers - Bridget, Jane, Fay & Lou. ESRC funding (R000222071) for 'Meet You at Junction 17 : a socio-spatial study of the mobile office' & the EQUATOR project (ref). Members of the Glasgow "data sessions". Paul Luff, Christian Heath & Lorenza Mondada.

Appendix – Transcription symbols

[hi]	
+	overlapping speech
[hello]	
(3.0)	pauses in seconds
it <u>was</u> today	speaker emphasis
((hand goes up))	non-verbal actions
=	latched speech
(sauce/source)	uncertain transcription of words

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