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Video Gaming as Practical Accomplishment: Ethnomethodology, Conversation Analysis, and Play

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Abstract

Accounts of video game play developed from an ethnomethodological and conversation analytic (EMCA) perspective remain relatively scarce. This study collects together an emerging, if scattered, body of research which focuses on the material, practical "work" of video game players. The study offers an example-driven explication of an EMCA perspective on video game play phenomena. The materials are arranged as a "tactical zoom." We start very much "outside" the game, beginning with a wide view of how massive-multiplayer online games are played within dedicated gaming spaces; here, we find multiple players, machines, and many different sorts of activities going on (besides playing the game). Still remaining somewhat distanced from the play of the game itself, we then take a closer look at the players themselves by examining a notionally simpler setting involving pairs taking part in a football game at a games console. As we draw closer to the technical details of play, we narrow our focus further still to examine a player and spectator situated "at the screen" but jointly analyzing play as the player competes in an online first-person shooter. Finally, we go "inside" the game entirely and look at the conduct of avatars on-screen via screen recordings of a massively multiplayer online game. Having worked through specific examples, we provide an elaboration of

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a selection of core topics of ethnomethodology and conversation analysis that is used to situate some of the unstated orientations in the presentation of data fragments. In this way, recurrent issues raised in the fragments are shown as coherent, interconnected phenomena. In closing, we suggest caution regarding the way game play phenomena have been analyzed in this study, while remarking on challenges present for the development of further EMCA-oriented research on video game play.

Keywords: Ethnomethodology; Conversation analysis; Video games

1. Introduction

The coincident development of increasing network bandwidth with more powerful computer technology has meant that online and "social" components to video games have become a major feature of gaming itself and thus of research *on* video games. This often has resulted in the routine concerns of the social sciences being brought to bear on video game play phenomena, including interests in the culture of video gaming, social psychological factors of play, or economic analysis (Reeves, Brown, & Laurier, 2009). However, curiously, research on video games has tended to take a somewhat disinterested stance toward the "intricacies of skilled gameplay" (Reeves et al., 2009). In other words, detailed studies of the players' embodied activities are still scarce (Mondada, 2012, p. 236).

In contrast, ethnomethodological (Garfinkel, 1967, 2002) and conversation analytic (Sacks, 1992) informed approaches—or "EMCA"—seek to draw attention to the "gameness" of game playing. This attentiveness is expressed in the overriding focus of EMCA work which delivers a corpus of investigations of play as it actually happens. For EMCA, the challenge is to unpack both the accountability of play as social action and the ways in which it is practically accomplished by players—between players themselves, and between players and "the game"—as a moment-by-moment, sequentially organized activity. The work we will explore seeks to provide a range of descriptive, largely empirical studies of video game players' naturally occurring practices, as they happen. It is in these senses—the sustained focus on play itself, and attention to the lived detail of human action—that EMCA work on video game play can provide novel contributions. On this point EMCA again stands in contrast with the methodological approaches of the social sciences as they tackle video game play, as this work has tended to rely on traditional social scientific instruments such as the survey or the interview and other post hoc accounts of play that tend to eschew this lived detail.

But what might EMCA's focus on the socially organized practical details of game play offer as a generative contribution to this journal? We must acknowledge the radically different epistemological positions of ethnomethodological and conversation analysis, with that of cognitive science (see Coulter (1989) and Button, Coulter, Lee, and Sharrock (1995) for detailed ethnomethodological critiques of the concept of

cognition). At the same time, we can discern a number of common features. First, there is a common interest in focusing on actual play, such as examining players' material engagements with a game's "mechanics," which is reflected, for example, in Kirsh's (1995, p. 62) work on the "interactional computation" of players in the manipulation of Tetris puzzle pieces. Furthermore, approaches such as distributed cognition focus on social processes and methods of action by "agents," and draw upon similar ethnographic techniques to those of ethnomethodology, to collect data and drive analysis of how features like "offloading" operate (e.g., Hutchins, 1995; Stevens, Satwicz, & McCarthy, 2008). Second, EMCA's praxiological perspective also has surface resonances with elements of cognitive science and allied work. For instance, notions such as "distributed cognition" (Hutchins, 1995; Stevens et al., 2008) and "joint action" (Clark, 1996) emphasize the sociality of interaction, albeit as cognitive processes, pointing toward the social and environmental "offloading" of cognitive representation and computation. Indeed, theories of joint action and common ground have been informed by some key findings from conversation analysis. For example, Clark and Wilkes-Gibbs (1986) heavily draw on Sacks, Schegloff, and Jefferson (1974), but they use formal experimentation based on cognitive theories thought to underpin the interactional phenomena documented by Sacks et al. to build upon the "suggestive" (Clark & Wilkes-Gibbs, 1986, p. 10) findings of conversation analysis. At the same time there are key differences particularly in the kind of data employed as well as its treatment.

In the broader program of the cognitive sciences, there is a common focus on (laboratory) experiments to collect data to test particular theories. EMCA tries to work with what is often referred to as "naturalistic data," that is, audio and video recording of activities in their original settings so as to focus on activities that are "naturally" occurring (although see Lynch, 2002). The use of audio and video recording also offers closer access to the real-time unfolding of action, that is, video game play as it happens, moment by moment. This focus on examining real-time practices in detail leads to a question over what standards or criteria EMCA employ to describe activities. While cognitive science typically works with external standards—that is, derived from a pre-given theory that determines a range of matters such as what counts as "success" in a particular activity—in contrast, EMCA tries to work with standards internal to the setting, that is, standards that are oriented to by the setting's participants. Thus, rather than considering cognitive processes of understanding game play by players, EMCA would not consider this a research problem per se but rather a problem for players in the setting to work out using various interactional resources at their disposal (such as talk). Or to put this another way, for the cognitive sciences, the starting point is typically a particular theory—of action, of cognition, of sense-making, etc. (e.g., the Kirsh and Maglio (1994) theory of "epistemic action" which has been applied to video game play). This is then tested, refined, and studied (in that sense, it is "top-down"). In contrast to this, EMCA's starting point is with the activity, and it seeks to advance rich descriptions of what might be said to adequately constitute actions from the perspective of those producing them; the aim is thus to discover what is important and/or problematic for the participants (in that sense, it is "bottom-up").

It is with this contrast in mind—between those of participants and theorists—that this study presents its examination of EMCA literature on video games, although the ambition here is not to make any further explicit critical moves toward a detailed comparison with cognitive scientific conceptions of games and gaming. Instead, our approach is to present a data-oriented, practical exposition of what and how EMCA research explicates in video game play.

In a wider context than just video games, EMCA research interests have already been put to work examining a wide range of leisure activities, such as dancing and sailing (Tolmie & Rouncefield, 2013). Conceptually this literature has also addressed pleasure and enjoyment (Brown & Juhlin, 2015), both of which are frequently tied topically to video game play. EMCA work has also explored more traditional games and the "work" of gaming specifically, such as in Livingston's investigations of checkers, jigsaws, and other puzzle games (Livingston, 2008). Although it is hard to say that this research has coalesced into as identifiable a program as distinctive as that of ethnomethodological "workplace studies" in the fields of human–computer interaction and computer-supported collaborative work (e.g., Heath & Luff, 2000), we can nevertheless locate in this literature something of a wider context for the EMCA interests in video games that are collected together in this study.

Perhaps the earliest ethnomethodologically informed study of video game play specifically is that of David Sudnow's (1983) book *Pilgrim in the Microworld*, which uses *Breakout* to investigate the experience of the video game player. *Breakout*, an arcade game released in 1976, involves the player using a movable "paddle" across the bottom of the game screen to bounce a virtual ball against layers of "bricks" located at the top of the screen (which disappear on the ball hitting them). Clearing out all the bricks enables progress to the next (harder) level of the game. Sudnow's account of this game builds on a prior work, *Ways of the Hand* (Sudnow, 1978), which offered a "player's" account of developing skills in playing jazz piano.

The distinguishing feature of both books is Sudnow's detailed description of a singular and largely solitary pursuit of mastery at a technical and skilled activity. In the case of *Pilgrim in the Microworld* he describes the intricacies of successful play in *Breakout* from a phenomenological position—that is, just what playing the game is, and reflecting upon the emerging organization of the experience of the skilled player. For instance, Sudnow articulates his developing skill at playing *Breakout* in terms of a field of possible, projectable next actions that are opened up to him, or emerge, as his competence develops. This includes the various novel strategies to get the ball bouncing against the bricks at the top of the screen and, therefore, make progress in the game. For instance, one strategy, discovered in playing, is to use the attributes of the paddle (and that it has different "zones" which produce different angles of rebounds with the ball, see Fig. 1). This learned strategy enables Sudnow to "[employ] the paddle as a switching device in ways [he] hadn't before." The strategy also offers distinct anticipatory possibilities for

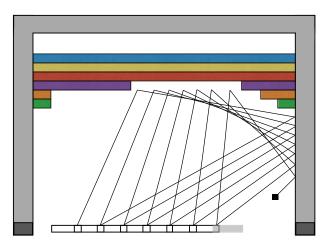


Fig. 1. Paddle attributes when playing Breakout. Redrawn from Sudnow (1983, p. 190).

the player: "I'm headed toward a long string of particular destinations. And with this pattern underway I can now accurately anticipate each specific next location" (Sudnow, 1983, p. 191).

While *Pilgrim in the Microworld* adopts the perspective of a single player, playing alone, most recent EMCA work focuses on games that are played *together*, or on situations in which a player is in some way "not alone" (e.g., online gaming). The studies that concern us here span game genres and settings. In terms of genre, EMCA studies have explored "beat-'em-ups" (Hung, 2011), sports games (Mondada, 2012), massively multiplayer online games (Bennerstedt & Ivarsson, 2010), first-person shooters (Reeves et al., 2009), adventure games (Laurier & Reeves, 2014), and racing, sports, platform, and real-time strategy games (Aarsand & Aronsson, 2009). Equally, we find a variety of naturalistic pre-existing settings or arrangements of video game play in focus, such as in the home (Mondada, 2012) or in dedicated gaming spaces (Keating & Sunakawa, 2010; Sjöblom, 2011). While there are cases of interventions that study the introduction of novel gaming circumstances for players (e.g., see Moore et al., 2007), these are rare.

In terms of the resources that are drawn into analysis, we can also see a balance between two tendencies of study. First, there are those that focus on examining verbal and bodily action as "modalities" *around* the video game, whereby the play of the game itself offers resources for this interaction. These studies tend to eschew detailed analysis of what activities are happening on-screen because they foreground other phenomena. For instance, they explore how in-game audio offers resources for talk, such as the response cries of Aarsand and Aronsson (2009) or the language learning of players in Piirainen-Marsh and Tainio's studies (2009a,b, 2014). Although what happens on-screen is important within this work, the analysis tends to be driven by

actions seen to be taking place off-screen; as Bennerstedt (2008b) argues, this is a distinguishable analytic stance that uses "in-screen and off-screen events to account for discourse and activities done off-screen." Second, we can discern studies that focus more specifically upon articulating the organization of virtual, in-game actions as they are witnessed on-screen, "in the game," such as the player-driven observable "bodily" and "conversational" conduct of in-game avatars in virtual worlds (e.g., Brown & Bell, 2004), the accountability (i.e., the observable-and-reportable features) of avatar formations available to players on-screen (e.g., Bennerstedt & Ivarsson, 2010), or the manipulation of the virtual camera view in-game by players (e.g., Laurier & Reeves, 2014). While there *are* conceptual issues with the distinction being introduced here around on-screen and off-screen activities (in fact they are broader analytic challenges), these will be put to one side momentarily and returned to in the closing remarks.

2. The practical accomplishment of video game play

Rather than initially engage in a detailed account of ethnomethodology and conversation analysis and their relations to video gaming, we instead provide an example-driven explication of the perspective to examine video game play phenomena as sites of social order. We do this by drawing directly upon a series of fragments of data from four different pieces of research: Sjöblom (2011), Mondada (2012), Laurier and Reeves (2014), and Bennerstedt and Ivarsson (2010). The selection and order of these fragments³ has been arranged using a simple analytic tactic, namely, a gradually narrowing of focus that assists us unpacking video game play in a staged, "tutorialized" manner. In doing so we aim to underscore how it is that the practical, routine accomplishment of orderly game play is a persistent, pervasive concern of all "levels" of video game play.

We can summarize our "tactical zoom" (and sections that follow) in this way:

- At first we deliberately take a wide view of video game play, considering how it unfolds in (dedicated) gaming *situations*. On-screen action and players' conduct are situated within a broader ecology of the particular *place* in which gaming happens. Spatial arrangements of multiple players, computers, keyboards, desks, furniture, etc. also play a part in these *multiactivity* settings. This is illustrated through Sjöblom's (2011) video-based ethnography of gaming in Internet cafés, where we examine an instance of players talking about—in fact, analyzing—the *strategy* of their ongoing game.
- We then narrow our focus somewhat to consider the *sequentiality* of video game play as it is intertwined closely with talk—such as *assessments* of play—and bodily action. In doing this we draw on an example from Mondada's (2012) study of two players engaging in a football game at a games console. In contrast with the example of a massively multiplayer online game in Sjöblom (2011), the fragment from

Mondada is drawn from an example of co-located play in the home and thereby underscores the tight, precise *temporality* of video game play and its sequential organization with talk, embodiment, and gestures.

- At this point we shift our analytic focus from "outside" the game to "inside" it, and begin to consider more of the *technical details* of play. To do this, we use a fragment from Laurier and Reeves (2014) where a player competes in an online first-person shooter but has a "spectator" sitting next to him with whom he engages in talk about the ongoing game at hand. From this we unpack two key points around the *competence* of players in scrutinizing in-game action for the purposes of play (in this case, via "zooming" and "panning"), and the player and spectator's talk as constituting *analysis* both of the game and one another's actions in the setting.
- Finally, we draw in entirely to technical game play, that is, action as it appears onscreen. This analysis draws on a 3-s fragment of screen-captured play from a massively multiplayer online game (MMO game or MMOG) as found in Bennerstedt
 and Ivarsson (2010). Unpacking the fragment, we draw upon notions of the *accountability* and *sequentiality* of in-game action, mirroring what we have found
 "outside" of the game in prior sections as we unpacked the ordering of conversation and bodily conduct "at the screen."

2.1. Play in places

We start, in a sense, "outside" the game itself. Games are played as part of particular settings, and the spatial, temporal, and social organization of these places will be resources for, and be offered further resources by, the play of the game. This means, for instance, that playing a video game in a traditional entertainment arcade will be differently organized from playing on a console at home with a family member, even though the game itself may be similar. The reflexive relationship between practices and settings is a key idea to begin with, as the ethnomethodological and conversation analytic programs have concerned themselves with studying social action in part as practices that "make a setting" (Sacks, 1992, p. 515). As Hung notes, this also means understanding video game play in terms of "interactions that are situated in particular contexts and that involve particular players, who have to deal with practical issues, including the action in the game, the controller, bodily configurations, and fellow players" (Hung, 2011, p. 58). There are two issues here: first, the reflexive relationship between video games and their settings and, second, the multiple activities that accompany the game. All too frequently, players are not just playing the game, but engaging in other things like talking about the game, spectating while someone else plays, eating, stretching, or taking phone calls. Game play is interwoven with other activities; that is, it is often inherently "multiactivity" (Haddington, Keisanen, Mondada, & Nevile, 2014). These other activities might be tied to the sequentiality of the game—that is, the organization of in-game activities or they can be interruptive. Finding appropriate moments to interweave activities is a concern for players, although it may be less so for others with minor or no involvement in game play.

The analysis we use here to foreground these issues is drawn from a study of video gaming in Internet cafés by Sjöblom (2008, 2011). This work examines MMO game play and co-located instances of player interactions (although, of course, the major focus of MMOGs is found in physically distributed coordination between players). Using video-recorded footage of cafés, Sjöblom explores a range of phenomena, particularly focusing on play as a situated and embodied activity where resources on-screen are drawn into sequences of collaboration between the physically collocated players (such as helping one another).

The fragment we use here depicts players in a multiplayer environment with a gaming "ecology" consisting of eight spatially distant computer screens, desks, chairs, input devices (in this case keyboards and mice), and various types of games running simultaneously. Here, we will concern ourselves with the recognizability of action in the room produced in the reflexive relationship of the room and the gaming: the audio-visual media on-screen, the spatial arrangements of seated players, and the bodily and verbal conduct of these players.

In the data fragment, Sjöblom (2011) documents eight players collectively taking part in real-time strategy game (*Warcraft III—Defense of the Ancients*). The game is being played across the local network in the Internet café, meaning that players' avatars occupy a shared virtual world for the duration of their play session but are all looking at their own individual screens. Thus, what happens on-screen is also shared across the room, albeit from different perspectives for each player. The players also are distributed across the space (see Fig. 2 for a schematic), with one player, G, seated a few meters away from the others (who, seated side-by-side, mostly have their backs to him).

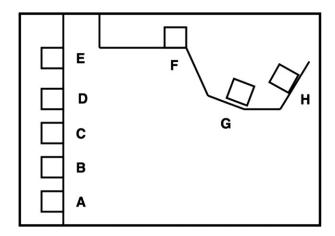


Fig. 2. A schematic of player and desktop computer arrangements in the space. Reproduced from Sjöblom (2011).

In the fragment as illustrated in Fragment 1⁴ (truncated in this study), player G is seated in a leaning position while he plays the game (Fragment 1, top right). At the start of the fragment, G is controlling his in-game character (his "hero") and is about to engage some enemies. After doing so (lines 1-2), his in-game character is set in an "auto-attack" mode, which means it will continue to do attacks on enemies unattended. At this point, G turns his head toward the general direction of player D (see Fragment 1, top right), then produces an analysis of the play being engaged in; this is an analysis that in part draws upon what has been available to him of the other players' activities from point of view of his own in-game perspective. G formulates his critique of these activities as a question ("but what'll happen later when you get ganged"—i.e., ganged up on and probably overwhelmed by enemies). G's play is necessarily bound up in the outcomes of other players' activities, even though in some senses the players operate "individually." In this case the fact of D's response to the question suggests some kind of implication between G and D in some joint in-game project that the data do not necessarily make available. Nevertheless, although G does not explicitly address D by name, he uses a second-person singular formation ("du," line 5) and indeed G's utterance is heard as implicating one of the players, D, who responds with a further question of G ("yea, but why would I do that cause I use the ulti⁵?"). In Sjöblom's original presentation of the fragment, the exchange here continues until D ultimately rejects the criticisms of game play by G.

Fragment 1: A player of a shared game offers a critique of others' play. Reproduced from Sjöblom (2011)

Players: G, in view, and D, as well as six other players, (A,B, C,E, F, H) Game: Warcraft III - Dota 1 ((engages enemies with his hero)) 2 3 G. ((turns head towards the other players)) Image 1, excerpt 1: Player G leaning towards But what'll happen later the other players Me va händer sen när 5 when you get ganged= >yeah du blir gangad= >a: now< for example? nu< till exempel? 7 Yea but why would I do that cause A men va skulle ja de för 8 cause I used the ulti? för att ja lagt ulti? [egentligen]

There are several key observations that, following Sjöblom's analysis, we may point to underscore the ways in which video game play is both a situated activity and one that is sequentially interwoven with many other goings-on—matters that include the utterances

of players, their bodily actions, their actions on-screens "in the game," and their spatial arrangement in the Internet café (Fig. 2).

The first thing we may point to is how the player G manages different ongoing activities. His leaning position, Sjöblom notes (seen in Fragment 1, top right), is a method for managing his engagement in what is happening "in the game" with respect to other activities. Of course, what might be happening in-game is made available onscreen in front of him, and his leaning comportment lets him engage both in this action on-screen while, simultaneously, retaining his participation in the ongoing activities of his co-players who are seated mostly behind him. The leaning position he is maintaining is itself thus accountable to the physical configuration of the group of players in the room. That is to say, G's bodily position displays his orientation to the bulk of players seated behind and to the left of him (as if, we might say, there were a "center of gravity" to the game setting and he presents something of an "attitude" toward it physically). Moving his gaze toward these others, G displays a shift in his participation, from his own in-game activities on-screen "here" to theirs "over there," as well as rendering the temporal opportunity he has located "in the game" as a (literally) visible object for co-players.

Critically, these activities go on as reflexively produced activities in that they are both about playing the game and getting that game done as a socially organized matter—that is, G's game play is on goingly related to the other players and their comportment and arrangements of desks, computers, screens, and so on. G's activities take advantage of the assemblies of persons, furniture, and equipment being particular distances apart, and set in particular alignments. Features "outside" the game are important and meaningful here for understanding the situation in which G's bodily, and in-game actions take place; to quote Sjöblom, the player's "placement in a gaming environment is not arbitrary" (Sjöblom, 2011, p. 112).

As we noted previously, the players here are not just playing the game but also talking about the game. Their talk is organized with respect to the proceedings of the game. For example, after turning his head toward the other players, G then produces a criticism of the strategy being pursued in-game (Fragment 1, lines 4-6). First, by placing his utterances sequentially after the rearrangement of his gaze, G implicates what is happening on the other players' screens across the room—as Sjöblom argues, it also shows how G is able to spot "on-screen 'trouble'." G "interrupts" himself, that is, he latches "yeah right now" directly after "you get ganged," and also utters this "yeah right now" with a quickening pace of speech (indicated with angle brackets ">" and "<"). This interruptive and rapidly spoken form of his utterance shows that he is able to attend to certain kinds of actions co-players are engaging in in-game from across the room. In particular, we can also see that G's utterances build in a "relation to specific on-screen events," such as how G "reformulates the advice from a general query about recurrent game states (lines 4-5) to a specific one related to what is happening currently ('yeah now for example', line 6)" (Sjöblom, 2011, p. 113). In this sense, then, the interwoven character of the physical circumstances of play, the availability of onscreen action, the arrangements of the artifacts of gaming like desk placement in this

scenario, and the utterances of players—it is within this situational whole that players seek to be "observable and reportable (i.e., accountable) as being a player in the gaming session as a whole, not just as a participant in the on-screen interactions" (Sjöblom, 2011, p. 112).

The kinds of concerns displayed in the strategizing of Sjöblom's gamers can be seen in other EMCA studies of video game play. For instance, Hung's ethnographic studies of players (2007, 2009, 2011) focus in part on pedagogical situations of play, such as examining how more competent and experienced players help a less experienced one. Thus, in Hung (2011), we see more competent players producing analyses of co-player's actions as they seek to provide help. Their analytic work involves producing articulations of various normally taken-for-granted, unspoken features of their actions in the game, and to make those actions accountable for less competent players.

Another relevant point of reference that speaks to multiactivity while playing and the management of different kinds of participation is work by Keating and Sunakawa (2010), who also investigate LAN gaming settings. In following the interaction between members of gaming groups, Keating and Sunakawa document the various methods deployed by players to manage their activities in "real space" and "virtual space." This includes articulation work (Schmidt & Bannon, 1992) conducted by players in the course of play: that is, players' analyses of the game as it unfolds, which they use to coordinate group actions between them, and to render coordinative features of that action mutually visible. Besides talk, Keating and Sunakawa also document how bodily posture, gesture, and the surrounding furniture such as chairs, are all employed to juggle and show different forms of participation, such as marking when game sessions end.

In closing this section, we now have some sense of the ways in which many different kinds of action can be "at play" in a video-gaming situation. However, in this fragment we have *not* examined what is happening on-screen in any detail, although we have hinted at its use as an analytic resource for critiques of play occasioned by opportunities made available by the game. What the following sections now do is to begin introducing action on-screen and its role in the organization of play. In doing so, we will also draw upon the different kinds of action that might constitute such a setting in increasing detail. In doing so, we continue to explore these, and actions on-screen, as the *practical* achievements of players, and analytically as exhibits for us of the socially organized practices of video game play.

2.2. Talk at the screen

In this section we start to narrow our focus to consider in more depth some of the notions already highlighted in the previous section, but drilling into the coordination of action in more detail. While we focus predominantly on what is happening "outside" the game, we explore a situation where both parties are engaged *in* the game. In doing this, we also reduce the scale of the setting, moving from a larger space

with many players, computers, and multiplayer activities—the Internet café—to a home with just two players at a single games console and sharing a single screen (in other words, the players have a "conjoint orientation" toward a "proper object of attention" (Watson, 2005, p. 214). Furthermore, we consider a different *genre* of game: Rather than an MMOG (which has been the main focus of many studies), we look at a football game played on a game console. The kind of game played has implications for the kinds of interactions "around" it: Football games require continuous and fast action during pre-specified temporal periods of play, whereas MMOGs involve a more flexible tempo of activities.

To make this transition, we examine a fragment of data from Mondada (2012) where players sit side-by-side while they play a football game. In many ways the fragment we deal with is similar to that of Sjöblom in the prior section; for instance, the players here also share access to a great many resources featuring in the arrangements of play-things such as couches, tables, games consoles, handheld controllers, TV screens, and so on. However, in this section we wish to get more purchase on the ways in which players very precisely and rapidly coordinate and intertwine the action in-game with their bodily and verbal conduct in front of the screen (and vice versa) as a matter of tight sequential organization. In particular, Mondada draws attention to players' verbal and bodily assessments of in-game actions. We also see an alternative use of video here to Sjöblom. While video from the prior fragment had an ethnographic quality and an ethnomethodological orientation to unpacking action, the fragment from Mondada in this section offers a more strong sequential (i.e., conversation analytic) approach that employs video recordings to establish emerging and reflexive relationship between features of playing the game (e.g., actions happening on screen, verbal, and bodily conduct).

In her studies of gaming, Mondada (2011, 2012, 2013) has examined video recordings of players sitting side-by-side as they play together using a games console. In the fragment (Fragment 2) drawn from Mondada (2012) we see a transcription⁷ of the interplay between different forms of action by players—their utterances, gestures, gaze, and the conduct of play as it unfolds moment-by-moment on-screen. In the fragment we are concerned with, two players—Luc and Raph—are taking part in a football video game (Fifa '08) together as they jointly compete with other players online. Luc and Raph are on the same team in the football match the fragment is drawn from, while they compete with other, online players. As we join the fragment, Luc is moving the avatar he is controlling on-screen continuously toward the goal (he has possession of the ball). As he makes this move with the avatar (illustrated in the top right of the transcript), his co-player Raph utters "you score it" (line 1) after which Luc does indeed score the goal for their team. Almost simultaneously Luc and Raph then both produce bodily and verbal "responses" to this goal: They produce overlapped utterances of "huh" and "good," start turning their torsos toward one another, and finally engage in a mutual gaze and handshake.

Fragment 2: Luc and Raph playing Fifa '08 together. Reproduced from Mondada (2012)



1 RAP tu le mets hein,

you score it PART,

2 (1.+5)+

luc ->+luc scores the goal for Real Madrid+

3 LUC *[Hu+h ↑

4 RAP *[bi+en[::]

[good[::↓

*....turns to LUC-->

luc +....turns to RAP-->

5 LUC [voi]#:1*+à: #

[here] it is:

-->*+mutual gaze and handshaking-->

fig #fig.5 #fig.6





We can immediately see that there is a closely managed sequential relevance to the production of in-game actions, talk-as-action, and bodily actions: Each is neatly meshed with the ongoing play in ways that mutually elaborate (i.e., take their sense from) one another in their placement within the sequential order. This is much the same as the prior fragment, except the temporal "closeness" or "tightness" of the sequential links between elements is high.

Unpacking this, we can see that Raph's first utterance "you score it" (Fragment 2, line 1) is produced while both parties are looking at the screen, instructing Luc what to do next. After the goal, which results in a pause in play, we see a "rearrangement" in Raph and Luc's utterances (lines 3 and 4) and a shift toward compliments being given (Raph: "good," line 4). As Mondada points out, different forms of talk are persistently employed by players in a way that is sensitive to, organized with, and "geared into" what is happening "in the game" and the sequential implications of these moments for the production of particular kinds of utterances (like praise in this case). In other words, the sequential position of player talk in the fragment is tied to the kind of action that it is/does. In particular, we can find one form of utterances (e.g., directives) while engaged *in* the game, and forms of utterances (such as compliments) during "breaks" in the game: "during the game, directives, instructions, and requests are common [...]; when the game is suspended, assessments of past action, along with compliments or blames and complaints are the most frequent [verbal] actions" (Mondada, 2012, p. 244).

Mondada describes how the in-game action—the maneuverings of Luc's in-game football team character and the goal he scores—"immediately generates a change in posture of the participants" (Mondada, 2012, p. 244). In the prior section, we saw how the arrangement of a single player in their chair and the shifting alignment of head direction and gaze was built into utterances and on-screen activities toward a group of players elsewhere. Here, we now see the sequential organization of bodily actions of *two* players around a shared screen. In particular, we can observe how players coordinate their bodies such that they are "geared in" very precisely to the temporal flow of actions on-screen and talk. Players' conduct displays mutual coordination between the players while they produce bodily action: for instance, turning toward one another in lines 3 and 4 (with initiations of a mutual "body torque" in Fragment 2 indicated with "+" and "*") and engaging in gaze alignments that switch away from the screen and toward the other player (line 5).

Simple but exquisitely timed sequences actions constitute *individual players' own analyses*; analysis that is not a purely cognitive phenomenon (hidden inside a player's head), but that is visible through the unfolding actions on the screen (e.g., whether to run left or right; stop or continue running). Consequently, through their on-screen actions, players can build up a shared understanding of the ongoing game activity. Put another way, the players display in, and through, their torqueing of torsos and changes in forms of talk that they are both oriented toward this point in the sequence as an opportunity for further actions to take place *away* from the focus of the screen. Mondada comments on this, arguing that "suspensions of the game occasion social

actions that are still related to the game, but in a retrospective way: whereas exchanges during the game are coordinated timely within the temporality of the football moves by the participants sitting side-by-side and concentrating on the TV monitor, comments about the game are voiced when the game is paused and within an interaction based on their reorientation face-to-face" (Mondada, 2012, p. 245). We see similar bodily moves employed in other gaming situations, such as LAN game settings, where bodily posture may be employed as a resource in structuring game play (Keating & Sunakawa, 2010).

In summary, then, the players' body torque and general physical positioning—with respect to one another, the game controllers, and the screen—are organized closely with the proceedings of the game and their talk. We have seen here how the activities of players on-screen—the orderly nature of which we have analyzed in prior sections—are necessarily embedded in the concerted production of talk and bodily conduct at the site of play. Physical conduct such as gesture and bodily comportment is continuously unfolding and subject to continuous mutual monitoring—that is, to say that it is produced so as to be readily analyzable to others—or as we might also say, as accountable actions.

The approach here is consonant with other more conversation analytic research on video game play. For instance, Piirainen-Marsh (2012) and Piirainen-Marsh and Tainio (2009a,b, 2014) examine in-game text as a resource for talk. Piiranien-Marsh and Tainio look at the ways in which in-game, on-screen text content and "utterances" (such as audible narration) can operate as conversational resources for players' interactions around the game. Employing video recordings of adventure games played within a domestic setting, their analysis unpacks the sequentiality of talk and ways in which the in-game text or voice content becomes a matter for sequential organization. This organization is practically achieved via different types of verbal repetition by players as they draw on this in-game "source material," and this is made accountable to the ongoing talk environment (Piirainen-Marsh & Tainio, 2009a), and how epistemic positions (e.g., how much a player knows about the game) play a role in such talk between players at the screen (Piirainen-Marsh & Tainio, 2014).

2.3. Analyzing the game on-screen

We now shift the analytic focus toward the "inside" of the game. Of course, we have already considered this to some extent, but so far this has been framed in terms of how "outside" actions are related to what is happening in-game. Here, we begin to look at the *technical details* of playing the game, finding ways to answer what it means to "engage in a fight" or "pass the ball and score a goal."

In performing this shift of focus we want to answer the question of how one might "open up" the *competences* for playing the game for analytic scrutiny. We will present two different ways of doing so. First, we use the presence of a "spectator" on the game in this section as a methodological opportunity, as an

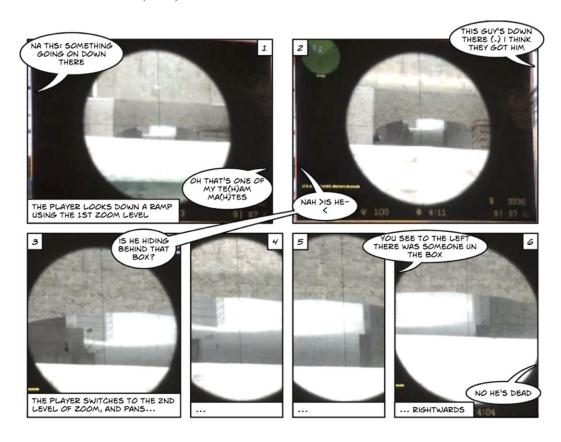
ethnomethodological "perspicuous setting" (Garfinkel, 2002; Mondada, 2013). Through talking to the spectator (and reacting to the spectator's questions and assessments), the player makes explicit many aspects of the game that would otherwise remain implicit. In other words, the player in talking to the spectator formulates (for the spectator, but thereby also for the researchers) many aspects of the game that usually remain implicit, tacit, or unspoken. Secondly, we look at how the interactive and collaborative nature of many games can *itself* be used as a way to get "inside" the game. This approach follows work in conversation analysis, which has exploited the interactive nature of talk-in-interaction, in particular, the fact that a current speaker in taking a turn-at-talk displays their understanding of a prior turn (e.g., in producing an "answer," a current speaker displays an understanding of a prior turn as a "question"). Similarly, in collaborative games when a first player reacts to what a second player has just done, the first player displays an understanding of the second player's action.

In this section we take a fragment from Laurier and Reeves (2014) where a player and a spectator jointly scrutinize and produce analyses of on-screen action of the collaborative online first-person perspective shooter *Counter-Strike: Source*. Briefly, *Counter-Strike* involves two opposing teams facing one another at on a single game "map" which is experienced as a complex 3D virtual environment. During play (rounds of a game can last seconds thorough to several minutes), the teams attempt to either eliminate each other entirely or defuse a bomb placed by the opposing team (and vice versa: the opposing team is trying to protect the bomb from being defused, i.e., to eventually explode).

In this fragment we examine a player and a spectator are seated at a computer screen while the player competes on one of these game maps against other online players (Fragment 3¹⁰). The player has a sniper rifle and is using a scoped view to look down a ramp toward a tunnel to locate enemy players at the end of it (the scoped view is circular as seen in Fragment 3, and in this case enables the player to inspect what is presented on-screen in greater detail). Briefly put, the fragment consists of a verbal exchange between the spectator and the player regarding what is happening in the tunnel. Specifically they are working out what one of the player's teammates is doing down the tunnel and what is happening as he encounters any possible enemy players there (the end of the tunnel is a well-known "flashpoint" for clashes between the two teams at play):

- the fragment starts with the player and the spectator noticing some movement ("something going on down there"), displayed in Fragment 3, Panel 1;
- to get a better look of the tunnel, the player moves forward (resulting in a different view, displayed in Panel 2);
- the player then zooms in further for a closer look at what is happening toward the left side (Panel 3);
- finally, the player pans his view rightward to scan the tunnel (Panels 4–6).

Fragment 3: Player zooming their scope into a tunnel. Fragment reproduced from Laurier and Reeves (2014)



At the start of the fragment (Fragment 3, Panel 1), the player has just zoomed in and "framed" his view to expose a small part of the tunnel in the center of the crosshairs. The player's zooming and movement at this point is conducted in a way to minimize his visibility to other players while still retaining a view of the end of the tunnel (and the movements of opposing players) (Reeves et al., 2009). At the same time, this zooming effectively "frames the shot" (Laurier & Reeves, 2014) for the player and, at the same time, "frames" the verbal exchange with the spectator which we see in Fragment 3's transcription. In other words, zooming and panning is analytic "screen work"—essential to the play of *Counter-Strike*, and which constitute in themselves an ongoing analysis of the unfolding game that provides resources to answer key questions like: Where are my enemies? Can I see movement? Is that movement from an enemy or a friend?

As the player does zooming-in to the tunnel, the spectator also produces an *analysis* of what he can see happening on-screen, namely, that there is "something going on down there." Simultaneously, the spectator is analyzing the player's in-game action—his

zooming-in (basically providing an account of "why is he zooming in?"). The spectator is of course at the same time also providing his analysis of the player's analysis: As the zooming and panning of the player results is visible change on-screen, the spectator can, in a certain sense, try to follow *that* analysis of the player. We can see his following in how the player responds to the spectator's comment with a laughter inflected "oh that's one of my te(h)am ma(h)tes," in other words, he formulates the "something" for the spectator: The spectator only saw *that* there was something in the tunnel, while the player actually claims to know *what* that something was.

The camera actions and the formulation show the player's *visual competence* (cf. Greiffenhagen, 2013) as a player of *Counter-Strike* in assessing, analyzing, and scrutinizing action in the game. As a consequence of then not only which parties are the spectator and the player but also what is happening at that moment in the game, there are certain kinds of differential rights-to-talk and rights-to-report on what is "seen" on-screen at play. There may then be a strategic vagueness to the spectator's utterance here regarding "something going on" (given that he might know but not have the entitlement to formulate it more explicitly), and then later his formulation of an assessment of the action on-screen in the form of a question (Panel 3), "is he hiding behind that box?" In this sense for the spectator the accountability (e.g., recognizability) of in-game action—what we might say is "there to see"—on-screen is *different* from what is "there to see" for the player.

The first part of the fragment has already given us an indication of how the player's visual competence (zooming) constitutes an in-game analysis, something that in this setup is mirrored by the spectator. What happens next in the fragment within Panels 2–6 is largely a continuation of this: a collaboratively produced scrutiny of action on-screen. For instance, we can turn to Panel 3 where the player switches to a higher level of zoom. This is performed sequentially after his utterance "I think they got him"; in this way the zoom as an in-game action is placed in a particular sequential relationship with the player's utterance. The point here is that the zoom is not *just* part of the player's engagement with the game but at the same time is a "clarificatory" zoom. It is clarificatory in the sense that it provides resources for the spectator to then raise a question at an opportune moment —"is he hiding behind that box?"—as the player's crosshairs (fortuitously) happen to rest upon the box after the zoom is switched up; not only this but it also implicates the "movements and detritus" of a co-player who has just died (Laurier & Reeves, 2014).

In Panels 4–6, the spectator's question initially goes unanswered and there is a pause as the player pans rightward. The player performs this panning motion "alongside" their verbal pause. This pause seems to be heard as "trouble" by the spectator who renders this absence of an answer as noticeable by reformulating the question, saying "you see to the left there was someone on the box." The player then finally answers with a perfunctory "no, he's dead." The point of note is, once again, to highlight the interdependence of actions "in the game" that are available on-screen and player talk as an ongoing conversation that analyses play "at the screen." We might characterize the whole fragment as a moment of disalignment *about analysis of play* between the spectator and the player about what is happening "down there," and the resolution of that via various means, of which actions witnessed on-screen are used as resources (such as zooming, panning, or

the appearance of avatar movements—and deaths—on-screen). These resources then offer opportunities for various conversational moves by the player and the spectator in the reaching of a resolution to seeing the same thing happening in the game. ¹²

As we turn to our final fragment, we want to note that we have tended to still rely upon more familiar interactional resources—like player talk—even as we take steps toward the "inside" of the game. The next section now focuses entirely upon what is available on-screen, that is, as a matter of what is available analytically to us from ingame screen recordings only. Of course, these actions "in the game" are also actions that happen "at the screen," that is, embedded within courses of action that often may include verbal, conversational forms of interaction, although in a way we are narrowing in even more on the perspective of the *solitary* player. We also take a further twist on our notion of players analyzing play. Rather than looking at a spectator analyzing what a player is doing (where the spectator's analysis is *not* game-relevant), next we see how players' analyses of one another also take place *as a matter of* in-game actions. Interestingly, this does not cause (in principle) any philosophical trouble to our EMCA perspective; instead, ethnomethodology would argue that actions on-screen *must* necessarily be organized in *some* way.

2.4. Player actions "in the game"

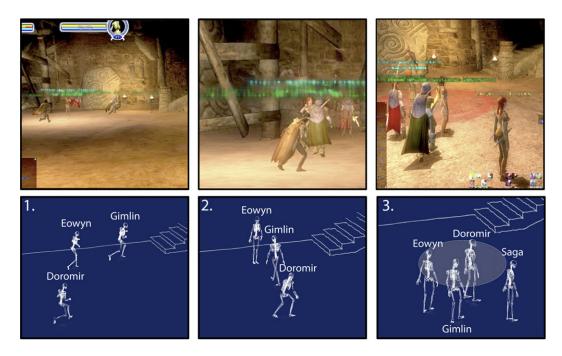
Here, we turn to look at how it is that the actions of avatars¹³ as controlled by players are socially organized so that they are meaningful to other physically remote players in the game. In particular, we wish to examine these in-game actions as in-and-of-themselves *accountable* and *sequentially organized* in much the same way as we have examined talk, bodily comportment, and so on. In a sense, we return to the first fragment from Sjöblom (2011) in which we observed a sequentiality in the relation *between* activities, except here it is very much *within* the activity on-screen itself. We will also continue to consider the significance of the *competence* of players in analyzing in-game activities.

In our final fragment, we can draw upon Bennerstedt and Ivarsson's (2010) study of collaborative action, or "team gameplay" as they put it, between players of an massively multiplayer online video game (*Lord of the Rings Online*). Like other studies by Bennerstedt (with Ivarsson and Linderoth [2008a,b, 2010, 2012, 2013]), this work predominantly examines the coordinative activities of players as they are made available on-screen. This being an MMO game, the players are not physically located together (and in this fragment do not talk with one another) but nevertheless group together virtually to achieve various shared missions or "quests" so as to progress within the game. The fragment we are concerned with lasts a mere 3-s in game duration and is drawn from video recordings capturing the screen from the perspective of one of the players. In this short fragment, Bennerstedt and Ivarsson describe how four players, distributed across the Internet, collaboratively achieve the setting of a trap prior to an encounter with enemies who are located behind a door, which lies ahead of the players (see Fragment 4 for screenshots of this).

In this fragment, the 3-s unfold thus:

- We join the action as four player's in-game avatars (Doromir, Eowyn, Gimlin, and Saga) are running toward a large door in the virtual environment, behind which are enemy characters (Fragment 4, Panel 1).
- At this point Eowyn and Gimlin are situated close to a staircase. The avatar Doromir then starts to kneel (Fragment 4, Panel 2), an action associated with laying a trap and resulting in a red circle appearing on the floor (Fragment 4, Panel 3).
- As Doromir starts to kneel, the other avatars (Eowyn and Gimlin; Sage is restoring energy and therefore stationary) rearrange themselves to a position to the side of Doromir before the trap marker (the red circle) appears on the ground. This rearrangement is visible in Fragment 4, Panels 2 and 3.

Fragment 4: Screenshots and simplified schematics of 3 s of play during Lord of the Rings Online. Reproduced from Bennerstedt and Ivarsson (2010)



Our first point to draw from this is about the *accountability* of in-game action. Players, in a collaborative game, do not simply "do" things, but they do them in such a way that makes recognizable to others what they are doing. They can formulate what they are doing explicitly in written text or through a verbal chat channel ("I am going to do X"), although this is not always necessary or possible. Competent players find the intelligibility of action in relation to the current and possible next moves, strategies, and tactics of the game (Livingston, 2006). Bennerstedt and Ivarsson observe that the actions of avatars as they appear on-screen gain this accountability as particular sorts of actions for co-

players via a "constrained set of possibilities afforded by the game" (Bennerstedt & Ivarsson, 2010, p. 220). Being a competent player in the game involves recognizing what other team members are up to without needing for formulate it in so many words. In this case the players respond to Doromir kneeling in relation to the closed door they have encountered as projecting some next action, and that next action is then made visible to all by the appearance of a red circle as laying a trap (which is made sense of through the strategies for laying traps in the game). To put it in other words, it is not *just* kneeling that Doromir is "doing" as it might appear to a disinterested observer—the point being that the avatar's kneeling action gains recognizability by its production in a particular situation. To underline this, we can consider kneeling in the everyday sense: the contention here is that "kneeling" is never a decontextual action—an action without a situation (consider, e.g., inspecting a clue on the ground, delivering a marriage proposal, engaging in a religious rite, talking eye-to-eye with a small child, etc.).

Our second point is about the sequentiality and the situatedness of in-game action, as resources for players to recognizing current and projecting next actions. The ability to recognize what someone is doing is not "isolated" (this points holds both for players and researchers)—to recognize that someone is laying a trap relies on both sequential concerns (e.g., "what was just done and what does that action make relevant as a next action?") and situated ones ("what is the game play in which this move could be located?"). Underscoring this point, Bennerstedt and Ivarsson describe how the kneeling by the avatar Doromir takes place in a way that is "sequentially and environmentally positioned so as to relevantly do the job of setting a trap" (ibid., p. 220). First, the avatar's kneeling is environmental in the sense that actions take place in "a topology shot through with meaning, projected as well as discovered" (ibid., p. 224)—for which, kneeling in this particular location, with respect to the proximate door, imbues that kneeling with an accountable orientation toward laying a trap (i.e., a matter that should be recognizable to the other players). Furthermore, the avatar's actions are sequential in the sense that they are produced, accomplished, and crafted by players with a particular sensitivity to what is happening now and what could happen next. The player's analysis of other player's avatars movements is both retrospective and prospective. Movements also show degrees of coordination of action and ideally understanding. Concretely, in this example, we see Doromir kneeling just now, then Eowyn and Gimlin moving position, only after which does the trap marker appear. The sequential proximity of Doromir's kneeling to these subsequent movement actions by Eowyn and Gimlin—that is, their movements within half a second of Doromir's kneeling-renders Eowyn and Gimlin's movements as a visibly meaningful set of actions that could be characterized as at a minimum responding to Doromir and more likely "getting into position." Doromir's kneeling at justthis-place and just-this-time indexes a set of co-ordinate, shared projects within the game that co-players display orientations to in their own subsequent actions. As Bennerstedt and Ivarsson point out, first, the laying of the trap shows that a "fight is about to take place [...] in this very location" (ibid., p. 220); second, it displays Doromir's preferences for the technique by which this fight will proceed (as Bennerstedt and Ivarsson describe,

a "luring" strategy); and third, in and through these actions it also shows a level of competence to co-players (that they recognize the action and respond accordingly).

Our third point to raise revolves around player competence. Unless one observes a game of novices—who will often either not be able to show what they are doing to other players, or who will have to formulate these things explicitly—much of the on-screen action relies on an intimacy with the moves in the game. Recognizing a move for what it is becomes a challenge for the analyst, who either has to become competent herself and/ or use a kind of methodological "trick," for example, the position of a novice (Sudnow's strategy) or the presence of a spectator (as we saw in the previous section). On this last point, if we wish to understand the organization of actions and how they proceed in video game play, we cannot seek to disentangle this player competence from the production of in-game action. As Bennerstedt and Ivarsson point out, "a competent player of LOTRO can see even the early stages of this kneeling as the object it will eventually result in" (ibid., p. 220) (emphasis added). The prospective sequential implications and consequences of actions conducted by players are the player's "phenomenal field," that is, "a world as that world is perceived from within lived experience" (Livingston, 2008, p. 65). This is what we might call the "professional vision" (Goodwin, 1994) of the competent player. To say this another way, for a competent player the actions witnessable on-screen present themselves as situations imbued with various (possible) prospective courses which inhere those self-same in-game actions with a meaningful, implicative texture (Livingston, 2006). Being able to "see" actions-in-the-game is what it means to be a competent player, while "seeing" this with others is what enables coordination to happen between (suitably competent) players. 14 For this fragment, avatar D's apparently "simple" act of kneeling is produced in a way that offers analytic possibilities for (competent) coplayers (i.e., it is reflexive). Thus, it is the players' witnessable orientations to, and recognizably purposeful production of a developing order before, during, and after the kneeling which is the stuff of coordination between players.

In summary, we have first seen how accountability and sequentiality are resources for making sense of the game from moment-to-moment, and secondly, we looked at how competence becomes a methodological requirement for recognizing what is happening and what will happen next at any point in the game. In other words, the activities of players "in the game," on-screen, are conducted in an organized and methodic fashion by players, who deploy a particular set of game-relevant actions that are finely crafted to the pervading order of play for the given game at hand (Hung, 2011, p. 164). The organization of in-game action becomes more apparent when we take seriously what to other social science approaches might seem merely to be fleeting fragments.

To conclude this section, we can note that the characteristics of in-game, on-screen actions detailed in this fragment—that is, the accountability of in-game action actions, as actions that are also sequentially organized and environmentally positioned by players in a purposeful, concerted way—are matters that will *not* be a surprise for researchers drawing upon an EMCA perspective. We find that actions on-screen are produced and organized concertedly just as actions in everyday social settings are. EMCA-oriented work inquires into members' methods: how different forms of action are methodically,

routinely produced by members of social settings in ways that are minutely sensitive to the analyzability of those actions within unfolding sequential orders. In the next section, we now broaden this point to throw into relief what we argue are the key ethnomethod-ological and conversation analytic concepts raised in our discussion of the data fragments.

3. Concepts in ethnomethodology and conversation analysis

Through diving directly into four fragments of data as we have done above, this study has provided implicit instruction on the broad character of EMCA-oriented research. In this section we want to give a more classic summary of ethnomethodology (EM) and conversation analysis (CA) through the cases of video game play to orient the reader to the primary commitments of these perspectives (Garfinkel, 1967; Sacks, 1992) and therefore contextualize some unspoken assumptions with which the data fragments addressed above have been unpacked. First, we describe ethnomethodology, then its expression in studies of work, and finally turn to distinguish the program of conversation analysis as a distinctive development.

3.1. Ethnomethodology

The term "ethnomethodology" was invented by Garfinkel (1974) and can be thought of as deriving from three components: "ethno" meaning members of a social or cultural group, "method" indicating an interest in the things members routinely do to create and recreate various social actions, and "ology" for the study of (or the logic of) these methods. As Garfinkel (1967, p. vii) puts this, "Ethnomethodological studies analyze everyday activities as members' methods for making those same activities visibly rational and reportable for all practical purposes, that is, 'accountable,' as organizations of commonplace everyday activities." Ethnomethodology, then, is the study of members' methods for producing recognizable social orders. Perhaps the most important assumption that drives ethnomethodological approaches is the *methodic* and *orderly* character of everyday activities that appear chaotic and messy at first glance. For ethnomethodology, that people are able to understand each other (e.g., when talking to each other) and participate in activities with others (e.g., such as playing a video game together) is an ongoing demonstration of the taken-for-granted, methodic, and routine order of the social world. Consequently, ethnomethodology is not interested in "idiosyncratic" methods, but rather "socially shared" methods. For example, in the context of video games, even a person playing on their own is often using socially shared methods. Sudnow was not suggesting that only he was using the various methods he described, but rather that "anyone" playing this game would come to use methods such as the ones documented in Pilgrim in the Microworld.

A significant concept in ethnomethodology which we have made use of in understanding game play is accountability. Simply put, the accountability of social actions

refers to the idea that we—as members of a setting—are doing things in such a way that they are seeable for what they are. For example, if you want to greet someone, you may extend your hand in such a way that the other person can see that you want to greet her or him. Similarly, in Section 2.4, when Doromir was kneeling down, other players were able to see that this may be initiating the laying of a trap and act accordingly (without Doromir having to announce "I will be laying a trap"). As Sacks (1992, vol. 1, p. 237) puts it, "actions [are...] done in such a way as to be recognized, so that the apparatus that can provide for how they're recognizable can also constitute procedures for generating the occurrence as a recognizable action, or set of them." In an earlier study, Brown and Bell (2004) observe how avatars of players physically absent from the game are purposefully left in particular poses that are accountably "indicating their unavailability for interaction." The accountability of actions is thus a seen-but-unnoticed feature of actions. However, accountability becomes more visible when things go wrong. For example, Bennerstedt (2008b) notes that in MMOGs assumptions between players who are otherwise unspoken become topicalized or surfaced when "something goes wrong or when roles in the group are negotiated."

In investigating members' methods and the accountability of action, ethnomethodology treats people as analysts—that is, as *practical* rather than "scientific" analysts. In this study, we have seen players analyzing one another's talk, bodily actions, events onscreen, and so on. Section 2.1's fragment showed a player producing an analysis of play through critiquing current strategies, whereas the football game players of Section 2.2 were analyzing whether the other player was in a position to score a goal (and acting accordingly). The players in Section 2.3 discussed contrasting analyses of what was happening down the end of the tunnel, while the players controlling avatars in Section 2.4 displayed their analysis of what other players were doing through performing appropriate next actions.

Ethnomethodology then means studying the *methods* of players (Garfinkel, 1967, p. 31). But how could this be done? For our purposes, it is helpful to distinguish two slightly different approaches to answering this question: ethnomethodological "studies of work" and the program of conversation analysis (also sometimes referred to as sequential analysis).

3.2. Ethnomethodological studies of work

One of the key expressions of ethnomethodology is found in its concern for studying "work"—not necessarily work per se but rather the "work" of social organization (Button, Crabtree, Rouncefield, & Tolmie, 2015; Garfinkel, 1986; Rouncefield & Tolmie 2011). This kind of study is, in a sense, often similar to traditional ethnographies, although nowadays often accompanied by the use of video recordings. However, we point to two crucial concerns that distinguish ethnomethodological studies of work. The first of these is the ethnomethodological preoccupation with the how rather than why of this work. For video games we have asked what this work consists of; that is, how the

playing of video games is practically accomplished by players. By recourse to fragments of data we have drawn the details of this accomplishment out. We have seen *how* players use a range of available resources in this: the screen, their bodies, their utterances, the physical arrangement of furniture, etc. An ethnomethodological study of games as work seeks to describe players' work in detail rather than finding ways to explain human action through abstract theorizing and fixed social features. Consequently, ethnomethodologists often put the word "doing" in front of the activity they are interested in (Churchill, 1971), from "doing gender" (West & Zimmerman, 1987) to "doing aggression" (Bennerstedt et al., 2012).

A second ethnomethodological concern we have presented through the fragment is with *competence*. This is twofold in that there is a concern for explicating the competence of members—that is, in the doing of their analytic work, such as that involved in game play—but at the same, it is also a methodological requirement on the part of the ethnomethodologist to appreciate this competence from "within," that is, to develop a suitable competence themselves. Just as the anthropologist studying a foreign culture is supposed to familiarize themselves with that culture (by learning to speak the language, engage in their customs, etc.), the ethnomethodologist is supposed to learn how to *do* the particular activity that they are studying. One of the main payoffs of this requirement is that researchers can then make direct sense of the things that they are observing, rather than having to rely on "informers" who tell them what is "really" going on (cf., Lynch and Sharrock, 2003, pp. xxiii–xxiv).

Just "how much" competence is needed is a question that is much discussed in the ethnomethodological literature and tied to the particular research question. Sudnow's reflection on his experiences with *Breakout* and his acquisition of skilful ways of playing the game (and prior to this, piano in *Ways of the Hand*) offers a particularly vivid example of an adherence to this policy of competence. In contrast, the presence of a less experienced player as spectator in Section 2.3 was used as methodological "trick" to get the more competent player to articulate some of the taken-for-granted aspects of playing.

We might ask why ethnomethodological studies insist on the importance of this acquisition of competence. One of the key critiques ethnomethodology makes of wider sociology is that it has tended to focus on the *surroundings* of the phenomena of interest rather than the phenomena *itself*. Garfinkel and Wieder (1992, p. 203) refer to this as the "missing what" of sociological studies of work, which tend to focus on matters such as "the division of labour, on work roles, role relationships, careers, and the like" (Strauss, Fagerhaugh, Suczek, & Wiener, 1985, p. xi), but not actually the fact that the work is, say, cooking, truck driving, or playing a video game (see also Button et al. [2015, Chapter 6]). Sudnow's personal phenomenological account of what it means to play *Breakout* as we find it in *Pilgrim in the Microworld* can therefore be seen as a response to Garfinkel and Wieder's complaint; Sudnow explicates what it means to pursue competence in a game so as to deliver this "missing what" analytically.

3.3. Conversation analysis

Distinct from and yet closely related to workplace studies, conversation analysis is a program which at least initially was closely tied to ethnomethodology. Following pioneering work by Sacks and his contemporaries (e.g., see Sacks, 1992; Sacks et al., 1974), CA investigated the organization of talk-in-interaction. CA's initial interest was not so much in a particular subject matter ("conversation"), but the use of its features to organize action (e.g., the myriad uses of the turn-taking machinery by speakers). CA also became more and more devoted to "naturally occurring data," which was made possible through the availability of tape recorders (Sacks, 1984, p. 26). These tape recordings had the advantage that they could be subjected to close scrutiny and shared with other researchers who could then see whether a proposed analysis made sense or not. In that sense, Sacks aimed to developed a "primitive natural science" (Lynch & Bogen, 1994).

While ethnomethodology and CA share a great many concepts, here we can point to a few tendencies which have been pursued by CA particularly and bear upon our analysis of the fragments. The first of these is CA's emphasis on the *interactional* nature of many activities and their sequential organization, such that CA is sometimes viewed as synonymous with "sequential analysis" (Macbeth, 2007). The basic insight is that a participant producing a particular turn-at-talk is thereby simultaneously displaying an understanding of a *prior* turn-at-talk. That is to say, in uttering something that can be heard as an "answer," one is simultaneously showing that one understood the previous turn as a "question" (i.e., something that would be referred to by ethnomethodology as the "reflexivity" of action) while also "answering the question."

CA has proceeded to explore the sequential organization of talk in a great many ways. Although talk remains a focal point for CA, its concern for sequentiality has also led beyond talk, to embodied non-verbal interaction (as we saw in Section 2.2, for instance). Sequentiality has consequences for interaction as it unfolds both in and around the game. Thus, in Section 2.1 the player's turn toward other co-players (i.e., as an inspection of their screens) was sequentially prior to his formulating of a critique of in-game strategy, enabling that critique to be heard as an analysis of on-screen action. In Section 2.2 we saw co-players changing their bodily orientation and the form of their utterance at a sequentially relevant place (i.e., the moment just after the goal). Section 2.3 let us examine how a spectator formulated ongoing analyses of play that he used describe what (he thought) the player had just done. And Section 2.4 showed the sequential implication of avatar movements done "in response" to one of their avatars kneeling.

The methodic organization of talk by conversationalists and their analyses (and production of) on its sequential organization also leads us to another key issue in CA that weds together conversationalists' analytic procedures and those of professional analysts (such as academics). This is the methodological "proof procedure" that is described by Sacks et al.:

But while understandings of other turns' talk are displayed to co-participants they are available as well to professional analysts, who are thereby afforded a proof criterion

(and a search procedure) for the analysis of what a turn's talk is occupied with. Since it is the parties' understandings of prior turns' talk that is relevant for their construction of next turns, it is *their* understandings that are wanted for analysis. The display of those understandings in the talk of subsequent turns affords both a resource for the analysis of prior turns and a proof procedure for professional analyses of prior turns—resources intrinsic to the data themselves. (Sacks et al., 1974, p. 729)

A critical part of the "proof procedure" is its leveraging of the multiparty nature of conversations, that is, classical CA research by its nature must involve at least two participants—meaning that members' sequential analyses of actions become, as a by-product, available to the professional analyst. This is also at play in EMCA work on video games and the fragments we have examined. Pushing away from the phenomenology of solitary experiences of play found in Sudnow's Pilgrim in the Microworld toward examining collaborative action¹⁵ shifts EMCA investigations of play toward multiparty situations and thus also explicating co-participants' analytic understandings. For instance, Section 2.4's fragment of the kneeling avatar and sequentially relevant co-occurring action reveals members' analysis of the kneeling as potentially that. That one participant in some interaction observably orients to another's action as such-and-such an object (like laying a trap) means that it becomes analytically available to the researcher and establishes an analytic correctness about identifying those particular actions. However, ethnomethodologists have remained cautious about the "next turn proof procedure" as a "proof" rather than a further resource to combat the over-excited imagination of the investigator.

4. Closing remarks

It seems that, after a long gap between Sudnow's work in the 1980s through to more recent interest in video games within human—computer interaction and computer-supported collaborative work communities from mid-2000s onward, video games are becoming a legitimate topic of interest for EMCA. Not only has there have been a variety of developments of video games (up to the more recent mixed reality games), but video games have also increasingly been recognized as important cultural artifacts in their own right. Coupled with the explosion of participation and sales associated with them, this means that video games will remain of interest to many approaches beyond ethnomethodology and conversation analysis.

This study has attempted to piece together the emerging body of EMCA-oriented research on video game play and draw the potential contributions such a thing might make for game research that is committed to the what might be characterized as "the *details* of play." By articulating what these details entail, we hope our tour through EMCA studies of video games offers hints of an alternative perspective on the constitution of (social) action, and one that can help pose *generative but critical* questions for the ways in which cognitive science work might approach the phenomena in future.

A few closing remarks are in order. First, it is worth noting an inevitable selectivity in the presentation made. Through re-presenting four fragments of data drawn from the literature, this study has emphasized video analytic (Heath, Hindmarsh, & Luff, 2010) explications of video game play which employ video recordings as exhibits of sequential action over other forms. At the same time, the study has deemphasized more broadly "ethnographic" styles of research on video game play that offer less detailed presentations of data. This commitment to the visual, video-recorded data does not necessarily mean that findings are somehow substantively different from those emerging from a more traditional observational ethnographic practice (e.g., see Hung, 2011)—ultimately both should, from an EMCA perspective, be ways of explicating the "work" of video game play using whatever materials support that work. There is pause for thought here also regarding this emphasis on video and associated data collection tools which are brought to bear for analysis; as Watson (1999) argues, video can be "used to illustrate spurious arguments and false problems: such data forms are not necessarily superior to others and may indeed deceive through their apparently persuasive power." Hence, an ethnomethodological perspective would argue that there is, in a sense, nothing inherent "in" video data but rather should be approached as "aids to the sluggish imagination" so as to "produce reflections through which the strangeness of an obstinately familiar world can be detected" (Garfinkel, 1967, p. 38) or, as Sacks put it, "we can start with things that are not currently imaginable, by showing that they happened" (Sacks, 1984, p. 25).

The work examined in this study also suggests some unexplored possibilities for future research. For example, we might consider in greater detail how the role of the spatial arrangements of the setting can shape the ways in which games are played. The study has highlighted just two contrasting examples. At one end there are Sjöblom's studies (2008, 2011) of interaction with and around the desktop computer games played in public Internet cafes, where players sit in front of their own desktop computer which may be located some distance away from others. In this work we saw how the organization of desks, chairs, screens, etc. provide for certain kinds of interactions, particular opportunities for glances between screens, etc. to unfold. In comparison, we can see how Mondada's work (2011, 2012, 2013) closely examines video game console play where players sit closely side-by-side on a couch, sharing the same screen. This provides for very different kinds of embodied actions between players, different ways in which players mutually monitor one another's activities, and quite different notions of what it means to "play together." The space of possibilities here is very wide given the diversity of play arrangements that exist in the gaming world. Beyond this we might also point to other sites of play which are currently unexplored from an EMCA perspective, such as live streaming or competitive video gaming ("e-sports"). Equally we could consider sites where alternative forms of game controller are in use, for instance, body-based gaming (e.g., gestural controllers like the Nintendo Wii or whole-body interaction devices like Microsoft's Kinect).

There are also serious analytic challenges ahead. The "tactical zoom" employed in this study has enabled us to shed light on how in-game actions are socially ordered and

accountable just as all social actions are. However, in the course of this, we have also constructed a set of analytically troublesome dichotomies which are often echoed in the EMCA literature on video games, such as on-screen/off-screen, virtual world/everyday world, in-game action/action outside the game, bodily action/verbal action, and so on. We should be cautious about introducing such distinctions, however, as they can be an artifactual analytic approach that reflects a conflation of the analyst's and member's perspectives on the action (Watson, 1999). Put simply, players do not appear to necessarily concern themselves with "modalities" or distinctions at all—rather, they employ whatever interactional resources are available to get the job done, that is, to play the game. Indeed, there may be distinctions made between on- and off-screen, but this is a matter for members of the setting (e.g., when they might draw attention to the "screen-ness of the screen" as a matter of relevant account; Introna and Ilharco, 2006). This means that there really may be no easy separation between, say, on-screen and off-screen except that produced by our own analytic work and data collection capabilities. While several of the studies highlighted in this study do of course entail examinations of interaction between physically collocated players (e.g., Hung, 2011), we find few actually attempting to eliminate these distinctions where they do not pertain to distinctions topicalized by players themselves (such as referring to "your screen" vs. "my screen"; Keating & Sunakawa, 2010).

Thus, future EMCA studies of video gaming might look to move beyond the convenient shearing off of "constituent" forms of action in video game play (on-screen, bodily, verbal, etc.) and start to examine these as an analytic gestalt; that is, seeking new ways to exhibit the practical interweaving of and interdependence between different forms of orderly action. As a product of transcription practices, this mirrors the troubles found in building rich descriptions of bodily conduct that conversation analysis has encountered as it extends toward ever more "multimodal" approaches. Compounding this is the unique challenges of video game play, which involves a richly complex audio-visual resource the play witnessable on-screen—that presents sophisticated graphics and sound, which often involve 3D virtual environments, intricate user interfaces, complex overlaid information, and careful sound design. These "expert interfaces" often resist the analytic focus leading either to them mostly being glossed away, or omitted entirely in favor of analyses of talk or bodily action (or the converse: the action on-screen takes precedence). Detailed analyses of in-game action are still rare, with the work of Bennerstedt and Ivarsson (2010) providing one of the few instances of an attempt to address such in-game activities as fundamentally socially organized phenomena, although very much a "first step" in this regard. The tactical presentation of fragments in this study has also inadvertently highlighted this issue, where the nature of game play as a matter of rich audiovisual experience for players seems to have started off remote but come to be more and more in-focus, although perhaps at the expense of the surrounding milieu. It is the appropriate integration of these different kinds of action (where analytically relevant of course) which forms an ongoing analytic challenge for future studies of video game play in the EMCA tradition.

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Data access statement

This study was a re-analysis of existing data published within cited studies (i.e., Bennerstedt & Ivarsson, 2010; Laurier & Reeves, 2014; Mondada, 2012; Sjöblom, 2011). Bennerstedt and Ivarsson also shared their original data with us. Our own data (drawn from Laurier & Reeves, 2014) cannot be made openly available due to consent restrictions.

Notes

- 1. In this study "video game" is used to refer to a broad category of games including games played on desktop computers, consoles, and mobile devices. However, we restrict our interests within this study to more "traditional" forms of video gaming, that is, console and desktop computer gaming. Analytically we will be concerned with the situations of play in which we will *not* treat video games as a generic class of interchangeable objects.
- 2. Besides these we may also point to a more comprehensive list of studies involving these game genres: beat-'em-ups (Hung, 2007, 2009), sports games (Mondada, 2011, 2013), massively multiplayer online games (Bennerstedt, 2008a,b, 2013; Bennerstedt, Ivarsson, & Linderoth, 2012; Bennerstedt & Linderoth, 2009; Brown & Bell, 2004; Keating & Sunakawa, 2010, 2011; Moore, Ducheneaut, & Nickell, 2006; Moore, Gathman, Ducheneaut, & Nickell, 2007; Sjöblom, 2008, 2011), first-person shooters (Laurier & Reeves, 2014; Sjöblom, 2008, 2011), and adventure games (Piirainen-Marsh, 2012; Piirainen-Marsh & Tainio, 2009a,b, 2014).
- 3. The selection of literature here has primarily been chosen on the basis that it engages with key concepts of EMCA in addressing the phenomena of video game play, that is, taking a stance on social interaction as a matter of accountable, sequential action that is accomplished moment-by-moment and is imbued with a retrospective-prospective, reflexive character—all of these notions we will explore in detail after the presentation of fragments. Besides the literature presented in this section, it is also possible to find related instances (albeit sparse)

of research that examines video game play in ways that are somewhat consonant with the EMCA perspective. For example, the symbolic interactionist studies of Kirshner and Williams (2013, 2014), which explicate the "gameness" of game playing via "gameplay review" where video recordings of play are used to elicit responses from players as analytic accounts of their own play. The reason for the distinction here is thus: An ethnomethodological argument might be that these "gameplay reviews" are still post hoc descriptions of play rather than play phenomena themselves. EMCA research would likely treat a "gameplay review" as a fundamentally different object of investigation rather than seeing it a proxy for video game play phenomena.

- 4. The transcription of talk in this fragment and subsequent transcriptions reproduced in this study largely follow Jeffersonian transcription (Jefferson, 2004). By way of summary, pauses between utterances are shown in brackets (e.g., "(5 s.)" or "(5.0)" for a 5-s pause), colons are used to indicate elongated sounds (e.g., ("a:" might suggest—in English—a slightly extended "ah" sound), gaps between utterances with no pause or overlap between them are shown as a latch ("="), while overlapping utterances are shown with square brackets.
- 5. "ulti" is a limited resource for players, that is, it is something that can be used by players but also "used up."
- 6. We also note that G here employs the projectability of in-game actions and his competence in recognizing these as such. That is, G uses his appreciation that certain actions will likely take a certain future course—that is, as "projectables"—as a way of organizing his conduct in the Internet café space. Specifically here he uses a temporal gap as an opportunity provided by the "auto-attack" feature of his character's actions to provide some interactional "space" or "downtime" to then shift his gaze away from the screen and toward his co-players. As he does this, he takes advantage of his existing bodily arrangement, that is, his leaning position. In some cases, such as those examined by Keating and Sunakawa (2010), furniture such as swivel chairs can be employed by players to augment such forms of leaning, or changes in posture or gaze (such as to project something Keating and Sunakawa describe as "instability" or possible in-game trouble, which then may be brought into verbal accounts of play). In orienting to the projectability of play, player G is analyzing the ongoing, unfolding game; his analysis enables them to see appropriate places to "take a break" and switch activities, perhaps to talk about game strategies as we have seen here.
- 7. Besides introducing other symbols from Jeffersonian transcription (e.g., "↑" and "↓" to indicate rising or falling intonations), Fragment 2's transcription includes further symbols, specifically the use of "+" and "*" to indicate where non-talk actions start and end within a section of talk. For example, "*[bi+en" (line 4) has two actions commencing as this word (i.e., "bien") is uttered by Raph: "*....turns to LUC" and "+....turns to RAP" (note that "bien" is also overlapped using "[" with Luc's "huh" on line 3). Arrows such as "-->" indicate actions extending beyond the current line of transcription. The moment video

- stills are taken is indicated by the use of "#" with reference to the figure number beneath (e.g., see line 5). For full details, see https://franz.unibas.ch/fileadmin/franz/user_upload/redaktion/Mondada_conv_multimodality.pdf.
- 8. Primarily so as to analyze the interactional bases of language learning—in this sense there is some consonance with Hung's (2011) work regarding the study of video games as vehicles to investigate associated phenomena, such as "learning."
- 9. Spectatorship is an important and routine feature of video game play, both in a mundane sense that others may sit and watch, particularly in home settings (Aarsand & Aronsson, 2009), but also in the sense that spectators may be part of a formal arrangement of games as "eSports" (e.g., see Cheung & Huang, 2011).
- 10. In Fragment 3, speech bubbles emanating from the left are the spectator's talk while speech bubbles emanating from the right are from the player; speech bubbles position vertically indicates the order of utterances from top to bottom; we will refer to Panels in Fragment 3 by number as shown in the corners.
- 11. The transcription here indicates that the utterance is inflected with laughter by the player as indicated by "(h)," which Laurier and Reeves argue is accounting for the player having been tracking his crosshairs on (what is now resolved as) a teammate.
- 12. We might briefly note that there is consonance with Aarsand and Aronsson (2009) who also examine co-located players and spectators on play within home settings, detailing how Goffmanian response cries (such as self-talk like "oops," "wow," or "ouch") are used by players and those spectating on players as a method to collaboratively secure and sustain joint attention on the game's proceedings. Of course, these response cries also have relevance as accounts of players' ongoing analyses of what is happening on-screen.
- 13. In this section we will refer mostly to the "actions of avatars" rather than the more correct "actions of players via their avatars." The shorthand is not intended to ascribe any agency to avatars themselves but rather emphasize our stance toward examining what is available on-screen only.
- 14. "semiotic fields elaborate each other so that, for example, pointing becomes meaningful for participants in its temporal and spatial relation to other means of communication" (Sjöblom, 2008).
- 15. The use of the term "collaboration" here is *not* intended as a synonym of non-competition. Rather "collaboration" is used to indicate some kind of practical coordination going on between players, whether this is a kind of coordination that involves clear teamwork like repositioning while a teammate lays a trap (as in Bennerstedt & Ivarsson, 2010) or coordination in purposefully avoiding enemy players' sights (as in the *Counter-Strike* example from Laurier and Reeves, 2014).

References

Aarsand, P. A., & Aronsson, K. (2009). Response cries and other gaming moves—Building intersubjectivity in gaming. *Journal of Pragmatics*, 41(8), 1557–1575.

- Bennerstedt, U. (2008a). Welcome to the digital puppet show: Positioning work and make-believe methods in roleplay MMORPG servers. In S. Mosberg Iversen (Ed.), *Proceedings of the [player] conference* (pp. 53–87). Copenhagen, Denmark: IT University of Copenhagen, Denmark.
- Bennerstedt, U. (2008b). Sheeping, sapping and avatars-in-action: An in-screen perspective on online gameplay. In S. Mosberg Iversen (Ed.), *Proceedings of the [player] conference* (pp. 28–52). Copenhagen, Denmark: IT University of Copenhagen, Denmark.
- Bennerstedt, U. (2013). Knowledge at play: Studies of games as members' matters. PhD thesis, University of Gothenburg, Acta Universitatis Gothoburgensis, Göteborg.
- Bennerstedt, U., & Ivarsson, J. (2010). Knowing the way. Managing epistemic topologies in virtual game worlds. *Computer Supported Cooperative Work*, 19(2), 201–230.
- Bennerstedt, U., Ivarsson, J., & Linderoth, J. (2012). How gamers manage aggression: Situating skills in collaborative computer games. *International Journal of Computer-Supported Collaborative Learning*, 7(1), 43–61.
- Bennerstedt, U., & Linderoth, J. (2009). The spellbound ones: Illuminating everyday collaborative gaming practices in a MMORPG. In O'Malley, Suthers, Reimann, & Dimitracopoulou (Eds.), *Proceedings of Computer Supported Collaborative Learning (CSCL 2009)* (pp. 404–413). Rhodes, Greece: International Society of the Learning Sciences.
- Brown, B., & Bell, M. (2004). CSCW at play: "There" as a collaborative virtual environment. In *Proceedings* of the 2004 ACM conference on Computer Supported Cooperative Work (CSCW '04) (pp. 350–359). New York: ACM.
- Brown, B., & Juhlin, O. (2015). Enjoying machines. Cambridge, MA: MIT Press.
- Button, G., Coulter, J., Lee, J. R., & Sharrock, W. (1995). *Computers, minds, and conduct*. Cambridge, UK: Polity.
- Button, G., Crabtree, A., Rouncefield, M., & Tolmie, P. (2015). *Deconstructing ethnography*. New York: Springer.
- Cheung, G., & Huang, J. (2011). Starcraft from the stands: Understanding the game spectator. In *Proceedings* of the SIGCHI conference on human factors in computing systems (CHI '11) (pp. 763–772). New York: ACM.
- Churchill, L. (1971). Ethnomethodology and measurement. Social Forces, 50(2), 182–191.
- Clark, H. H. (1996). Using language. Cambridge, UK: Cambridge University Press.
- Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. Cognition, 22(1), 1–39.
- Coulter, J. (1989). Mind in action. Atlantic Highlands, NJ: Prometheus Books.
- Garfinkel, H. (1967). Studies in ethnomethodology. Englewood Cliffs, NJ: Prentice-Hall.
- Garfinkel, H. (1974). On the origins of the term "ethnomethodology." In R. Turner (Ed.), *Ethnomethodology: Selected readings* (pp. 15–18). Harmondsworth, UK: Penguin Education.
- Garfinkel, H. (Ed.) (1986). Ethnomethodological studies of work. London: Routledge.
- Garfinkel, H. (2002). Ethnomethodology's program. Lanham, MD: Rowman & Littlefield.
- Garfinkel, H., & Wieder, L. (1992). Two incommensurable, asymmetrically alternate technologies of social analysis. In G. Watson & S. M. Seiler (Eds.), *Text in context: Contributions to ethnomethodology* (pp. 175–206). Newbury Park: Sage.
- Goodwin, C. (1994). Professional vision. American Anthropologist, 96(3), 606-633.
- Greiffenhagen, C. (2013). Visual grammar in practice: Negotiating the arrangement of speech bubbles in storyboards. *Semiotica*, 195(1), 127–167.
- Haddington, P., Keisanen, T., Mondada, L., & Nevile, M. (Eds.) (2014). *Beyond multitasking: Multiactivity in social interaction*. Amsterdam, the Netherlands: Benjamins.
- Heath, C., Hindmarsh, J., & Luff, P. (2010). Video in qualitative research: Analysing social interaction in everyday life. Los Angeles: Sage.
- Heath, C., & Luff, P. (2000). Technology in action. Cambridge, UK; New York: Cambridge University Press.

- Hung, A. C.-Y. (2007). Video games in context: An ethnographic study of situated meaning-making practices of Asian immigrant adolescents in New York City. In *Proceedings of DiGRA 2007*. Tokyo, Japan: Digital Games Research Association (DiGRA).
- Hung, A. C.-Y. (2009). The order of play: seeing, teaching, and learning. Meaning in video games. In *Proceedings of DiGRA 2009 (Breaking new ground: Innovation in games, play, practice and theory)*. London, UK: Digital Games Research Association (DiGRA).
- Hung, A. C.-Y. (2011). *The work of play: Meaning-making in video games*. New York: Peter Lang Publishing Inc.
- Hutchins, E. (1995). Cognition in the wild. Cambridge, MA: MIT Press.
- Introna, L., & Ilharco, F. M. (2006). The meaning of screens: Towards a phenomenological account of screenness. *Human Studies*, 29(1), 57–76.
- Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13–31). Amsterdam, the Netherlands; Philadelphia, PA: John Benjamins.
- Keating, E., & Sunakawa, C. (2010). Participation cues: Coordinating activity and collaboration in complex online gaming worlds. *Language and Society*, 39(3), 331–356.
- Keating, E., & Sunakawa, C. (2011). A full inspiration tray: Multimodality across real and computer-mediated spaces. In J. Streeck, C. Goodwin, & C. LeBaron (Eds.), Embodied interaction: Language and body in the material world (pp. 194–204). Cambridge, UK: Cambridge University Press.
- Kirsh, D. (1995). The Intelligent Use of Space. Artificial Intelligence, 73(1–2), 31–68.
- Kirsh, D., & Maglio, P. (1994). On distinguishing epistemic from pragmatic action. Cognitive Science, 18, 513–549. Elsevier.
- Kirshner, D., & Williams, J. P. (2013). Experts and novices or expertise? Positioning players through gameplay reviews. In *Proceedings of the DiGRA international conference: DeFragging game studies* (Vol. 7, pp). Atlanta, GA: Digital Games Research Association (DiGRA).
- Kirshner, D., & Williams, J. P. (2014). A microsociological perspective on non-verbal communicative strategies in MMORPGs. In Joshua Tanenbaum, Magy Seif El-Nasr, and Michael Nixon (Eds.), *Nonverbal communication in virtual worlds* (pp. 307–322). Pittsburgh, PA: Carnegie Mellon ETC Press.
- Laurier, E., & Reeves, S. (2014). Cameras in video games: Comparing play in Counter-Strike and the Doctor Who Adventures. In M. Broth, E. Laurier & L. Mondada (Eds.), *Studies of video practices: Video at work* (Chapter 6). New York: Routledge.
- Livingston, E. (2006). Ethnomethodological studies of mediated interaction and mundane expertise. The Sociological Review, 54(3), 405–425.
- Livingston, E. (2008). Ethnographies of reason. Burlington, VT: Ashgate.
- Lynch, M. (2002). From naturally occurring data to naturally organized ordinary activities: Comment on Speer. Discourse Studies, 4(4), 531–537.
- Lynch, M., & Bogen, D. (1994). Harvey Sacks's primitive natural science. *Theory, Culture & Society*, 11(4), 65–104.
- Lynch, M., & Sharrock, W. (2003). *Harold Garfinkel*. Sage Masters of Modern Social Thought Series (4 Volume Set). Thousand Oaks, CA: Sage Publications Ltd.
- Macbeth, D. H. (2007). Sequential analysis in an ethnomethodological key: Order without theory. In L. N. Berlin (Ed.), *Theoretical approaches to dialogue analysis* (pp. 199–213). Selected Papers from the IADA Chicago 2004 Conference. Tübingen, Germany: Max Niemeyer.
- Mondada, L. (2011). The situated organisation of directives in French: Imperatives and action coordination in video games. *Nottingham French Studies*, 50(2), 19–50.
- Mondada, L. (2012). Coordinating action and talk-in-interaction in and out of video games. In R. Ayaß & C. Gerhardt (Eds.), *The appropriation of media in everyday life* (pp. 231–270). Amsterdam, the Netherlands: John Benjamins.

- Mondada, L. (2013). Coordinating mobile action in real time: The timely organisation of directives in video games. In: P. Haddington, L. Mondada, M. Nevile (Eds), Interaction and Mobility. Language and the Body in Motion. Berlin: De Gruyter.
- Moore, R. J., Ducheneaut, N., & Nickell, E. (2006). Doing virtually nothing: Awareness and accountability in massively multiplayer online worlds. *Computer Supported Cooperative Work (CSCW)*, 16(3), 265–305.
- Moore, R. J., Gathman, E. C. H., Ducheneaut, N., & Nickell, E. (2007). Coordinating joint activity in avatar-mediated interaction. In *Proceedings of the SIGCHI conference on human factors in computing systems (CHI '07)* (pp. 21–30). New York: ACM.
- Piirainen-Marsh, A. (2012). Organising participation in video gaming activities. In R. Ayaß & C. Gerhardt (Eds.), *The appropriation of media in everyday life* (pp. 195–230). Amsterdam, the Netherlands: John Benjamins.
- Piirainen-Marsh, A., & Tainio, L. (2009a). Other-repetition as a resource for participation in the activity of playing a video game. *The Modern Language Journal*, 93(2), 153–169.
- Piirainen-Marsh, A., & Tainio, L. (2009b). Collaborative game-play as a site for participation and situated learning of a second language. *Scandanavian Journal of Educational Research*, 53(2), 167–183.
- Piirainen-Marsh, A., & Tainio, L. (2014). Asymmetries of knowledge and epistemic change in social gaming interaction. *Modern Language Journal*, 98(4), 1022–1038.
- Rouncefield, M., & Tolmie, P. (Eds.) (2011). Ethnomethodology at work. Burlington, VT: Ashgate.
- Reeves, S., Brown, B., & Laurier, E. (2009). Experts at play: Understanding skilled expertise. *Games and Culture* 4(3), 205–227.
- Sacks, H. (1984). Notes on methodology. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 2–27). Cambridge, UK: Cambridge University Press.
- Sacks, H. (1992). Lectures on conversation, volumes I and II. Cambridge, MA: Blackwell.
- Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50 (4 Part 1), pp. 696–735.
- Schmidt, K., & Bannon, L. (1992). Taking CSCW seriously: Supporting articulation work. *Computer Supported Cooperative Work*, 1, 1–2; 7–40.
- Sjöblom, B. (2008). Gaming as a situated collaborative practice. Human IT, 9(3), 128-165.
- Sjöblom, B. (2011). Gaming interaction: Conversations and competencies in internet cafés. PhD thesis, Linköping University Electronic Press.
- Stevens, R., Satwicz, T., & McCarthy, L. (2008). In-game, in-room, in-world: Reconnecting video game play to the rest of kids' lives. In K. Salen (Ed.), *The ecology of games: Connecting youth, games, and learning* (pp. 41–66). Cambridge, MA: The MIT Press.
- Strauss, A. L., Fagerhaugh, S., Suczek, B., & Wiener, C. (1985). *Social organization of medical work*. Chicago, IL: University of Chicago Press.
- Sudnow, D. (1983). Pilgrim in the microworld. Chicago, IL: Warner Books.
- Sudnow, D. (1978). Ways of the hand: The organization of improvised conduct. London: Routledge & Kegan Paul.
- Tolmie, P., & Rouncefield, M. (Eds.) (2013). Ethnomethodology at play. Chicago, IL: Ashgate.
- Watson, R. (1999). Driving in forests and mountains: A pure and applied ethnography. *Ethnographic Studies*, 4, 50–60.
- Watson, R. (2005). The visibility arrangements of public space: Conceptual resources and methodological issues in analysing pedestrian movements. *Communication & Cognition*, 38(1–2), 201–227.
- West, C., & Zimmerman, D. H. (1987). Doing gender. Gender & Society, 1(2), 125-151.