Fine-tuning locational formulations in mobile phone calls

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Abstract
This study examines the sequential and situated organization associated with framing locational formulations by dislocated parties to mobile phone calls for the joint accomplishment of location-related social action. The data come from 22 mundane Farsi mobile phone calls involving location inquiring and/or reporting. The analysis of the data, informed by conversational analysis and Levinson's conceptual framework of perspective-taking, adds frame of reference (hereafter, FoR) to Schegloff's location, membership, and topic or activity analyses operative in the selection of locational formulations. The trajectory plotted for location-related action indicates the contingent roles which material, linguistic and semiotic resources play in the selection of locational formulations deployed for co-presence purposes. The findings suggest consequentiality of the-relevant-next action for the framing of locational descriptions and provide insight into how conversationalists interact with their physical environment in a wider social context.

Keywords
Co-localization, Farsi everyday conversation, locational formulations, mobile telephony

Introduction
Combining conversation analysis (hereafter, CA) with general anthropology of space and spatial cognition, encapsulated in the framework of perspective-taking developed by Levinson (1996a, 1996b, 2003) the present study seeks to sketch locational descriptions which figure in mobile phone calls. It problematizes the selection of a particular...
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perspective, akin to what Schegloff (1972: 100) terms ‘point of reference’, from which entities are looked at and described in relation to their surrounding environment in talk-in-interaction in mobile telephony. Drawing on data coming from co-present interactions and landline phone calls, the analysis Schegloff (1972) presented indicated that the selection of locational formulations turns on location analysis, membership analysis, earlier expounded by Sacks (1972), and topic or activity analysis. Schegloff (1972) was not specifically concerned with mobility and change in contextual configurations of parties to talk-in-interaction, as communication technology did not allow ‘connected presence’ (Licoppe, 2009) back then. Building on the foundational work he carried out, which scrutinized alternative formulations for describing entities or activities, locational inquiries have been scrutinized in conversational analytic studies in mobile telephony (Arminen, 2006; DiDomenico et al., 2018; Green, 2002; Hutchby and Barnett, 2005; Laurier, 2001; Laursen and Szymanski, 2013; Licoppe, 2009; Weilenmann, 2003). The findings have revealed that unlike landline calls in which co-participants’ respective locations rarely become relevant as talk unrolls, in mobile phone calls, parties frequently inquire about and display mutual understanding of each other’s location. This is due to the fact that ‘mobile phones afford mediated conversation not anchored to pre-specified geographical locations . . . ’ (Hutchby and Barnett, 2005: 167). While these findings further our understanding of how, where and why locational inquiries and descriptions feature in mobile phone calls, they do not specifically deal with the perspectives from which co-participants provide descriptions of their locations as they relate to the social actions at hand.

Entities, including people, objects and locations can be looked upon from different perspectives, and languages afford their speakers a range of options to provide corresponding descriptions anchored to different vantage points (Palmer et al., 2017). For the purpose of providing a description of an entity, conversationalists need to formulate their descriptions from a particular perspective. The description provided is a function of which ‘conceptual anchor’ is selected as the vantage point (Danziger, 2010: 168). Applying the same notion to locational formulations in mobile phone calls, the selection of a particular angle or adoption of a particular frame of reference from which a description is provided is especially relevant to the ensuing social action. This is especially relevant to mobile phone calls which predominantly involve co-localization, lead up to ‘co-proximity events’ (Licoppe, 2009) and ultimately co-presence and focused interaction (Goffman, 1963, 1971).

Levinson (1996a, 1996b) established two general classes of spatial descriptors. The first class which consists of deictic, topological and toponymical categories is based on coincidence and its approximations and provides non-angular specifications. For localization purposes, a ground or landmark object is chosen in close proximity to or contiguity with the entity to be located. The second class makes use of coordinate systems and provides angular specifications. It consists of three main relative, intrinsic, and absolute frames of reference which crosscut many distinctions made in the disciplines above and are often distinguished by means of certain lexemic and semantic systems (Levinson, 1996a). As a crosslinguistic typology, Levinson’s framework has been taken as the basis in a number of studies into spatial descriptions, adopting a conversational perspective (e.g. Brown-Schmidt, 2009; Galati et al., 2013; Levelt, 1996; Mainwaring et al., 2003;
Pickering et al., 2012; Schober, 1993, 1995; Traxler and Gernsbacher, 1993; Tversky and Hard, 2009). The findings of these (experimental) studies into frame of reference indicate that in perspective-taking involving co-present interlocutors, conveying spatial information is collaboratively accomplished by drawing on interlocutors’ knowledge, the nature of the task at hand and the specifics of the interaction through which information is transmitted.

Building on Schegloff’s (1972) study into orders of consideration operative in the selection of locational formulations, the present study seeks to establish the relevance of perspective-taking, as operationalized by Levinson (1996a, 1996b), to the selection of locational formulations. It sheds light on how parties to mobile phone calls accomplish their co-proximity actions for incipient co-presence by adopting particular frames of reference and by drawing upon different resources which are relevant or become available as conversation unfolds, such as mobility or changing contextual configurations (Haddington and Keisanen, 2009).

**Data and methods**

In all, 54 mundane mobile phone calls recorded in central and southern Iran in the second half of 2018 and the first half of 2019 were inspected for the exchange of locational information. The analysis is based on 22 calls singled out in this corpus involving location inquiring and/or telling. The calls were recorded either by callers or calleds, using Call-Recorder Apps installed on their phones. The majority of the co-participants were familiars, friends and family members and ranged in age from approximately 19 to 40. All calls involved mobile-to-mobile phone conversations. The parties doing the recordings orally consented to be recorded and before recording their interlocutors, they asked for their consent. They were free in choosing which calls to record and hand over. Parts of talks involving the exchange of locational descriptions were transcribed1 with details deemed to be adequate for the analysis.

The analysis of the data is based on CA methodology in which co-conversationalists’ reactions form the basis of the analyses and is informed by Levinson’s framework of perspective-taking founded on general anthropology of space and spatial cognition. For the purposes of the current study, FoR is defined as a unit or organization of several units identifying a coordinate system, used to gauge properties of objects (Rock, 1992). The description associated with this class of spatial descriptors involves choosing ‘a prominent ground object at some remove from the figure or object to be located, and then to specify a search-domain from the ground by specifying an angle from that landmark’. (Levinson, 1996b: 359). This system which yields relative, absolute or intrinsic descriptions is an analytical tool applied to locational formulations used by parties to naturally occurring mobile phone conversations. In relative FoR, an entity is described in terms of its relative position to the observer, using the speaker’s viewpoint. However, in absolute and intrinsic FoRs, the entity is anchored allocentrically or geocentrically. In addition, unlike intrinsic FoR in which internal properties of an entity are utilized, and the entity is described in relation to a reference object (i.e. ground or landmark object), in absolute FoR, fixed angles extrinsic to the entity are used, and the description is made relative to features which remain stable (Levinson, 1996a).
Results

Joint accomplishment of location-related social actions, which either lead up to co-presence as a relevant ‘course of joint action’ (Licoppe, 2009: 1925) or are preliminaries to other actions involves the choice of location formulations. These formulations typically occur in a sequential position which is compatible with initiating the-reason-for-the-call action. In the former case, for the purpose of aligning their locations which can project their successful reunion, dislocated parties need to exchange information about their respective locations, the final end point where they can meet up or possibly their routes (Haddington and Keisanen, 2009). However, in the latter, locational inquiries do not project incipient co-presence as the relevant next action and may be deployed to check the interactional availability of co-participants.

As stated above, according to Schegloff (1972: 81), the choice of locational formulation turns on three ‘sorts of considerations’ which are based on location, membership and topic or activity analyses. He provided empirical interactional evidence suggesting that these considerations are part of what a speaker does in order to provide a locational description and what the hearer does to analyze the use of that particular formulation.

The close inspection of the calls in the current data set suggests that characterizations which do not utilize coordinate systems and hence do not give angular specifications, are more applicable to locational formulations which do not involve co-proximity events and ultimate reunion. However, when it comes to doing co-localizing, especially by mobile individuals, perspective-taking is typically occasioned by the nature of the social action to be accomplished. This has a bearing on the framing of a locational description or selection of a locational formulation. Based on the empirical data, I argue for an additional incipient-action analysis, which is a requirement in the selection of a locational formulation to resolve the issue of co-localization, partially posed by the lack of visual access in technologically mediated interaction (Zimmerman, 1984).

The analysis of dynamics of locational formulations in situ suggests that in calls which do not involve co-proximity events, inquiring and reporting of locational information are typically based on non-angular specifications and generally involve immobile conversationalists with no change in their contextual configurations. This characterization also holds when locational queries are deployed to check the interactional availability of co-participants. Even when the conversation unrolls in time and space, and location information is sought, in response to a localization query, without having sufficient knowledge as to why a location inquiry is deployed, a recipient simply locates himself/herself in relation to a ground or landmark.

On the other hand, if it is, or turns out to be, the case that the incipient social action to be conducted is associated with co-localization involving or leading to ‘mutually ratified co-proximity events’ (Licoppe, 2009: 1924) aimed at co-presence, locational description routinely shifts to perspective-taking embodying adoption of particular FoRs. This is especially relevant when conversationalists do not know the topographical layout of a place or for mobility reasons, which leads to changed contextual configurations, they cannot rely on their knowledge of the layout. The following sections illustrate how technologically mediated social actions associated with locational descriptions are occasioned either for localizing or co-localizing purposes.
Non-co-localization framing

In the following section, an attempt is made to show that Schegloff’s orders of consideration are more relevant to non-co-localization events and to co-localization purposes when co-participants have more or less fixed contextual configurations or can be located with known location formulations such as street addresses. On these occasions, inquiring locational information and location-telling might be a routine part of the opening phase of the call, or may be deployed for reasons having to do with checking the interactional availability of interlocutors. According to Levinson (1996b: 359), location description in this case consists in choosing ‘a ground or landmark object in close contiguity with the object to be located’. The orders of consideration which are instantiated in the following excerpts are generally at work for purposes other than co-localizing for co-presence. It is notable that even if locational information is delivered in different ways, with various levels of scale (Schegloff, 1972), conversationalists do not look at their respective places or provide a description of their places by adopting a particular FoR. The following involves a call made by a university student to his flatmate. Locational inquiry is a preliminary to what the caller wants to get the called to do (i.e. to provide a list of students who would like to serve as proctors).

Exc.1(2) Campus Talk (CD=called, CR=caller)

. . .

11 CR: ⇒ khoob-i kojâ-ee?
well-are[2ndSG] where-are[2ndSG]
Are you well? Where are you?

12 CD: ( )sâlon
( )gym

13 CR: ⇒ sâlon? salon-e chi?
gym? gym-of what?
Gym? What gym?

14 CD: ⇒ sâlon-e eeeeh badansâzi ()
gym-of PART2 bodybuilding ()
Bodybuilding gym ()

15 CR: ⇒ âhâ khâbgâh?
PART dormitory?

16 CD: âre khâbgâ-m
yes dormitory-am[1stSG]
Yes, I am at the dormitory.

17 CR: baad ki oonjâ-st, bachehâ-ye otâgh ki oonjâ-st?
then who there-is guys-of room who there-is
OK, who is there? Which guys from the room are there?

18 CD: hamze
name
. . . .

After the opening segment of the call is accomplished (not included here for space reasons), on Line 11, the caller embarks on an initial location inquiry sequence. Occasioned by the nature of the ensuing social action as the warrant prompting the call and yet to be accomplished, the caller does not adopt a particular perspective in framing the location inquiry. Consistent with Schegloff’s order of consideration about location analysis and occasioned by the caller’s general location inquiry, the called selects a formulation and reports his positioning. Given that in line with topic or activity
Discourse studies are framed with reference to a base location, and that location information is not provided with the adequate level of scale by the called (Schegloff, 1972), the caller proceeds to inquire more detailed information on Line 13. Even if the sought-for information is provided by the called in the answer to the query, the locational descriptions provided in response to the first and the second inquiry are not ‘expectably recognizable’ (Schegloff, 1972: 92), as the caller cannot perform operations on them to gain understanding into where the called is, and treats them as not analyzable (Sacks, 1992). Therefore, the caller himself provides a relevant frame for the location formulation on Line 15, which is confirmed by the called (Line 16). All location inquiries figuring in the call appear before the reason-for-the-call action given later. The descriptions of place are all based on topological relations, which means that the location of the called as the entity to be identified is described in relation to sâlon (gym) and khâbgâh (dormitory) as grounds (Levinson, 1996b) or as base locations (Schegloff, 1972).

Adequacy of level of scale is not always established with reference to a base location. The description could be made in relation to a landmark or a place associated with a certain activity, which is not treated as the base location with which the entity to be located is usually associated. As instantiated in the following excerpt in which a mother has called her son to check on him, providing locational description in terms of the implied base location of home is not treated adequate by the conversationalist seeking location information.

Exc.2(38)Checking on Son(CD=called,CR=caller)

...  
09 CR: ⇒ kojá-ee mädər’?
   where-are[2ndSG]mother
   Where are you, darling?
10 CD: ⇒ mâ bâ bachehâ oomad-im biroon
   we with children came-1STPL out
   I am out with my friends.
11 CR: ⇒ biroon kojá hast-in?
   out where are-2ndSG
   Out where?
12 CD: ⇒ kâfe
   Cafè
13 CR: ⇒ hâ, key miyâ-yn?
   PART, when come-2ndPL?
   When will you come back?
   ...

In the answer to the general location query by the caller on Line 9, in the light of location analysis as well as topic or activity analysis, the called selects a formulation to provide information about his whereabouts. Even if the selection is made with implied reference to the base location of home, as the ground, as indicated in the follow-up inquiry by the caller on Line 11, this does not provide sufficient clues. Therefore, the locational information does not entail adequate level of scale (Schegloff, 1972). In other words, because it is not sufficiently precise, it is not recognizable by the caller on this occasion to perform operations on it, even if based on ‘common sense geography’, the mother is attentive to the fact that the son is in her vicinity in the same city (Schegloff, 1972).
The mother’s follow-up inquiry includes the word ‘bīroon’ (out) used by the son to report his whereabouts. It could be said that by making a follow-up inquiry, the mother wants to know what the son is up to, rather than where he is, which is oriented to by the son in providing more detailed information on Line 12. As in the first case (Line 10), the description provided is based on topological relations in that the called configures his location relative to kāfe (café) as the ground. Treating the location information as received, as displayed on Line 13, the caller proceeds to make an inquiry about when the son would come home.

The examples above show the relevance of Schegloff’s orders of consideration to the occasions on which locational inquiries receive locational responses. These same orders are also relevant when a location inquiry receives a non-location response. The following is a case in point.

Exc.3(20) Menu Talk(CD=called, CR=caller)

09 CR: ⇒ eeeh migam kojā-ee?
   PART PART where=are[2ndSG]
   Where are you?

10 CD: ⇒ man dār-am mir-am khābgā
   I have-1stSG going-1stSG dormitory.
   I am going to the dormitory.

11 CR: ⇒ āha, self bood-i mage?
   PART self-service were-2ndSG whether
   Have you been to the (uni) restaurant?

12 CD: ⇒ hā raft-am self ghazā khord-am
   yes,went-1stSG self-service food ate-1stSG
   Yes, I went to the (uni) restaurant and ate lunch.

In this excerpt, a university student studying in the library on the campus has called his classmate to make inquiries about the menu at the university restaurant. The location inquiries on Lines 9 and 11 are preliminaries to the incipient action which appears later in the call because the location inquiry is not specifically deployed as being the warrant prompting the call. Given that the called is on the move, he selects a formulation showing his state of transition. According to Schegloff (1972), the choice is now between location or non-location formulation, and the formulation used is responsive to the problem of localization on this particular occasion. It is necessary to note that even if a non-location formulation is opted by the called, nevertheless, he makes mention of the base location of khābgā (dormitory) with respect to which provision of locational description is expectably accomplished by a university student. The description provided does not locate the entity; rather it is used to describe the movement of the entity (i.e. the called) toward a figure (i.e. khābgā, ‘dormitory’) (Levinson, 1996b) or the base location where the figure’s presence or movement is not accountable and with which the figure is usually associated (Schegloff, 1972).

The section above illustrated that the orders of consideration worked out by Schegloff (1972) are generally applicable when interlocutors inquire about or report their whereabouts with reference to some physical objects, without adopting a particular frame of reference. In the following section, the examples provided illustrate the
relevance of perspective-taking to framing locational descriptions or choosing locational formulations.

**Co-localization framing**

In co-localization for subsequent co-presence, given that both parties to mobile phone calls may be on the move, it may not be enough for interlocutors to simply report where they are, using street addresses; rather they need to look at their relation to the surrounding environment, or adopt a particular FoR, which can make their reunion possible. Therefore, providing a description which embodies perspective-taking becomes contingently relevant. Through co-localization, they can mutually assess their whereabouts as a co-proximity event (Licoppe, 2009). On these occasions, even if framing the locational description turns on the orders of consideration involving location, membership and topic or activity analyses (Schegloff, 1972), the analysis of the incipient action makes another consideration contingently relevant to the selection of the right locational formulation and its hearing. This section provides a description of the trajectory of co-localization as a social action by illustrating how the problem of mutual localization and its resolution is interactively oriented to by conversationalists in and through co-proximity events in their talk-in-interaction by enacting perspective-taking. Depending on the circumstances, especially who is mobile and who is immobile, the location of one or both participants may become relevant and thus enacted in co-localization work. In co-localization for the incipient reunion, co-participants may rely on their shared knowledge of space. Alternatively, the conversationalist crafting the location description chooses a (prominent) ground which is either distant or nearby and then specifies a search-domain with respect to the ground (Levinson, 1996b). In co-present interactions, speakers may choose to shift the burden of understanding a description to their interlocutors (Duran et al., 2011). However, it seems that in locational formulations in mobile phones, lack of access to most of the resources of co-presence (Beveridge and Pickering, 2013; Licoppe, 2009) such as sensory resources, considerably shifts the burden to the speaker providing the location description. Therefore, doing localization work is not fully symmetrical (Licoppe, 2009). The description provided turns on the cognitive map or the geographical knowledge of the area (Haddington and Keisanen, 2009). Consider the following example in which the location query deployed clearly necessitates a location description conducive to incipient co-presence.

**Exc. 4 (16) Pick-up Point**

01 (RING)
02 CD: alo
   Hello
03 CR: alo salâm khoob-i?
   hello hi good-are[2ndSG]
   Hello! Hi! How are you?
04 CD: merci
   Thanks
05 CR: ⇒ kojâ-eer
   where-are[2ndSG]
   Where are you?
In the excerpt above, a boy has called a girl who is a shop clerk to see where she is as he is to pick her up. The first location inquiry appears on Line 5, immediately following the opening sequence. Since it is given as a pre to the social action for which the call has been placed, it is couched in terms characteristic of general location inquiries and does not involve any perspective-taking. The answer provided by the called on Line 6 reports on her location in which use is made of a base location, in this case, maghâze (shop), where she works. Following that, without waiting for the caller to initiate the-reason-for-the-call action, she proceeds to inquire where he is waiting, pre-emptively initiating the warrant prompting the call. In the light of their interactional history, she reasonably displays knowledge of why the call was placed. The design of the turn constructional unit by the called on Line 7 suggests mutual localization with co-presence at the horizon and not simply reporting of the caller’s whereabouts. Therefore, it may not be adequate if the caller simply reports his positioning because the incipient social action is reunion, which requires additional orders of consideration. This has repercussions for the formulation of location initiated by the caller (Lines 10) and completed by the called (Line 11). The formulation occasioned by the query is attuned to the turn design by the called delivered to elicit specificities of the caller’s location for their reunion and embodies a location description framed from the perspective of both conversationalists. In addition, the description is ‘effort-minimizing’ (Schober, 1995: 230) in that in the light of previous encounters, both parties demonstrably orient to it since use is made of common ground which is the information shared by both conversationalists (Clark and Carlson, 1981) involving mutually known indexical expressions (Licoppe, 2009). This particular framing obviates the need for further engagement in exchanging localization information.

In the call above, reunion is specifically mentioned in the talk-in-interaction, even if it seems there were already arrangements in place for parties’ co-presence. A variation of calls in which co-presence is the ultimate objective is that reunion is not expressly pointed out in the call, and location information is not provided in response to a location inquiry. In the following call, a taxi driver has called a teacher working at a language institute. The call is a follow-up one to an earlier arrangement, made to inform the called that he has arrived and reports where is waiting. Location reporting is placed in the anchor position, which is treated as the-reason-for-the-call action. Even if the location
inquiry is noticeably absent, the caller and the called both orient to the subsequent action of co-presence.

**Exc. 5 (41) Language Institute**

| CD | CR | CR: ⇒ |
|----|----|-------|
| 01 | alo, jānam | alo, jānam |
| 02 | alo sa[lām] | alo sa[lām] |
| 03 | sa[lām] | sa[lām] |
| 04 | ghorbān man jonoob-e meydoon-e golhā hastam | sir I south-of roundabout-of name am |
| 05 | chashm alān oomad-am alān miyā-m do daghi[- | ok, now came-1stSG now come-1stSG two min- |
| 06 | chashm alān oomad-am alān miyā-m do daghi[- | ok, I’ll be right there, I’ll come now. In two min- |
| 07 | [hamin-jā vāys-am dige? | [same-place stand-1stSG PART |
| 08 | bale bale hamoon [amoozeshgāhây-e zabān-e khāreje ke rooberoosh-e āre | Yes yes same institutes-of language-of foreign that facing-is yes |
| 09 | áre neveshte vizheye khāharān-e pāygāh-e basij-e dige | Yes yes, the same language institutes facing it, yes |
| 10 | jonoob-e meydoon-e golhā mishe dige? | south-of roundabout-of name becomes PART |
| 11 | na na ye kam biyâ-n bālātar | no no a little come-2ndPL upper |
| 12 | ye kam dor-e meydoon dorbazan-id besamt-e bālā[ | a little round-of roundabout turn-2ndPL toward-of up |
| 13 | [āhā samte bālā mishe | A little, turn around the roundabout and head upward |
| 14 | samte chape-toon mishe amoozeshgāhâ-ye zabān-e khāreje | PART toward up is |
| 15 | oonjâ vāys-id joloy-e [amoozeshgâ vāys-id | Upward then. |
| 16 | [āhā bale | yes |

After the opening sequence which is truncated considerably, the initiation of the warrant prompting the call is ‘potentially relevant’ (Licoppe, 2009: 1927). Orienting to the slot provided for the initiation of the reason for the call, the caller selects a formulation to report his whereabouts (Line 4). It is notable that he does not simply provide information about his positioning; rather being mindful of the incipient action (i.e. reunion with the called), he adopts a particular frame of reference, yielding angular specifications of his location.
The formulation is thus closely fitted to the incipient social action and explicitly projects the upcoming co-presence. Given that the call involves distant parties and that successful co-presence as the incipient action requires ‘micro co-ordination’ of social actions in the interactional sequence (Arminen and Weilenmann, 2009: 1921) as co-proximity events, the caller makes use of an absolute frame of reference, viz. *jonoobe Meydoone Golhâ* (south of Golha Roundabout), to enable the called to determine where he is waiting. Even if based on location analysis, explicit reference is made to a commonly known place (Licoppe, 2009) as a landmark (i.e. *Meydoone Golhâ* ‘Golha Roundabout’), it is not adequate for the called on this occasion. This is because, as revealed later (Line 11), the called cannot operate on the information as it brings about problems of analyzability (Sacks, 1992). In spite of the called’s ratification at the beginning of Line 7, it seems that the description provided by the called in the continuation of the turn on this same line does not correspond to the caller’s positioning. To seek assurance, on Line 9, the caller reads out a sign posted on the building where he is waiting. In so doing, he shifts from an absolute frame of reference to an intrinsic one, involving an object-centered coordinate system (Levinson, 1996a), as reading the sign implies standing in front of the building. He then proceeds to address another direct localization inquiry to the called. In the intrinsic frame of reference adopted by the caller, the implied facet (i.e. *jolo*, ‘front’) enables the called to extract an angle or line which radiates out from the ground where the entity (i.e. caller) can be found (Levinson, 1996a). To seek confirmation from the called, the caller makes a location inquiry on Line 10 phrased in almost the same terms as the first formulation (Line 4) but with a question contour, switching back to an absolute frame of reference which involves the use of cardinal geographical directions. At this stage, in the light of the information made available through descriptions provided of the caller’s whereabouts as a result of location-telling embodying different frames of reference, the called comes to understand that the driver is waiting in front of the wrong institute, as there are several language institutes in the same area. He subsequently proceeds to do the co-location work. This reverts the burden of providing locational information to him. Having noticed the location of the caller, to ensure successful navigation, instead of providing a description of his location limited to location and topic analyses, the called makes use of a coordinate system and provides locational descriptions. He thus effectively attunes to the location formulation chosen by the caller on Line 10 (Arminen and Weilenmann, 2009) by building a ‘designedly multiple-utterance turn’ (Zimmerman, 1984: 219). The called adopts particular perspectives of where the driver is, where he himself is and how the driver can get where he is, involving the use of viewer-centered relative (i.e. *besamte bâlâ*, ‘upward’, *samte chap*, ‘left side’), and object-centered intrinsic (i.e. *joloye*, ‘in front of’) frames of reference (Levinson, 1996b). It is notable that the use of the relative frame of reference, requiring a ternary relation is prominent as it provides a triangulation of the figure, ground and viewpoint and allows the caller to map the coordinates on the viewpoint onto the ground (Levinson, 1996a). Thus, co-localization is collaboratively achieved as speakers keep exchanging locational information until both are sure they have understood each other’s location and their co-proximity actions (Schober, 1993). Mutual understanding of location, as indicated by the acknowledgment of receipt of locational information during various stages of the call, paves the way for coordinated exit from the call (Zimmerman, 1984). The caller’s understanding of the location description provided by the called is aided by the fact that the figure, ground
and anchor are configured from the caller’s perspective (Donelson, 2018; Tversky and Hard, 2009), which, in turn, ensures the caller’s successful navigation.

The examples cited to this point illustrate the relevance of perspective-taking on occasions where orders of consideration of location and topic or activity analyses are at work, but did not involve any explicit membership analysis. In the following excerpt, membership analysis is also relevant. However, again successful reunion as an interactional achievement requires perspective-taking in locational framing occasioned by incipient-action analysis.

Exc. 6 (52) Iranmehr Clinic

04 CD: ⇒ kojâ-een shomâ?
where-are[2ndSG]you
Where are you?
05 CR: ⇒ joloy-e darmângâh-e irânmehr
front-of clinic+of name
In front of Iranmehr Clinic
06 CD: ⇒ irânmehr? [balad nis-am man
name [familiar not-am I I
Iranmehr? I don’t know where it is.
07 CR:    ⇒ [bale
yes
08 CD: ⇒ avval-e jâdey-e shahrak-e velâyat
beginning-of road-of township-of name
Beginning of the road to Velayat Township
09 CD: ⇒ man jolo hamin kalântariy-am hâlâ
I front same police station-am[1stSG] now
I am now in front of the police station.
10 CR: ⇒ ham alân by-u sar-e khiyâboon alân sar-e meydoon
PART now come-2ndSG beginning-of street now beginning-of roundabout
Come now to the intersection, to the roundabout
11 CD: bâshe
ok

In the call above, the caller is waiting for a taxi driver to pick him up. In the answer to the general location query made by the called on Line 4, which does not involve perspective-taking, the caller adopts an intrinsic frame of reference on Line 5, using a ‘projective term’ (i.e. joloye, ‘in front of’) (Tenbrink, 2011: 705). The choice of the location formulation is based on membership analysis, treating the driver as a member of the category of taxi-drivers who know where a landmark, such as darmângâh (the clinic) in this case, is. The consideration of location analysis is also pertinent in that a clinic is a place where people frequently present and call taxi drivers to pick them up. However, the driver does not exhibit an understanding of the location by posing a question on Line 6. The repetition of the name of the clinic on this line is equivocal and could be deployed for various reasons (Sacks, 1992). Taking the turn for its confirmation value hearably delivered to solicit acknowledgment, given its question contour as a try-marker (Zimmerman, 1984), the caller confirms the name of the place. However, overlapping with the caller’s confirmatory answer, the called goes on to indicate that he does not know where the clinic is by using a negative formulation (Mondada, 2011), which acts as a prompt for the caller’s refashioning the locational formulation. Noticeably, even if the caller’s description of his location embodies adequate
locational details, on Line 8, he opts for a formulation ‘concentric’ with the one already given (Schegloff, 1972: 85). The second formulation deployed by the caller to report his positioning involves the use of a coordinate system, allowing him to provide a description of his whereabouts in relation to the surrounding environment. Specifically, in this description, the figure (i.e. the caller) lies within a specific search domain which extends from the ground (i.e. *jâde*, ‘the road’) based on an angle or line which is projected from the ground (i.e. Velâyat Township) (Levinson, 1996a). However, as displayed in the turn taken by the called on Line 9, he still has problems finding the place. Therefore, instead, he opts to formulate a description of his own whereabouts, using the object-centered, intrinsic frame of reference (i.e. *jolo kalántari*, ‘in front of police station’). This enables the caller to demonstrate understanding of where he is (Line 11). The caller orients to the called’s location which has been made relevant in the sequential context of the talk (Hutchby and Barnett, 2005), and uses the intersection and the roundabout as base locations (Schegloff, 1972). He provides a location description in close vicinity and adjusts his route accordingly, which must involve some walking (Licoppe, 2009), using topological relations, yielding non-angular specifications (Levinson, 1996b).

**Conclusion and discussion**

This study scrutinized how conversationalists accomplish location-related social actions on occasions where locational descriptions are preliminaries to some other actions (Exc. 1, 2 and 3) and where they project incipient co-presence (Exc. 4, 5 and 6). The analysis presented suggests that Schegloff’s (1972) orders of consideration are at work in the selection of locational formulations in both cases. In other words, orientation to the subsequent location-related action is consequential for the choice of location formulation. However, on occasions where calls are placed for co-presence purposes by mobile conversationalists, for the purpose of achieving successful reunion as an action interactionally generated (Sacks, 1992), the orders of consideration may not be adequate and perspective-taking may contingently arise (Exc. 5 and 6). The descriptions thus provided are indeed configurations of co-participants in relation to the physical environment, which is a (prominent) ground with known location and orientation (Levinson, 1996a). In choosing locational formulations for the ensuing co-presence action, conversationalists fuse configurations of their positioning with descriptions for co-localization purposes. These descriptions which are realized in orderly unrolling of sequences of actions are an essential requirement and establish a basis for the ensuing action (Mondada, 2011). In line with Laurier’s (2001) finding, locational formulations are contextually and sequentially bound up with the business to be mutually carried out by tele-present conversationalists. Location queries and descriptions for co-presences purposes may go beyond formulations of place and project an upcoming social action (Exc. 4). The analysis presented suggests that in proffering locational information, interlocutors do more fine-tuning and go beyond what the analysis of landline phone calls and co-present interaction suggests. The organization of the eventual social action of co-presence requires parties’ sharing information about their whereabouts and designing their proximity events accordingly, allowing them to co-organize their movements to meet up, which is
made possible due to the communicative affordances provided by mobile technology, which allows micro-coordination of activities (Ling and Yttri, 2002).

The findings suggest that location and changing contextual configurations which are drawn upon as resources in formulation of locational descriptions play contingent roles in ‘locally managed social interaction’ (Haddington and Keisanen, 2009: 1940). In the characterization provided of the problem of (co-)localization and its resolution, it could be seen that for the purpose of organizing their actions, conversationalists simultaneously rely on linguistic, material and semiotic resources to ensure their hearers’ recognition of their whereabouts (Haddington and Keisanen, 2009). In addition, their movement in space and time and changing contextual configurations which the movement causes (Exc. 5 and 6), are contingent resources for the accomplishment of a social action (Haddington and Keisanen, 2009; Licoppe, 2009; Urry, 2002). In locational sequences occasioned by co-proximity events, given the potential variability of the called’s and/or the caller’s positioning, their location becomes contingently relevant and is oriented to at various stages of the call. It seems that the frame of reference adopted provides another resource upon which conversationalists rely to do co-location work. Moreover, common knowledge of the interlocutors, or ‘common sense geography’ (Schegloff, 1972: 85) and their epistemic knowledge have ramifications for location formulations (Exc. 4). Drawing upon a range of resources which play contingent roles in the accomplishment of co-localization action, parties interactively frame locational descriptions which make their co-presence possible, allowing them to construct meaning in their interaction in the wider social context (Haddington and Keisanen, 2009).

In perspective-taking, the relevant literature on co-present locational descriptions suggests consistency in adopting a particular frame of reference (Shusterman and Li, 2016). It seems that there is not a default perspective in locational formulations in mobile telephony. Parties to mobile phone call are flexible in adopting FoRs due to contingencies which may arise as the talk unfolds, and location formulation is not just a matter of the selection of location- or non-location-related formulations (Schegloff, 1972); it is also a matter of selecting a particular FoR to suit a particular situation and changing it in the same interactional situation if interactional contingencies arise (Exc. 5). Moreover, there is some research evidence suggesting that languages are different in terms of the frames of reference which they make available to their users (Levinson, 1996b; Shusterman and Li, 2016) and that there is a consistency within a language across different modalities (Levinson, 1996a). These distinctions may not be equally applicable to mobile telephone calls where interlocutors have to draw on a number of resources to deal with contingencies which arise from different physical circumstances (Exc. 6). Exchanging location information for co-presence purposes is especially problematic because information bearers have to provide descriptions for distant others, using ‘non-person-centered’ descriptions (Schober, 1995: 227). In mobile phone calls, if locational reference is invoked as routine, the frame of reference does not seem to be particularly relevant. However, when locational information prefigures possible reunion, requiring some co-localizing actions on the part of interlocutors, the frame of reference becomes a relevant resource and is routinely enacted, showing the relevance of what-we-know-we-are-going-to-do to the selection of locational formulation.
The selections made of locational descriptions for co-presence purposes are based on relative, intrinsic and absolute frames of reference, which indicates that conversationalists construe contextual configurations in different ways (Haddington and Keisanen, 2009). In the context of mutual localization actions for imminent co-presence, perspective-taking can serve a vantage point from which to approach locational descriptions as it plays a contingent role in the accomplishment of action. This implies that cognitive phenomena are also enacted and thus become salient in the accomplishment of a social action (Levinson, 1996a). Given variable contextual configurations and resources, the range of options associated with the choice of locational formulations is more extensive than what has been thought before, implicating the complex interplay of linguistic structure, social action and physical environment.

By reconciling conversation analysis with general anthropology of space and spatial cognition, this study has sought to show the relevance of different orders of consideration to the selection of locational formulations in mobile phone calls in which location becomes topocalized as warrants prompting the calls or arise from the calls as they unroll. It has closely examined the ramifications of different grounds for the topocalization of location in terms of selections which conversationalists make out of the range of options which their language makes available to them. This is especially applicable to occasions on which conversationalists orient to their mutual locations projecting their subsequent reunion as the relevant next action, entailing their reliance on different resources which are available from the outset or become available as the conversation unfolds and exploiting dynamics of distant presence and proximity (Licoppe, 2009; Urry, 2002). The description provided of perspective-taking in mobile phone calls in Farsi involving locative constructions reveals initial specifics of how mobile telephony has transformed the conceptualization of place. In addition to considerations which speakers have in framing location descriptions and resources which they draw upon, the descriptions provided by parties about their positioning might as well turn on how different people in different cultures interact with their physical environment in a given social context.

The findings represent a stepping stone toward scholarly understanding of dynamics of frames of reference in locational formulations of mobile phone calls and provide insights into accomplishment of action in interactional research by showing how location-related action is socially and sequentially organized (Sacks, 1992; Schegloff, 2007). This study opens up a new domain of inquiry into a hitherto unexplored area of perspective-taking in mobile telephony which has to do with how tele-present parties do co-localization work projecting their incipient co-presence. Whether the results are replicable across different modalities of the same language or even across different languages remains to be seen.

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Notes

1. The Jeffersonian System is used for transcription (Atkinson and Heritage, 1984: ix–xvi) spanning three lines: the transliteration in English, a gloss and an idiomatic English translation. Idiomatic translations have been provided with a focus on content. The Leipzig Glossing Rules have been adopted for person morphological inflections: ‘1SG’ = first person singular, ‘2SG’ = second person singular, ‘3SG’ = third person singular, ‘1PL’ = first person plural, ‘2PL’ = second person plural, and ‘3PL’ = third person plural (Comrie et al., 2015).

2. Particle

3. Even if there is no empirical evidence for the use of these terms, nevertheless, based on native speaker’s intuition it seems that these are used as endearment terms by parents in Farsi to address their children.

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