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Expertise in Cooperative Online Video Gaming Interactions: Epistemics, Multimodality and Language at Play

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Abstract

Video games are not just an extremely popular leisure activity, but they have also become legitimate cultural assets and professionalized sports with their own economic market. In addition, cooperative game modes have created new opportunities for players to socialize, especially with online gaming, a type of digital social interaction where participants combine language with other modalities in the creation of new social practices that are used to play together while at a distance. These social practices have raised the interest of ethnomethodological and conversation analytic informed studies, which have started to describe gaming interactions by focusing on the organization of gameplay both in the virtual world and in the real world, and to account for players expertise as a situated accomplishment. However, the focus has often remained on either a single player perspective or on the real world vs. game world dichotomy.

The aim of this thesis is to analyze how gamers negotiate their knowledge and expertise in interaction with one another, while cooperating in virtual environments. The study is positioned in the recent tradition of EMCA research on epistemics in interaction and it aims to contribute with an integration of orientations to both propositional ('knowing-that') and procedural ('knowing-how') knowledge as constituents of expertise, from a video-based, multimodal conversation analytic perspective. In CA, multimodality is conceived as the multiple resources that participants visibly orient to and mobilize in the moment-by-moment realization of interaction. In the context of online gaming, the resources available to participants are mediated by both the technology, through which players are able to (inter)act, and the video, which is the 'porthole' of the game world.

The data under analysis include three hours of interactions in English and Italian between two teams of three distant gamers, who play as trios in the popular battle royale game Fortnite on computers and home consoles. The multiplicity of perspectives and the asymmetries of visual access that gamers may experience online raised an important methodological issue for data collection. For this reason, data were collected capturing each player's screen, along with the recording of the vocal chat. The video recordings have been synchronized so as to have access to multiple perspectives in simultaneity and then manually transcribed and annotated according to multimodal CA conventions.

The analysis focuses on three main points related to gamers expertise. The first point has to do with the orientation to knowing that and knowing how in interaction and it highlights how gamers display and mutually recognize superior epistemic rights over propositional content to one another when making decisions together. At the same time, players still display competence in the procedures and mechanics related to the game which result in socially organized, accountable practices. The second analytic point describes how one such practice, marking i.e. the user-controlled triggering of

a graphic cue on each player's screen, allows for efficient interaction through the game interface. The analysis sheds light on how marking is not only used for deictic purposes, but it is understood as part of multimodal gestalts that can be used to perform collaborative gaming actions like offering or making proposals. The third analytic aspect considers players' knowledge of the language of gaming and describes the endogenous co-construction and negotiation of jargon as an indication of the recognizability of language resources (e.g. neologisms, loanwords) as part of players' common ground and competence of 'doing gaming'.

Contents

Introduction

Video games are one of the most popular leisure activities of our society, with over 3 billion players worldwide. Thanks to the development of new technologies such as smartphones and tablets, games are no longer confined to arcades, or personal computers and consoles, but everyone has multiple opportunities to engage in gaming by choosing their preferred configuration. According to a study by Ampere Analysis (2022), the video game industry reached a total value of 191 billion dollars in 2021. In addition, the eSport scene is becoming more and more popular, paving the way for the professionalization of video gaming and the organization of official tournaments and leagues. In parallel, video games are starting to be recognized as cultural assets worth of exhibition and preservation, with game-dedicated areas are being arranged as part of museum works of art (Eklund, Sjöblom & Prax, 2019), and gaming mechanics are now applied in the development of both in corporate, learning and cultural environments, with the process of gamification (e.g. Viola, 2011).

Moreover, the improvement of broadband internet connections has changed the preferred gaming configuration from a solitary, or co-sit experience, to a more interactive and social activity that takes place online, while physically being at a distance, but sharing the same virtual world inside the game and the same vocal chat. The importance of online gaming has also been emphasized by the Covid-19 pandemic, offering people opportunities to gather online and socialize during play. In fact, one of the ways in which the pandemic has affected our lives has been by increasing time spent on video games. Barr and Copeland-Stewart (2022) report that time spent playing games has increased for 71% of respondents, while 58% of respondents reported that playing games has impacted their well-being, with the overwhelming majority of responses indicating positive effects related to opportunities to socialize.

The growth and impact of the gaming industry has gone hand in hand with a burgeoning interest for video games in the world of academia, as gaming has turned into a topic of research in multiple disciplines from the social sciences and humanities, as well as computer science (Ensslin, 2012). Among the several approaches to study video games (cf. ch.4), in recent years ethnomethodology and conversation analysis (EMCA) have started to consider games as social interaction, in an attempt to describe the methods and practices that constitute gaming conduct in naturally occurring encounters. From this perspective, the social component of gaming is emphasized. In other words, the focus is not on the game itself, its design, or the set of semiotic modes that

constitute meaning as established and coded by the developers, but rather on the interactions between social members, that is, gamers, in playing games together in different settings and configurations.

One of the areas that the EMCA tradition has considered from the outset is the role of knowledge, expertise and skills in performing competent gaming practice. In the pioneering study *Pilgrim in the Microworld* (1983), David Sudnow for instance provided an autoethnographic description of how he learned to play the Atari game Breakout, accounting for his development of skills and dexterity through repeated practice. More recently, EMCA studies have been concerned with the acquisition of knowledge between expert and non-expert players in situations of knowledge asymmetry, reflecting a broader interest within the discipline for the ways in which knowledge is negotiated, displayed and transmitted in the course of social interaction.

In fact, the notions of epistemics (e.g. Heritage, 2013b) and expertise (Arminen et al., 2021) constitute two of the more recent trends in the study of social interaction, with a focus on how different qualities of knowledge, factual and practical, or knowing-that and knowing-how, can concur to the enactment of competence and skills in interaction. Studies of video games have been considered a perspicuous setting to investigate expertise and competence, because of the complex relationship between rules and practice, skill and knowledge. However, the early studies usually took a rather solipsistic perspective in analyzing expertise, or focus on interactions between gamers and non-gamers, or expert and non-experts.

Instead, the aim of the present study is to investigate how knowledge and expertise are negotiated, displayed and oriented to by peer-gamers interacting in a cooperative online game, the popular battle royale game Fortnite (2017). In particular, the study aims at investigating the interrelation between factual and procedural knowledge by analyzing how gamers explicitly or implicitly orient to different qualities of knowledge through talk and action in gaming interaction. In addition, the study sets out to identify and describe the organization of complex multimodal gaming practices that constitute analytic gestalts based on the interplay of the multiple semiotic resource that players demonstrably orient to in interaction, thus accounting for the technological and video-mediated nature of the encounters. Moreover, the study will delve into gamers' interactional language use as a way to access and display expertise.

The analysis is based on the video recordings of two different teams of three players, one team speaking Italian and one team in English, playing Fortnite together, and is carried out from a (multimodal) conversation analytic approach. The work can be divided into two main parts: the first four chapters provide a review of the core theoretical and methodological topics of the dissertation, whereas the last three ones present three analytic reports on the areas of inquiry outlined above. More in detail, the work is structured as follows:

Chapter 1 introduces the notion of "Epistemics" in Conversation Analysis. It starts by presenting preliminary studies on knowledge in interaction and then discusses the systematization of the epistemic analytic framework, intended as the ways in which knowledge is displayed and negotiated in interaction. The chapter also includes a review of the debate on epistemics launched by a more radical ethnomethodological group of scholars. The debate is taken as an opportunity to introduce core epistemological issues underlying EM and CA as disciplines, going back to the foundational works of Harold Garfinkel and Harvey Sacks.

Chapter 2 is dedicated to the presentation of the notion of 'expertise' in interaction. The chapter takes off by discussing the distinction between knowing-that and knowing-how from a philosophical and phenomenological perspective, to then present a recent trend of EMCA studies that consider expertise as an interactional domain, including its relationship with the broader domain of epistemics, the public and tacit nature of expertise and some methodological issues related to its study. The chapter also presents the relationship of epistemics and expertise with other two interactional domains: deontics and benefactives.

In Chapter 3, I introduce the EMCA approach to multimodality in interaction, with a focus on the embodied and video turns within the discipline. To outline the theory and methods of multimodal EMCA, I introduce the notion of gestalt starting from the phenomenological foundations of ethnomethodology, to then present the endogenous interactional emergence of multimodal assemblages as holistic practices and their routinization and erosion in time as they become shared practices between expert participants. The chapter then delves into the role of video both as a method and as a topic of research.

Chapter 4 focuses on video games as social interaction. I begin by introducing the academic field of game studies and the different approaches to the study of video games, with a focus on digital humanities and linguistics, in particular. The chapter continues with a revision of the EMCA literature on video gaming, considering different ecological configurations, before zeroing in on the notion of expertise in gaming interactions. In the final part of the chapter, the data and setting of the current study are described and compared to previous EMCA research.

Chapters 5, 6 and 7, instead, include the analytic parts of the present work, tackling the topic of expertise in online gaming interactions from different perspectives. In chapter 5, I discuss examples of orientations to different qualities of knowledge, i.e. factual and procedural knowledge, and how these elaborate each other in the organization of gameplay activities between participants. Chapter 6 focuses on the realization and deployments of multimodal practices based on the use of 'markers', video manipulation mechanics that allow to alter the game interface on the fly to cooperate with the teammates. More precisely, marking practices are presented in terms of complex analytic gestalts that

come to constitute shared practical knowledge for the participants. Last but not least, chapter 7 investigates the use of discursive practices as one of the characteristics of interactional expertise. In particular, the chapter focuses on the local co-construction of jargon in interaction, both in the English and the Italian dataset.

Chapter 1 – Epistemics:
A Macro-conceptualization behind Expertise

1.1 Introduction

One of the emerging trends under development in ethnomethodology and conversation analysis (EMCA) concerns the notion of 'expertise in interaction' (Arminen, Koole & Simonen, 2021) and its relationship with the broader domain of epistemics, i.e. the social organization, negotiation and display of access to knowledge (Drew, 2018b; Heritage, 2013b).

According to Arminen et al. (2021), research on epistemics has mostly focused on factual, propositional knowledge (or 'knowing-that'), on information known or unknown to participants. With expertise, instead, they refer to participants' orientations to practical skills and procedural knowledge (or 'knowing-how'). Even though the topic is far from new in EMCA studies, dating back to Harold Garfinkel and Harvey Sacks' shared interest for commonsense knowledge and practical action as accountable phenomena (Garfinkel & Sacks, 1986[1970]), expertise has lacked systematic treatment as an interactional domain of its own and has usually been considered ancillary to epistemics.

However, the recent attempts at topicalizing expertise and studying 'knowing how' in practice allow to investigate the interrelations of different 'types of knowledge', as they are made publicly available in the accomplishment of both ordinary and institutional activities, while also opening new paths of research within, and along, the field of epistemics and other interactional domains.

In this chapter I will provide an overview of the concepts and disputes over the notion of "epistemics in interaction". The first part of the chapter will be dedicated to the introduction of epistemics from a conversation analytic perspective, starting from its precursors, to then illustrate John Heritage's conceptualization of the domain and its application. The second part of the chapter will review the critical aspects that have been raised concerning its application and adherence to CA's methodology and epistemology. This will allow to revise some of the core theoretical and methodological topics of conversation analysis, and its relationship with ethnomethodology.

1.2 Common Ground and Shared Understanding: The Precursors of Epistemics

In his classic book *Studies in Ethnomethodology*, Garfinkel (1967) reported the results of a series of experiments that he had his students run. In one of these, students were asked to take note of natural conversations they had in their everyday life and then to clarify and specify what was meant 'behind'

each participant's turns. The outcome of their task resembled something like the following, reported by Garfinkel in a nowadays well-known example:

[1] Conversation Clarification Experiment (Garfinkel, 1967)

Conversation		Clarification
Husband:	Dana succeeded in putting a penny in a parking meter today without being picked up.	This afternoon, as I was bringing Dana, our four-year-old son, home from the nursery school, he succeeded in reaching high enough to put a penny in a parking meter when we parked in a meter parking zone, whereas before he has always had to be picked up to reach that high.
Wife:	Did you take him to the record store?	Since he put a penny in a meter that means you stopped while he was with you. I know that you stopped at the record store either on the way to get him or on the way back. Was it on the way back, so that he was with you, or did you stop there on the way to get him and somewhere else on the way back?

This example was used by Garfinkel to make two key observations about the accountable nature of members' methods and about the organization of interaction. First, Garfinkel used it to point out that the practices with which members display understanding are themselves observable and available in the interaction or, in his words "that the activities whereby members produce and manage settings of organized everyday affairs are identical with members' procedures for making those settings "account-able" (1967, p. 1). Second, that these procedures are sequentially and temporally attended to by participants in the process of achieving common understanding and are indexes not of a direct relationship between words, but of matters the two parties attributed to each other that were interpreted on the basis of what was known (pp. 39-40). In other words, as also pointed out by Heritage (2013a), this extract is an example of how "mutual action and joint understandings in interaction rest on the parties' abilities to recognize what each knows about the world and to adjust actions and understandings in accordance with that recognition" (Heritage, 2013b, p. 370).

In interaction, speakers build and rely on a "common ground" (Clark, 1996; Clark et al., 1983) a shared, mutual attribution of knowledge about the world (Stevanovic & Peräkylä, 2014; Drew, 2018b). This shared knowledge allows participants to make assumptions about the ongoing interaction. It is the means by which speakers are able to cope with what is left unsaid and are ultimately able to understand and orient the interaction, as shown, for instance by the wife's clarifications provided in example [1]. Stevanovic and Peräkylä (2014) argue that 'common ground'

is based on three main elements shared by speakers: a sociocultural knowledge, related to general expectations within a community; a personal knowledge, dependent on participants common history; a local knowledge, built on previous contributions in the interaction and therefore related to the actual, endogenous context that results both from the sequential organization of talk (Heritage, 1984b) and the ordinary or institutional occasion of the conversation. Heritage and Clayman (2010) for instance explain that an utterance like "someone just vandalized my car" can be understood in different ways according to the context of production. It could be a request for assistance in a call for emergency context, a complaint in a conversation with a friend, a request to put off an appointment e.g. in a call to a doctor's office, and so on. The context causes "different attributions of underlying motive or intention" (Heritage, 2013a, p. 554) and participants deploy their sociocultural, personal, and local knowledge to attribute social roles, characteristics and authority that will shape their actions and their understanding of others' actions (Heritage, 2013a; Stevanovic & Peräkylä, 2014).

Within Conversation Analysis (Fele, 2007; Hutchby & Wooffitt, 2008; Sacks, 1992; Sidnell & Stivers, 2013), the investigation of the various facets that make up participants' common ground has developed in a stream of research labelled as "epistemics". Studies in epistemics focus "on the knowledge claims that interactants assert, contest and defend in and through turns-at-talk and sequences of interaction" (Heritage, 2013b, p. 370), on the interactional attributions and representation of knowledge (Drew, 2018b, p. 163). From this perspective, then, displays and negotiations of knowledge are not seen in terms of participants' cognitive states, e.g., of knowing or not knowing a piece of information, but as socially organized phenomena, made relevant in the hic et nunc of the conversation (Drew, 1991).

Much of the conversation analytic work on epistemics has been carried out by John Heritage, who summarized his findings in two articles published in 2012 in a journal called *Research on Language and Social Interaction* (Heritage, 2012a; 2012b). Along with introducing the key notions of epistemic status and epistemic stance, in these two articles Heritage tracks back the development of the interactional interest on the topic and stresses how his proposal is not ex novo, but rather the result of different studies that have laid the foundations of the epistemic analytic framework. In the following section I will therefore describe the dimensions that have come to constitute the field of epistemics.

1.3 The Dimensions of Epistemics

One of the main sources for epistemic inquiries can be found in early conversation analytic research on sequences where, for example, speakers deal with anticipation or reception of information, as in the use of pre-announcements as indicators that the upcoming talk is considered

unknown to the recipient, and thus informative (Terasaki, 2004) or the use of "oh" as an acknowledgment of the informativity of the utterances conveyed by the prior speaker (Heritage, 1984a). This interest for the interactional organization of knowledge (a)symmetries allowed scholars to shed light on how these are displayed, negotiated, and oriented to by participants in conversation, and led to the emergence of different epistemic dimensions, that have been developed in terms of epistemic access, epistemic primacy and epistemic responsibilities (Stivers, Mondada & Steensig, 2011).

1.3.1. Epistemic Access

Starting with epistemic access, this dimension indicates the practices speakers employ to assess and express one another's knowledgeability of what is at hand in the interaction. It implies that speakers should avoid informing others about what they already know and that they should limit themselves to talking about things they know, to which they have a sufficient degree of access (Stivers et al., 2011, p. 10), as it can be seen in the following extract:

[2] [Stivers et al., 2011, p. 11]

```
1 Tara:      My mum left me this who:le long message on my cell
2            phone last night about thuh directions,
3 Kris:      Yea(h)h I kn(h)ow, I was there,
4            (1.0)
5 Tara:      #huh# ((cough))
6 Kris:      #heh heh# ((laughter))
```

Tara's first turn (lines 1-2) marks the beginning of a storytelling sequence, but Kris' claim of being present when the reportable event happened (line 3), and thus to know about the long message, leads to the abandonment of the telling. Both Tara and Kris share the epistemic access to what happened the night before and they display it in the interaction. This example can be connected to Labov and Fanshel's (1977) classification of knowledge (Heritage, 2012a; 2013a: 2013b). More precisely, they distinguish between five types of events that vary in accordance with the difference in access by speakers: A-events, know to speaker A, but not to speaker B; B-events, known to B but not A; AB-events, known to both; O-events, known to everyone present in the interaction; D-event, known to be disputable. According to this classification, in extract [2] Tara projects the event as an A-Event, where she is the only one knowing, but Kris's claim of prior access turns it into an AB-event. Extract 2 shows how interactants rely on presuppositions on mutual access that are not always correct, subsequently display their access within the interaction, ad adjust the trajectory of their course of action accordingly. This can be achieved with a set of practices available to speakers that allow them to ascertain others' epistemic access, e.g. with pre-announcements, as shown in the next sequence:

[3] [KC4:2 – Terasaki, 2004, p. 189]

```
01 A:     Hey we got good news.
02 C:     [What's the good ne]ws,
03 D:     [ I    k  n  o :  w]
04        (.)
05 A:     [Oh ya do::?
06 B:     [Ya heard it?
07 A:     Oh good.
08 C:     Oh yeah, mm hm
09 D:     Except that I don't know what a giant follicular
10        lymphoblastoma is.
11 A:     Who the hell does except a doctor.
```

The participants are two couples (A-B and C-D) and one of them is willing to give "good news" to the other, as preannounced by speaker A in line 1. However, while C invites A to go on with the news, D simultaneously claims access by stating that they already know about it (line 3 "I know"), a position that is later confirmed by C in line 8 after a request for confirmation by both A and B (lines 5-6). This sequence shows again how participants orient to a general rule of conversation that says that speakers should not inform others about what they already know (Sacks, 1992), and how matters of access to knowledge are dealt with by participants as a part of their activity in interaction. While the two examples analyzed concern claim of access to knowledge, participants can also display lack of knowledge either by implicitly acknowledging some information as newsworthy, e.g. with "oh"' (Heritage, 1984a) and other information receipt tokens in third position (Schegloff, 2007b), or by explicitly formulating their unknowing state. In the latter case, as shown by Beach and Metzger (1997), claiming lack of access can be used to downgrade the knowledge source or the degree of certainty as a way of neutralizing expected actions, for example in response to a request to express an opinion or assessment on a state of affairs.

Knowledge source, degree of certainty and directness thus add different nuances to epistemic access which can be marked and made transparent in interaction. In [2], for instance, Kris referred to her physical presence and experience of the message as a direct, certain, source of access. Consider also the following example taken from a discussion between two friends, a man and a woman, about the man's marriage:

[4] [Drew, 1991, pp. 28-29]

```
01 Cloe:     Definitely for the fifteen years I:ve known you,
02           yihknow you've really both basic'ly honestly
03           gone yer own ways.
04           (0.8)
05 Dave:     Essentially:: except we've had a good relationship
06           at home yihknow
07 Cloe:     Ye:s but I mean it's a relationship where uh:
08           yihknow pass the butter dear, .hh
```

```
09           (0.5)
10 Cloe:     Yihknow w [make a piece of toast dear this
11 Dave:               [No not really
12 Cloe:     type of thing.
13 Dave:     We've actually had a real health- I think we've had
14           a very healthy relationship y'know.
```

As explained by Drew (1991), Cloe and Dave rely on different sources of knowledge to defend their argument on the state of Dave's relationship. Having direct, firsthand experience of his domestic affairs, Dave emphasizes the good relationship he has with his wife at home (lines 5-6), something only he and his wife have access to and that is precluded to Cloe, whose comments are in turn based on her perception as external observer and ultimately based on stereotypical knowledge of superficial marriages (lines 7-10). In addition, the extract introduces a relative distribution of knowledge between the participants of a conversation. As a matter of fact, while with access we usually refer to individual states of knowledge, these may come to constitute relative asymmetric positions that are treated in terms of epistemic primacy.

1.3.2 Epistemic Primacy

Asymmetries of epistemic access imply a relational distribution of rights to know or to claim knowledge among participants: the speaker with a more direct, more detailed, or more recent access to knowledge is considered to have superior rights vis-à-vis other conversationalists. This dimension is defined by Stivers et al. (2011) epistemic primacy and is often accounted for in terms of epistemic authority. In extract [5], we can see a group of friends talking about a course that helps quit smoking. After attending the course, John was able to achieve his goal of giving up on cigarettes, and his friend Don is expressing his opinion about that type of initiatives:

[5] [Stivers et. al 2011, p. 15]

```
01 DON:      The point is you wouldn't take
02           that course if you weren't determined
03           in the first [place
04 TER:                   [(I'm nna  [go mo:    [my)
05 JOH:                              [mm hm,    [
06 DON: ->   [The ju[st- just give you that=
07 ANN:      [Well,
08 DON: ->   =bit of support.
09 JOH: ->   Th't's right.
```

Don's assertion of the course is expressed in lines 6 and 8, where he declares that, provided that the patient is determined to quit smoking, the course acts as a support throughout the process. But Don's assessment is based on his thoughts since he does not possess a direct experience of the situation. In

fact, it is John, as experiencer, who claims authority and primacy over the course by acknowledging and confirming his friend's view in line 9 ('that's right').

Rights to possess and express knowledge are strictly related to Kamio's concept of territories of knowledge (Kamio, 1997; 2001; see also Heritage, 2012a; 2013a; 2013b). For Kamio, participants address a domain of knowledge according to their 'distance' or 'closeness' to it. Speakers' relative position to a territory of knowledge can "be arrayed on a continuum from 0 (highly distant) to 1 (extremely close and 'possessed' by the speaker)" (Heritage, 2013b, p. 557). Their positioning along this gradient does not only account for access, but also for rights to know and express information about the territory of knowledge under discussion. In extract [5], John's closeness to the course qualifies him as the most knowledgeable and rightfully entitled to talk about it, when compared to Don and other co-participants, who are more distant to the topic due to their lack of firsthand experience.

Relatedly, Pomerantz (1980) distinguished between Type 1 and Type 2 knowables. The first type has to do with firsthand knowledge to which speakers have access as subject-actors (Stivers et al., 2011; Heritage, 2012a; 2013a; 2013b), whereas the second type refers to derivative knowledge, i.e. from an indirect source, such as hearsay, inference etc. In general, according to Heritage (2013b), persons have authority for knowing about their own thoughts, hopes, experiences and feelings. Moreover, authority can be derived from social categories (e.g. teacher, mother, doctor etc. as also shown by Raymond and Heritage, 2006). It follows then, as pointed out by Enfield (2011), that epistemic primacy can be source-based, or status-based, i.e. dependent on the institutional or interactional roles and social categories that are made relevant in the ongoing conversation. Don's authority in extract [5] for example derives from the experiential source of the process of giving up smoking, while the following excerpt features an orientation to institutional and social roles. Extract [6] is taken from a doctor-patient interaction where the patient is trying to explain an issue using medical terminology:

[6] [Drew, 1991, p. 38]

```
01 Pat:     B't this time I have a little problem
02          (0.9)
03 Pat:     I seem to have
04          (0.8) ((thumping hand on desk))
05 Doc:     Ye[s
06 Pat: ->    [what is it - contracted
07 Doc:     khn [Yes
08 Pat: ->      [tendon:,
09 Doc: ->  That's right. How long have you been in developing this.
```

Drew (1991) highlights that the tentativeness with which the patient mentions the diagnosis ('contracted tendon', lines 6 and 8), which is formulated as a request for confirmation, displays an orientation to the doctor's superior authority over medical terminology. In fact, the doctor in line 9 confirms the correctness of the expression ('that's right') before launching a new sequence. Similar practices can also be found in cases where institutional roles and membership categories (Sacks, 1992; Schegloff, 2007a) to which one of the two parties has primary rights are strictly related. One case comes from a previous study of mine about sports commentaries, where play-by-play commentators have been found to use mitigated formulations to recognize color commentators' authority over technical knowledge of the sport, by making reference to their past experience as players or coaches (Corradini, 2019; see also Raymond & Cashman, 2021).

1.3.3 Epistemic Responsibilities

Pomerantz's classification adds another dimension to the analysis of knowledge, based on the idea that epistemic rights also entail responsibilities and obligations. As explained by Stivers et al., depending on type of knowable

> […] one has a right as well as an obligation to know such things as one's name, what one is doing or has done, how one is feeling etc. By contrast, one is not held accountable to the same degree for what one knows about, for instance, the comings and goings of other people (Stivers et al., 2011, p.17).

Therefore, speakers attribute knowledge, design their turns at talk and orient the interaction by taking into account not only co-participants' access and relative rights, but also "who is responsible for knowing what" (Stivers et al., 2011, p.18). Sequence [7] shows an example of this:

[7] [Rah:12;4:ST in Heritage 2013a: 555]

```
01 Jen:     [Okay then I w]'z askin='er en she says
02          yer working tomorrow ez well.
03 Ida:     Yes I'm s'posed to be tomorrow yes,
04 Jen:     O[h:::.
05 Ida:       [Yeh,
```

The two speakers are talking about Ida's work schedule for the next day. Jen's knowledge is a type 2 one according to Pomerantz's definition, because it is based on a hearsay ('she says you are working tomorrow') attributed to an external third party. Because of her direct involvement, Ida is considered to be more entitled and responsible to talk about her job, to which she is held accountable as a "type 1 knowable". Consequently, Jen's assertion is understood as a request to Ida to confirm whether the information was correct or not, which is provided by Ida in line 3 ("Yes, I'm supposed to be tomorrow,

yes"). In addition, Jen's third turn ("Oh") highlights a change of state in Jen's knowledge, after her hearsay knowledge has been confirmed from a more reliable perspective.

Epistemic responsibilities are thus monitored by participants in turn design and action design, and the monitoring can also lead to a negotiation, a sanctioning or a distribution of obligations. For instance, Gavioli (2015b) has shown that in interpreter-mediated doctor-patient encounters, doctors' use of interactional structures that invite mediators to deal with critical topics by expanding and clarify doctors' explanations imply a legitimation and distribution of responsibilities in communicating delicate information to patients.

As shown in the rest of this section, the dimensions of epistemic access, primacy, rights and responsibilities play a key role for speakers' recognition and orientation to matters related to knowledge in social interaction. It is important to stress that, even though they have been described singularly in extracts [2-7], they are not to be considered as isolated entities driven by dynamics of mutual exclusion. Conversely, research on epistemics has highlighted how these features are simultaneous and ubiquitous, as they have become the grounds on which Heritage (2012a) has built his definition of epistemic status.

1.4 Epistemic Status

Drawing on the works of Labov and Fanshel, Pomerantz, and Kamio and the dimensions of epistemics discussed in par. 1.3, Heritage (2012a) argues that speakers display their epistemic access, primacy and rights by positioning on an epistemic gradient that ranges from a K+ position (more knowledgeable) to a K- position (less knowledgeable) and that, according to their positioning, speakers are able to recognize "their comparative access, knowledgeability and rights relative to some domain on knowledge as a matter of a more or less established fact" (Heritage, 2013a, p. 558; 2013b, p. 376). The position on the epistemic status gradient, following Enfield (2011), is thus defined in terms of a polar, relational set of enablements (who can know), entitlements (who has the rights to know) and responsibilities (who is obliged to know). The following well-known sequence in CA's literature is taken from a phone call between Nancy and Emma and is helpful to illustrate speakers' epistemic status.

[8] [NB II:2:1 Pomerantz, 1980, p.195]

```
01 Nan:     Hel-lo:,
02 Emm:     .hh HI::.
03 Nan:     Oh: 'i::: 'ow a:re you Emmah:
04 Emm:     FI:NE yer LINE'S BEEN BUSY.
05 Nan:     Yeaa:h (.) my u.-fuhh h- .hhhh my father's wife ca:lled
06          me.h .hhh So when she calls me::.h .hh I always talk fer
07          a lo:ng ti:me ex she c'n afford it'n I can't.hhh[hhh]°huh°]
```

08 Emm: [OH:[:::

After the initial greeting-greeting adjacency pair sequence, Emma's utterance in line 4 ('your line has been busy') can be interpreted as a request for information about Nancy's previous calls. Analyzing the participants' epistemic positions, Emma has direct access to the fact that line was busy and therefore infers, with a high degree of certainty, that Nancy was talking to the phone to someone else. However, Emma does not have access to specific details, e.g. about the person Nancy was talking to, the reasons for the phone call or its duration. These are details that belong to Nancy's territory of knowledge, over which she has the rights emanating from direct experience. In other words, there is asymmetry in terms of access to Nancy's phone call, a Type 1 event from her perspective. Therefore, we can argue that Emma's knowledge vis-à-vis Nancy's reveals that the former is in K- position, while the latter in K+ position. This is confirmed by the following turns, where Nancy delivers some information about her call (lines 5-7) and Emma registers this as informative in line 8 ('Oh') (Heritage, 2012a). In extract [8], speakers' evaluation of epistemic status is dependent on the general attributions of knowledge about one's identity and personal affairs to one's domain of knowledge, thus accounting for enablements and entitlements, but less clearly for obligations.

In addition, as explained above (see 1.2), participants tend to base their recognition of authority on sociocultural and contextual assumptions. Consequently, access to the same event does not necessarily imply that both speakers' understanding or rights are equal: in a situation where a doctor and a patient are looking at the same radiography and are thus experiencing the same situation in the exact same moment, the doctor would still be considered as more knowledgeable in reading and explaining what the two are observing (Heritage, 2012a). In the light of doctors' studies and preparation, they are generally treated as having the authority to diagnose and prescribe (Stivers et al., 2011) and probably have the obligation to do so.

Obviously, in the course of an interaction, conversation can shift from one domain to another, thus causing an adjustment of epistemic status. In fact, the status of each participant "will tend to vary from domain to domain, as well as over time, and can be altered from moment to moment as a result of specific interactional contributions" (Heritage, 2012a, p. 4). Going back to the doctor-patient example, if doctors have more authority over the scientific domain of knowledge, patients are treated as more knowledgeable for telling their personal medical history. However, as far as a single domain of knowledge is concerned, Heritage argues that epistemic status is an easily accessed, established, real and enduring state of affair. What is subject to change is the way speakers express their status, i.e. their *epistemic stance*.

1.5 Epistemic Stance

With epistemic stance, Heritage (2012a) indicates the "moment-by-moment expression" of epistemic status in turns at talk, i.e. how speakers project and express the underlying epistemic relationships that come into play in the interaction. This expression is generally achieved through different syntactic realizations of content (e.g. declaratives, questions) and by means of lexical and grammatical categories such as evidentials and epistemic modality (Heritage, 2013a; 2013b). By taking up different stances, participants can position themselves on different epistemic gradients compared to the recipient's one, as shown in the following utterances:

[9] [Heritage, 2012a, p. 6]

(a) Are you married?
(b) You're married, aren't you?
(c) You're married.

All of them address the same propositional content, i.e. the recipient's marital status, and in every situation potential recipients are considered to maintain a K+ position, since the topic is related to details of their personal life. However, in sentence (8a) the use of a direct polar question marks overtly the questioner's total lack of knowledge while also increasing the distance to that domain of knowledge. This stance signals that the questioner is totally unaware of the answer, and the aim of his action is to receive an informative answer that could supposedly report detail about the marriage. On the contrary, sentences (b) and (c) – a tag question and an assertion, respectively – index minor distance between K+ and K- positioning, as they display that the questioner has some pre-existing knowledge of the situation and is just seeking confirmation about it from someone more reliable.

In general, explains Heritage (2012a), there is congruency between stance and status of the participants. Those who know and position as K+ usually make assertions, while those who do not know ask questions. Yet, this convergence is not to be taken for granted, as there could be speakers that adopt a certain stance to dissimulate their real epistemic status in order to appear more or less knowledgeable (e.g. teachers asking questions to students during exams).

Along with the introduction of the notions of epistemic status and stance, Heritage's featured debate on Research on Language and Social Interaction (2012a; 2012b) provided an in-depth description of the role that epistemics matters play for two main themes of conversation analytic research: action formation and sequence organization. The two main arguments presented by Heritage include the ideas first, that epistemic status takes precedence over syntax and grammar in defining how the actions of questioning and telling are formed (2012a), and second, that epistemic imbalances are the 'engine' that drives or puts a halt to sequences of talk (2012b). In the upcoming section, I will

provide an account of Heritage's work on the impact of epistemics on action formation (par. 1.6) and sequence organization (par. 1.7).

1.6 Epistemics in Action

In CA, "action formation" is meant to identify the resources with which turns at talk are designed to be recognizable as particular actions performed by participants (Schegloff, 2007b), and is strictly related to "action ascription", i.e. how co-participants interpret and attribute particular actions to preceding turns, and display their recognition in the subsequent responses (Levinson, 2013). Questioning, answering, agreeing, disagreeing, noticing and assessing are just a few examples of the actions that can be performed in interaction and CA's research has highlighted other types of actions that are not are not the property of a single statement, but actually recognizable analyzing turn construction units (TCUs).

Relatedly, Heritage (2012a) contends that participants' understanding of actions carried out with interrogative and declarative formats is highly dependent on epistemic status. The lack of explicit syntactic markers to distinguish between questions and statements in several languages and the frequent ambiguity and incongruence between form and action in the English language are the triggers of Heritage's analytic enterprise. Due to our background knowledge of grammar, we would expect questions to be asked by K- speakers, and statements to be made with certainty by K+ ones. However, it is not syntax that defines whether an utterance is giving or requesting information, but rather the epistemic status displayed by the producer of the utterance which can either be congruent or incongruent with the syntactic structure of the utterance.

In the case of declaratives, Heritage (2012a) shows that if what is being declared belongs to the producer's epistemic domain, and thus there is congruence between status and syntax, then the action will in fact be understood as a statement informing the recipient, as it can be observed in [10]:

[10] [Rah:12:1:ST]

```
01 Jen:     °Hello?°
02          (0.5)
03 Ida:     Jenny? (0.3) It's me:,
04 Jen:     Oh hello I:da.
05 Ida: ->  Ye:h. .h uh:, (0.2) ah'v jis rung tih teh- eh tell you (0.3) uh
06      ->  the things ev arrived from Barkerr'n Stone'ou[:se]
07 Jen:                                                   [Oh:::::.
08 Jen:     Oh c'n ah c'm rou:nd .hh
```

Here Ida calls Jenny to inform her about the status of delivery of an order from a local department store. Ida is in K+ position, since Jenny's goods were delivered to her ('the things have arrived from

Barker & Stone House'). Lines 7 and 8 display Jenny's acceptance of the informativity of Ida's statement as she goes on to ask for permission to 'come round', likely to pick up the order.

Nevertheless, when declaratives are uttered from a K- status, they work as requests for confirmation to a recipient with greater access to the domain at hand. Extract [11] is taken from a doctor-patient interaction where the physician is seeking personal information about the patient's history and after an opening polar question followed by a negative reply, the doctor utters a declarative (line 4), based on inferencing, which requires confirmation:

[11] [Midwest 2.4 in Heritage, 2012a, p.8]

```
01 DOC:     Are you married?
02 PAT:     No.
03          (.)
04 DOC: ->  You're divorced (°cur[rently°)
05 PAT:                          [Mm hm.
```

Since patients, and speakers in general, have the authority over personal facts, the doctor's utterance in line 4 can be interpreted as a "next best guess" produced from a K- position. In line 5 the patient confirms the inference from a more authoritative epistemic position.

As far as questions are concerned, Heritage (2012a) highlights that grammar is once again 'trumped' by epistemics, regardless of the type of interrogative structure that participants are uttering, by presenting a series of cases that include both positive (PPQ) and negative polar questions (NPQ). When questions are asked from a less knowledgeable position, they are treated as proper questions that seek confirmation (with NPQs, extract 12) or as a plain request for information (with PPQs, extract 13):

[12] [JH:FN in Heritage 2012a, p. 18]

```
01 A:     But the weather's humid in Fall.
02 B:     ((Looks puzzled))
03 A: ->  Isn't the weather humid in Fall?
04 B:     Yes it is.
```

[13] [HG:II:25]

```
01 Nan: ->  .hhh Dz he 'av 'iz own apa:rt[mint?]
02 Hyl:                                  [.hhhh]Yea:h.=
03 Nan:     =Oh:, (1.0) How didju git 'iz number,
```

In [12] we see a European visitor (A) to Japan talking about the weather to a local citizen (B). The sequence starts with an assertion from a K+ position that is retreated after the puzzling expression by the Japanese speaker. 'A' subsequently downgrades his knowledge and uses a negative interrogative question to ask for confirmation to someone who, as a native, is more entitled than him to generalize about the weather in Japan. In this case, the negative interrogative structure is thus used as a request

for confirmation from a K- position. In [13] Nancy starts the sequence with a direct positive polar question that invites Hyla to address something which Nancy does not have any access to. After Hyla's answer in line 2, Nancy's oh signals the reception of information and a change of knowledge state (Heritage, 1984a).

When questions are uttered from a K+ position, on the other hand, they can be used to assert an opinion and seek for agreement from the co-participant, with NPQs (extract 14), or as rhetorical questions that do not really project a delivery of news from a more knowledgeable party, with PPQs (extract 15):

[14] [NB:IV:10 R:14-17 in Heritage, 2012a, p. 17]

```
01 Emm:     .h How wz yer tri:p.
02 Lot:     Oh:: Go:d wonderful Emm[a
03 Emm: ->                         [Oh isn'it beautiful do:wn the:re.
04 Lot:     Oh:: Jeeziz ih wz go:rgeous::.
```

[15] [Debbie and Shelley in Heritage, 2012a, p. 23]

```
01 She:     So: I mean it's not becuz he's- he's- I mean it's not becuz
02          he:'s not going it's becuz (0.5) his money's not (0.5) funding
03          me.
04 Deb:     Okay.
05 She: ->  So an when other time have I ever [done that?
06 Deb:                                       [.hhh well I'm just sayin'
07          it jus seems you- you base a lot of things on- on guy:s (.) I
08          do'known:. it just- a couple times I don- I don- .hh it's not
09          a big deal.
```

In [14], the sequence starts with Emma's question about Lottie's trip, a domain of knowledge to which she does not have access. After Lottie's reply (line 2), Emma shifts the topic with a negative interrogative. From the specific instance of the Emma's trip, her turn designates the beauty in se of the destination, Palm Springs, as also signaled by the change of tense. By moving from a specific event to a generalization of the destination, Emma thus moves from a K- to a K+ position and expresses her opinion on the topic while looking for Lottie to agree with her on the assessment. In [15], Shelley and Debbie are quarreling because Shelley has decided not to make a scheduled trip with her friends and Debbie is accusing her of having changed her mind because Shelley's boyfriend was not going either. The sequence starts with Shelley trying to defend herself from her friend's accusations, she tries to justify her decision to 'bail out' on her friends by explaining it is not a matter his boyfriend being present or not, but rather a financial problem. In line 5, she uses a polar interrogative to ask Debbie to mention other occasions where she behaved in that way, a piece of information that is clearly not part of Debbie's domain. In this case, instead of asking for information, Shelley is adopting a defensive strategy to challenge Debbie's accusation. Since she holds a primary

epistemic position over her personal choices, the question results in a rhetorical argumentation that aims at neutralizing her friend's proposition, and not in a real request to list every time Shelley has favored partners at the expenses of friends.

This series of examples has shown that the same syntactic structure can perform different actions according to the epistemic status of the participants. Heritage (2012a) argues that this is true also for tag questions, which have been proved to serve two main functions depending on the relative epistemic position of the participants: they can either serve as a request for information from a K- speaker about something declared with uncertainty that stirs a confirmation by a more knowledgeable participant, or they can be uttered rhetorically by a K+ speaker to achieve consensus about the point the producer is making. In sum, Heritage (2012a; 2013a; 2013b; 2018) has pinpointed how relative epistemic status can be considered more effective than grammar in understating action formation. For this reason, interactants must be cognizant of rights and distribution of knowledge, in order to correctly understand how to interpret utterances. (Heritage, 2012a). If this does not happen, it can lead to miscues that need to be dealt with.

As a matter of fact, what presented thus far is not be taken as a normative rule, nor as an unchallengeable truth. Action formation and action ascription are locally, endogenously accomplished in interaction, and are subject to negotiation and defeasibility. This means that, for instance, not every declarative utterance produced by a K- speaker will be interpreted as a request for confirmation *per se* as pointed out by Sidnell's commentary on Heritage's proposals (2012) and also acknowledged by Heritage in a response (2012c). Sidnell for instance points out that declaratives could be defeasible because of their nature of assertions, and recipients could understand them as an informative action, rather than a question. And if the producer has not epistemic primacy over the domain at hand, that action might be deemed inappropriate and lead to a misunderstanding, as shown in the following sequence where Helen Razer, an Australian broadcaster, is interviewing British playwright Steven Berkoff:

[16] [Helen Razer interviews Steven Berkoff in Sidnell, 2012, p. 58 (simplified)]

```
01 HR:     Well look I- I- I- I- hoped you'd be a curmudgeon for me and a
02     ->  curmudgeon you are being. Mr Berkoff you are in Australia,
03         [you ah
04 SB:     [no kidding. I din't realize that (.)  [I thought it was Japan.
05 HR:                                            [excellent. Well done.
06     ->  Well done. And you are in Australia to perform your new work.
07         (0.6)
08 SB:     °yes°
09 HR:     You gonna help me out with this Steven.
10         (0.4)
11 SB:     Yeah well speak normally to me an I'll f-an'
12         I can respond normally
```

```
13 HR:     hih hih ha I don' Loo' I have to say [I
14 SB: ->                                      [you say you're in
15     ->  Australia like I think I don't know I'm 'ere.
16 HR:     Wu- you see Steven this was. this was my way of of- telling (.)
17         others that
18 SB:     Oh I see oh gosh alright then I'm in Australia ye:s.
19 HR:     Ye:s. See you've ruined the moment Ste:ven.
```

The interview has been problematic right from the start, with Berkoff criticizing Razer's patronizing tone, especially after having called him "dear" (data not shown). Nonetheless, the sequence starts with a declarative ('Mr Berkoff you are in Australia') with which Razer aims at introducing the host to the public and then to present the reason behind the trip to Australia (i.e. performing his new work). Razer is probably expecting a confirmation, but instead she receives a sarcastic reply ('no kidding, I didn't realize that, I thought it was Japan'). Razer presumably takes it ironically and goes on with her agenda, but Berkoff's minimal utterances are then overtly treated as a problem in line 9. Berkoff's turn in lines 11-12 and 14-15 display that he had interpreted the opening declarative as an informative action designed for him and, since it was a statement about something that was a part of his knowledge, assessed it as superfluous and uninformative. This leads to Helen's explication of what she was trying to do ('this was my way of telling others') and to the repair of the misunderstanding. The sequence proves that action formation is indeed dependent on speakers epistemics positions, but it also shows that actions cannot be classified a priori. They require a constant monitoring of epistemic status and of the sequential development of the interaction. As noted by Sidnell (2012, p.59, note 4), we cannot know whether Berkoff was purposefully trying to hinder the interview or if he really misunderstood the question, but what is evident is that the misunderstanding is based on what Berkoff thought Razer knew he did not know, and supports the idea that epistemics plays a key role in shaping actions, and extended sequences as talk as well (Heritage, 2012b). The latter point about the relationship between sequences and epistemics will be treated in more detail in the next paragraph.

1.7 Epistemics and Sequences

Sequences of talk-in-interaction can be defined as a series of organized, coherent actions enacted through turns at talk, which aim at accomplishing a certain activity (Schegloff, 2007b). As shown in the previous section, epistemics is relevant in understanding what actions are being performed by participants, but these actions are not isolated entities that take place in a vacuum. Rather, they are part of interactional sequences that involve a constant assessment and negotiation of epistemic status and that are driven by matters related to knowledge. Heritage (2012b) argues that asymmetry between K- and K+ speakers can be the "basis for initiating or expanding a sequence" (2012b, p. 49) and this asymmetry can be acknowledged in interaction by speakers with their replies, as shown for instance

on the body of conversation analytic work on response tokens, such as "oh" (Heritage, 1984a; 1988), "right" (Bolden, Hepburn & Mandelbaum, 2023; Gardner, 2007) or "I know" as in the joint article by Mikesell, Bolden, Mandelbaum, Robinson, Romaniuk, Bolaños-Carpio, Searles, Wei, DiDomenico and Angell (2017).

According to Heritage, sequences can be initiated either from a K- position (e.g. questions, and requests for confirmation) or from a K+ position (e.g. storytelling and advice giving sequences). It is the "seesaw" between K+ and K- that drives the conversation forward, whereas when epistemic balance is achieved, the interaction will generally feature a topic shift or a topic closure.

Storytelling sequences for instance are usually prefaced by a preannouncement by the K+ speaker. The recipient can request or accept to hear the story, thus signaling epistemic asymmetry and legitimizing the teller to go on, as in [17]:

[17] [Holt: Xmas 85:4:2-4 in Hutchby & Wooffitt, 2008, p. 128)

```
01 Les:     °Oh° .hh Yi-m You know I- I- I'm broiling about something
02           hhheh[heh .hh
03 Joy:           [Wha::t
04 Les:     Well that sa:le (0.2) At- At (.) the vicarage.
```

The sequence is initiated by Lesley from a K+ position with a preannouncement ('you know I'm broiling about something') that Joyce accepts with a request to go on with the story that signals a lack of knowledge about the topic, assess the upcoming story as informative and allows Lesley to start the story in line 4. However, as we have already seen in extract [3], when designated recipients of a projected telling claim a knowledgeable status after the prefatory action, and therefore remark a balance of epistemic access, storytelling is interrupted and interactants either perform a topic shift or let the interaction come to an end. Terasaki's example is also analyzed by Mikesell et al. (2017), who focus on the function of "I know" in line 3:

[18/3b] [KC4:2 in Terasaki, 2004, p. 189]

```
01 A:     Hey we got good news.
02 C:     [What's the good ne]ws,
03 D:     [ I    k  n  o :  w]
     ((5 lines omitted))
09 D:     Except that I don't know what a giant follicular
10        lymphoblastoma is.
11 A:     Who the hell does except a doctor.
```

In similar instances, they argue that with 'I know' speakers "claim to already know what is being reported and thereby convey that the initiating action is unnecessary and inappropriately recipient-designed" (Mikesell et al., 2017, p. 274). 'I know' blocks the preannouncement and positions D as K+ participant, balanced to A's epistemic background. Still, the example also shows how participants

are able to orient conversation with a topical shift. In fact, with the negative declarative in lines 9-10 D repositions as a K- speaker and moves the focus of the conversation from the news to detail related to it.

If sequences can be initiated by K+ speakers' action, the same is true of course for utterances produced by K- speakers. In [19] we can see three examples of polar and open questions that make up three sub-sequences:

[19] [HG:II:25 in Heritage, 2012b, pp. 33-34]

```
01 Nan:     .hhh Dz he 'av 'iz own apa:rt[mint?]
02 Hyl:                                  [.hhhh] Yea:h,=
03 Nan:     =Oh:,
04          (1.0)
05 Nan:     How didju git 'iz number,
06 Hyl:     I(h) (.) c(h)alled infermation 'n San Fr'ncissc(h)[uh!
07 Nan:                                                       [Oh:::::.
08          (.)
09 Nan:     Very cleve:r ,hh=
10 Hyl:     =Thank you[: I- .hh- -hhhhhh hh=
11 Nan:               [W't 'iz last name,
12 Hyl:     =Uh:: Freedla:nd .hh[hh
13 Nan:                         [Oh[:
14 Hyl:                            [('r) Freedlind.
```

Nancy and Hyla are talking about Hyla's new boyfriend, which implies that Hyla has greater epistemic authority on the theme vis-à-vis Nancy. Nancy therefore positions herself as K- and launches three distinct sequences each of which is introduced with a question. The first is a polar, yes/no question, whereas the second and third are open questions that require some details to be communicated in order to produce a satisfying reply. In doing so, Hyla provides the information requested and allows Nancy to move from a K- to a K+ epistemic status. It is important to note that the three subsequences end when Nancy's status shifts from K- to K+. The sequence closing third 'oh' in lines 3, 7 and 13 signal the epistemic shift and the consequent epistemic balance reached between the participants. Heritage (2012b) also stresses how each 'oh' marks the end of the sequence and how talk is renewed by recreating an imbalance with new questions.

Topic and sequence closures are not only provided by third turns with 'oh', but evidence tends to confirm Heritage's (2012b) point that when speakers are able to maintain the seesaw in equilibrium – i.e. to share the same epistemic status – topic and sequence start to wither. Extracts [18] and [19] have already shown how this happens in preannouncing and questioning actions, but the principle applies to other types of sequences such as assessments [20] and requests for confirmation [21]:

[20][IK87 Financial Accounting in Mikesell et al. 2017, p. 278]

```
01 Lyd:     What’re you studying for?
02 Ash:     Financial accounti::ng.
03 Lyd:     (w) Ew:. ((expresses distaste))
04 Ash:     I kno:::w:. ((nasal))
05 Lyd:     >That< sucks.
06          (0.2)
07 Ash:     What about you. Science ‘n stuff
```

Lydia and Ashley, two students, are talking about the subjects they are studying for. After a straight question from a K- position in line 1, Ashley answers by giving the required information and simultaneously, according to Mikesell et al. (2017), expressing lack of enthusiasm for the subject with the lengthening of the vocal in ‘accounting’ and with intonation. Therefore, Lydia produces a negative assessment with her expression and with a non-verbal comment of distaste (line 3). Ashley aligns with her with ‘I know’, as an indicator that the two are holding the same opinion, that Lydia then explicates in line 5. Given the congruence of opinion, and the lack of imbalance with regards to ‘financial accounting’, the topic is closed, as signaled by the pause in line 6 and it is a new question, or a new ‘swing of the seesaw’, to make the interaction progress.

Extract [21] is taken from conversation during dinner. Don is describing a location he has been to when he is interrupted by Beth, who utters a question to request the confirmation of a detail of the telling she is unsure about:

[21] [R-9-US-Chinese Dinner in Gardner, 2007, p.324]

```
01 Don:     They’ve gotta b- Instead of that tiny li’l, scrappy desk in
02          the cornuh? .hh they’ve gotta hu:ge ca:rved wooden. (0.1) desk
03          in the cornuh.
04 Bet:     ‘N China [C i t y ? ]=
05 Don:              [Really sum]=
06 Don:     =in China City. Right.
07 Bet:     hhm.=
08 Ann:     =’S like a ba:r.
09          (1.5)
```

In line 4 Beth positions as K- and relies on Don, the storyteller, to clear any doubts about the location. Don confirms the correctness of Beth’s understanding that the location actually was ‘in China city’ with a full turn repetition followed by ‘right’. According to Gardner (2007), this use of ‘right’ by a K+ speakers can be qualified as “epistemic confirmation” that “asserts Don’s epistemic priority over this information” (2007, p. 324) and in this case too, once the parties reach a balance in what is known, the topic comes to a close, as signaled by the one and a half second pause after line 8. The case of ‘right’ is interesting because once again it provides an indication of the import of epistemics on both action formation and sequence organization at the same time. While in [21] we have seen an example

of ‘right’ uttered from a K+ position, when ‘right’ is uttered by a K- speaker it generally marks epistemic dependency and signals that the K- participant is understanding, thus favoring epistemic balancing, as in extract [22]:

[22] [Holt 2:2 in Bolden et al., 2023, p. 82]

```
01 Les:     Oh hello, c’d I speak t’y’ mother please,
02 Sus:     Yes who is it plea:se,
03 Les:     Missiz Field.
04 Sus:     Right
05 Les:     ‘hankyou,
```

As shown in line 1, Leslie has called to talk to Susan’s mother. Before passing the call, Susan asks the caller to identify, thus displaying that she has not recognized the person. Her lack of access to the caller’s name positions her as less knowledgeable. After Leslie has provided her name (line 3), in this case Susan’s ‘right’ in line 4 registers the reception of information, brings the sequence to a close and eventually launches the fulfillment of the request to talk to her mother. Therefore, the same response token can signal different epistemic statuses and can be used in different sequential positions, as pointed out by Bolden et al. (2023), who also argue that this difference in use can be ascertained to dialectal variation: in American English, right is typically used from a K+ position to provide confirmation or claim epistemic primacy, and tends to collocate with “yeah”, while in British English, data show that it is typically employed from a K- position to register the reception of information, as also confirmed by the tendency to collocate with other change of state tokens such as “oh”.

In sum, these last few examples have shown how epistemic matters can influence not only actions, but entire sequences. Participants keep track of what is known and what is not known to them and adjust their actions in interaction to cope with epistemic imbalances (Heritage, 2012b, p. 49). Heritage’s work on epistemics has been welcomed warmly and considered as “absolutely centrally implicated in the organization of topic” (Sidnell, 2012, p.59), paving the way for new areas of research in interaction. However, his argumentations on the relevance of epistemic status in shaping action formation and sequence organization have recently attracted strong criticism as well. In the next section, I will try to outline the debate on epistemics while addressing some theoretical and methodological issues in the relationship between Conversation Analysis and Ethnomethodology.

1.8 The Debate on Epistemics

The special issue of *Discourse Studies* titled “The Epistemics of Epistemics” (henceforth “EoE”), and edited by Michael Lynch and Douglas Macbeth (2016), offered strong criticism of Heritage’s work, sparking off a fervent debate that included rebuttals, rejoinders and subsequent re-workings of the

main arguments and counterarguments that have animated the EMCA literature over the last six years. The EoE special issue, which was developed from a series of meetings that contributors held online in 2014 and from a panel at the 2015 IIEMCA conference in Kolding, included four main articles by Lindwall, Lymer and Ivarsson (2016), Lynch and Wong (2016), Macbeth, Wong and Lynch (2016) and Macbeth and Wong (2016), along with two commentaries by Button and Sharrock (2016) and Steensig and Heinemann (2016).

The main argument that was put forth by the prosecution deemed epistemics as "a radical turn away from CA's distinctive treatment of talk-in-interaction" (Lynch & Macbeth, 2016, p. 497). In particular, the authors defined Heritage's investigation of epistemics as a cognitivist, hidden, analyst-imposed order, anchored to extra-situational assumptions that mark a clear cut and a disavowal of conversation analytic methods, questioning the relevance and actual presence of epistemic orientations in interaction.

The issue though did not feature any replies from Heritage, nor from any of the scholars who had collaborated with him in developing the domain of epistemics. Indeed, Heritage was invited to provide one, but given the limited time and space allotted (Maynard & Clayman, 2018, p. 128), he initially published a response online on his academia.edu webpage (now retracted), which was later revised and included as part of a second special issue of *Discourse Studies* ("Epistemics - The Rebuttal") edited by Paul Drew (2018a). The rebuttal issue included papers by Heritage (2018), Bolden (2018), Clift and Raymond (2018), Drew (2018b), Maynard and Clayman (2018), Raymond (2018) and showed the fallacies of the EoE group's accusations. The editor of the journal also announced that no other replies were going to be hosted on *Discourse Studies*. However, this did not prevent members of the EoE group from publishing their rejoinders (mainly to Heritage's initial response) on Lynch's website radicalethno.org (Lymer et al., 2017; Lynch, 2018; Macbeth, 2017), and Lynch et al.'s positions have also been reiterated in subsequent articles and books (e.g. Button, Lynch & Sharrock, 2022; Lynch, 2020), notwithstanding the absence of further replies by Heritage and colleagues.

This is probably due to the different inclinations of the two groups for engaging in polemics and debates. While a habit for scholars in the more radical strand of EM (cf. Lynch, 2019b; Rouncefield & Tolmie, 2013, p. 8), to Heritage this may prove to be "tedious" and "a waste of time" for readers and authors (2018, p. 17), especially when the discussion becomes a stagnant rehashing of the same positions that does not seem to lead to anywhere other than to a proverbial 'agreement to disagree'. However, far from being tedious, going through some of the problems raised and dealt with in the numerous publications listed above can offer the chance not only to revise some basic features of conversation analysis and address methodological aspects and potential pitfalls and

misinterpretations related to epistemics, but also to expand the topic beyond epistemics and explore the relationship between EM and CA.

In fact, while certainly key for the discussion, the criticism of epistemics is just one of the many developments which proponents of "radical EM" label under the umbrella of a positivistic, formal analytic turn in CA. Regardless of the frequent use of paralipses stating for example that "divergences from EM's program are not germane to the articles" (Lynch & Macbeth, 2016, p. 497), they are indeed germane, as made explicit by Button and Sharrock's commentary (2016) and by subsequent characterizations of epistemics, along with the use of collections, quantification, coding, experimental laboratory interactions, *et cetera* (Button et al., 2022; Lindwall & Lynch, 2021; Lynch, 2019a; 2019b; 2020; Macbeth, 2020) as a departure from (EM)CA's radical agenda.

In this section I will thus try to address both the specific criticisms of epistemics (par. 1.8.1) and of the so-called "latter-day CA" (Lynch, 2020, inter alia) (par. 1.8.2). Even though the former topic was already touched upon in my MA dissertation (Corradini, 2019), I believe it is worth expanding and integrating the review of the 'micro' accusations to then delve into the 'macro' topic that will set the grounds for the methodological and analytic background of this dissertation.

1.8.1 The Epistemics of Epistemics – Prosecution and Defense

In the EoE special issue, interactional studies of epistemic matters are defined by Lynch and Macbeth (2016) as 'Epistemic Program' (EP). The points raised by the EoE group include the idea that the EP represents a cognitivist domain that aims to substitute sequential analysis while jeopardizing CA analytic methods (e.g., the next turn proof procedure), that its import on action formation and sequence organization is overgeneralized, overemphasized and the result of an analyst-imposed ambiguity and categorization, and that such program is grounded on the construction of ad hoc collections of data that dismiss the centrality of single-case analyses. After Heritage's explicit rejection of a programmatic nature of his research (2018), the EoE dropped the 'EP' label in favor of the alternative formulation of Epistemic Analytic Framework (EAF) first used by Raymond (2018), but not the substance of the arguments.

Cognitivism. Starting with the matter of 'cognitivism', Lynch and Wong (2016) argue that the EAF is cognitive because it invokes cognitive states and cognitive process, the former related to speakers' background knowledge, the latter to change of epistemic status signaled for instance with 'oh', a marker that, according to Macbeth and Wong (2016), represents one of the most exemplar cases of an aprioristic attribution of knowledge by the analysts. This reliance of external cognitive background, a "hidden order of motivation" (Lynch & Wong, 2016, p. 535), is a departure from CA's theoretical and methodological backgrounds, and leads to the definition of the EP/EAF as

> founded on such generalizations about speakers' motivations, intention, moral claims, territorial rights, preference, and presupposition, all of which supposedly 'drive' the sequentially organized details of conversation, while remaining hidden beneath those details. (ibid.)

Therefore, Lynch and Wong see the notion of epistemics as something pre-constructed and imposed on conversation, rather than something that is made evident in the sequential progression of talk.

Despite Heritage's awareness of the risk of generalizations related to epistemics (2012c, p.80), he rejects this accusation by stressing the difference between references to cognitivism within the interaction (i.e. matters related to what participants know or come to know), and of cognitivism as a means of explaining actions with a subjective underlying process (2018, pp. 22-24). As already shown in most of the examples presented earlier, references to motivation, territorial rights and participants tracking of knowledge are based and negotiated within the interaction and are not the result of pre-assignment, but rather of the cumulative displays that participants perform through the enactment of different practices. Heritage himself argued that turns at talk are simultaneously *context-shaped* and *context-renewing* (1984, p. 242) i.e. that an action is to be understood in reference to what came before and at the same time as an addition that renews the context for what will follow. This clearly points to a local, interactional management of epistemics that is endogenously, temporally, and sequentially organized.

Still, the relevance of inferencing pointing to a 'common ground' behind the actual interaction presented in 1.2 cannot be ignored both by the participants and by the analysts. Relatedly, Hutchby and Wooffitt (2008, p. 106) highlight how commonsense knowledge plays a fundamental role in developing analyses. For analysts to provide data with interpretation, they need to take into account aspects of the "culture from which their data have been drawn" (ibid.). The aim, they continue, is to understand what participants are doing, but to do so, some inferential work or "vernacular and linguistic competence" (Arminen, 2008, p. 185), along with sequential analysis, is required for the analyst. In sum, claims about extradimensional notions imposed upon speakers' actions seem to vanish vis-à-vis an interpretation of epistemics that is conceived in terms of a locally managed orientation to what is known, unknown, displayed and accumulated in interaction.

Next-Turn Proof Procedure in Jeopardy. Strictly related to the point of cognitivism is the objection against the primacy of epistemic status in shaping action formation and sequence organization. According to the EoE group, given the cognitive nature of epistemics, relying on it implies "substitution for analyses of the sequential organization of the singular episode" (Lindwall et al., 2016, p. 512). Similarly, Macbeth and Wong (2016) emphasize how 'EP' focuses on ordinal

accounts of epistemic position, rather than on temporal-sequential order (2016, p. 586). With 'ordinal account of epistemic position', they refer to the analyst's attribution of epistemic status and stances (as K+ or K- speakers), which, in their view, marks a departure from the turn-by-turn analysis that is foundational to CA's methodology. For example, they put forth the argument that the analysis of 'oh' as a change of state token is based on third-turn procedures, dismissing the next-turn proof procedure.

In CA, the next-turn proof procedure is a tool that allows analysts to orient the interpretation of actions by looking at what happens in following turns. Identified by Sacks, Schegloff and Jefferson (1974), the proof procedure is based on the first rule of turn-taking, i.e. that speaker-change recurs, or at least occurs (p. 706) and on the fact that "a turn's talk will display its speaker's understanding of other turns' talk" (p. 728) to both co-participants and analysts. Heritage (2018) explains that second and third turns cannot be considered as alternatives or isolated elements (pp. 30-31), as they both are parts of sequential courses of actions where, when A utters a first turn, B's second turn provides evidence of B's understanding for A and, subsequently, A's third turn is the place where B can assess how her response was received. Therefore, both second and third turns are relevant for carrying out sequential actions, and Heritage's treatment of 'oh' (1984a; 1988) has aligned with this mechanism.

Nonetheless, Heritage also points out that "'next turn' will not always be a source of unequivocal validation" (Heritage 2012c, p. 80), as it is not infallible and not the only means on which analyses can be based (2018, p. 28). Consider the following case:

[23] [Midwest 3.4 in Heritage, 2018, p. 29]

```
01 Doc:     Where was her cancer.
02 Pat:    .hhh Well:- she lived in Arizona an:'- she:: wouldn't go tuh
03          doctor much. She only went to chiropractor. (h[u-)
04 Doc:                                                   [Mm [hm
05 Pat:                                                       [An:d she
06          had ('t) like- in her stomach somewhere I guess but (.) thuh-
07          even- that guy had told her tuh go (into) uh medical doctor.
```

In line 1 the doctor initiates the sequence with a straight question about the patient's medical history. However, in line 2 the patient replies producing a narrative instead of an answer, which is given later in lines 5-7, after the back-channeling acknowledgment in turn 3. If we were to interpret the action in line 1 relying only on the reaction provided in the next-turn, Doc's first turn would be understood as something other than a question. In other words, a second turn narrative in place of a second turn answer (i.e. the usual second pair part of the question-answer adjacency pair) does not automatically imply that the first turn is not a question. In this case, epistemic status gives us the wherewithal to understand the sequence as a quest for personal detail about the patient's family history. Indeed, the

doctor accepts the action performed by the patient without correcting it, and at the end of the sequence is able to retrieve the piece of information he was looking for.

Relevance and Ubiquity of Epistemics. The third point put forward by members of the EoE group is that epistemics is actually present only in situations where it is overtly dealt with in the interaction. Furthermore, in these instances as well as in other sequences that recurrently feature in the EAF literature, according to Lindwall et al. (2016), "the epistemic argument adds little to what already seems apparent" from the sequential analysis of the conversation (2016, p. 510). For example, they propose a different analysis of extract [10] presented earlier, and argue that Ida's turn ("I've just rung to tell you the things have arrived from…") can be understood as delivering, and not requesting, information from the use of the verb "tell" and the formulation of the reason for the call, without the need to attribute a K+/K- status to the participants. Relatedly, Lindwall et al. (2016) also display skepticism about the fact that interlocutors constantly keep track of their epistemic status in on-going interactions.

While this view in and of itself contradicts Lynch and Wong's (2016) reference to hidden orders, since epistemic matters are already apparent on the surface and thus legitimately exist, the authors align with the demotion of epistemic status. One of the major problems pertaining to epistemic status is the attribution of always recognizable knowledge states that affect action formation, and of a ubiquitous information exchange engine that drives sequences (Lynch & Wong, 2016, p. 542), a view that is also confirmed, albeit in a less radical fashion, by Steensig and Heinemann (2016, p. 602). Lynch (2020) echoes the point by targeting epistemic status and the metaphor of epistemic engine as grounded on a constructivist ambiguity that is not relevant for the participants, but only for the analyst.

Heritage (2018), Raymond (2018) and Drew (2018a, 2018b) address the issue of the relevance and omnipresence of epistemics in interaction by showing once again how the actions and the orientations that take place in naturally occurring interaction point at this definition. Raymond (2018, p. 67) argues that speakers do manage their first pair parts with a range of interactional and linguistic practices that offer "strong prima facie evidence" (ibid.) of epistemic displays and orientations. He then goes on with his argumentation conceding the point made by Lindwall et al.: if participants did not keep track on epistemic positioning in interactions, then declaratives or questioning sequences characterized by uncertainty with regards to their epistemic status would be dealt with in a straightforward manner i.e. as if what is or is not known by participants would not count at all. He then presents his counterargument with the following example, taken from a 911 call to report a possibly known event by the call-taker:

[24] [MG8: CT2M7 in Raymond, 2018, p. 68]

```
01 CT:     Nine=one=one emergency,
02 CA: ->  Yeah I'd like to report uh fi:re um: I don't know if
03     ->  it's b'n reported already It looks like it's off Old San Pedro?=
04 CT:     =Yeah we're on our way to that [up- up at
05 CA:                                    [(alright)
06 CT:     Two Thirty Five? (.) Near thuh top?
07 CA:     .hh Uh: [(             )]
08 CT:             [Two Thirty Five] an' Old San Pedro?
09 CA:     It looks like Oh Old San Pedro area I:m
10         [(  )] across the way from Tre[verten Oaks
11 CT:     [Okay]                        [Yeah we're on our way to that
12 CA:     Okay th[ank you  ]
13 CT:            [Thank you]
```

In calls to emergency, the caller (CA) usually has a K+ status on the event to be reported, whereas the call taker (CT) positions as a K-. In this case, however, the caller is uncertain about the fact that what he is reporting may already be known to the 911. The design of the turn in lines 2-3 marks a shift from a K+ to a K- positioning, expressed overtly with 'I don't know' and by displaying uncertainty about the location where the fire broke out. The call taker then assumes a K+ status about previous reports and launches an action that aims at making sure that it is the same fire that had already been reported. According to Raymond, the sequence shows the relevance and the speaker's orientation to matters of knowledge in interaction, and the monitoring that participant do of what others know, thus rebutting EoE group's claims.

As far as ubiquity is concerned, Drew's contribution (2018b) focuses on the interplay of epistemics and other interactional domains and areas of inquiry such as turn design and repair with a twofold aim. First of all, he shows how epistemic stance, concretely realized in "the micro properties of word selection" (p. 183), reflects participants epistemic status (p. 171ff.). In particular, Drew refers to the principle of recipient design (Sacks et al., 1974, p. 727), and argues that speakers orient to what they suppose co-speakers know when designing their turns. This is evident for instance in the way participants select greeting forms based on the level of acquaintance and on what they know of others, or in self-corrections to mitigate or upgrade the certainty of their utterances, as in the following case:

[25] [W:PC:1:MJ(1):18 in Drew, 2018b, p. 175]

```
01 J: ->  But the trai:n goes. Does th'train go o:n th' boat?
02 M:     .h .h Ooh I've no idea::. She ha:sn't sai:d.
```

As Drew explains, the speaker in line 1 starts asserting something with a declarative that displays a knowing epistemic stance. However, the utterance is abandoned in favor of an interrogative form that, while downgrading the stance of the utterance, also attributes K+ to the co-speaker. Similar instances

can also be found in cases where two speakers are contesting or competing for epistemic primacy and in general, they confirm the omnipresence of epistemics in interaction.

The second point Drew makes, relatedly, is that omnipresence in interaction does not necessarily mean omni-relevance to analysis (p. 168). While orientations to epistemics are made manifest by speakers in interaction, this does not imply that epistemics is the only domain that is relevant to the ordered organization of talk, nor that it is an alternative to sequential analysis, as argued by the EoE group. Epistemics is one of the many interactional domains that CA's methods have described and systematized. It is not a matter of radicalism between sequential analysis and research on epistemics. The two do not exclude each other. In Drew's words:

> There are phenomena in a huge range of social interactions in which epistemics is central to analysis. But equally there are phenomena that do not require to explore participants' (relative) epistemic status, or their epistemic stances, in order to investigate the properties of these phenomena or the range of practices that may constitute a given phenomenon. (Drew, 2018b, pp. 167-168)

Along the same lines, Heritage (2018) offers an overview of interactional studies on knowledge, in English and in other languages, both in everyday and in institutional settings. He emphatically stresses the communicative nature of his interest in epistemics as "methods that speaker rely upon to produce [and ascribe] recognizable actions" (p. 40), adherent to the ethnomethodological focus on indexicality of social actions, and specifies that, far from being a hidden order of motivation, the engine metaphor is to be understood in terms of public accountability to expand sequences by saying "new things" (p. 42). Finally, like Drew, Heritage remarks his vision of epistemics not as a program, but as one of the orders in conversational organization (p. 44; cf. Heritage, 2008). It is part of the analytic project to understand whether the epistemic order can be relevant or not. Provided that it is there, just like turn-taking, repair, sequencing and other orders (e.g. deontics, benefactives), data and the interpretation of data will guide analysts' findings. From this perspective, epistemics may not always be relevant to the analysis, but is certainly omnipresent in the interaction.

1.8.2. Radicalism and Ethnomethodology

Moving to the topic of radicalism, a recurrent claim made by the EoE concerns the idea that the epistemic order is a departure from conversation analysis' radical agenda (Button & Sharrock, 2016). This point is addressed and rebutted by Maynard and Clayman (2018) but can be further expanded to review the ethnomethodological lineage of CA (Arminen, 2008; Clayman & Maynard, 1995; Clayman et al., 2022; Heritage, 1984b; 2008; Ten Have, 2002), the convergences, divergences, and opportunities for mutual interchange.

According to Maynard and Clayman, "radicalism" can be interpreted as a pursuit of either "far reaching change" or "of independence of or departure from tradition" (2018, p. 122). In the case of EMCA, I would argue that a second distinction may be added, which has to do with the directionality of the change/departure: external, i.e. field-related, and internal, i.e. discipline related. The former has to do with the position of Garfinkel's ethnomethodological enterprise within the broader field of sociology, while the latter focuses on internal divisions and developments that took place in over fifty years of scholarly work.

EM's perspective, in fact, can be seen as a critical response to the sociological environment of the fifties and sixties. As pointed out by Clayman and Maynard (1995), Garfinkel's classic approach rejected "top-down" theories centered around cultural or structural phenomena that pre-determined social order, which instead was seen as a local accomplishment that results from members methods, as they are produced in endogenous, here-and-now situations. Against a "Parsonian backdrop" (Heritage, 1984b, p. 7ff.), Garfinkel emphasized actors' experience as a real time process and put it at the center of the inquiry that aimed to explore "the defining features of mundane activities", the "quiddity" or "just whatness" of social action (Arminen, 2008, p. 168).

Key to this view is Garfinkel's conception of members methods as accountable, reflexive, and indexical. With accountability and reflexivity, Garfinkel assumed that actions are designed so as to be recognizable as such, that there is equivalence between the activity and the procedures that make them "visibly-rational-and-reportable-for-all-practical-purposes" (Garfinkel, 1967, p. vii). With indexicality, Garfinkel hinted at the local, time-bound, and situational properties of members' expressions (ten Have, 2002). Consequently, in EM, methods become both the topic and resource for sociological inquiry, marking a separation from what Garfinkel defined "Formal Analysis", i.e. the attempts to "render scientific propositions in abstract terms […] that will retain a determinate sense across the varied situations where such expressions are intended to apply" (Clayman & Maynard, 1995, p. 11), but fail to bridge the gap between the general and abstract, and the concrete and specific.

The abstraction of generalizations typical of Formal Analysis is presented by Garfinkel with the example of the assemblage of an IKEA piece of furniture, as he highlights how the instructions and illustrations fall short of actually indicating how to perform the activity in space and time, e.g. they do not say to the assembler to count and identify all the parts before starting to work (Garfinkel, 2002, p. 200). EM inquiry, instead, can "recover the accountable work" (Maynard & Clayman, 2018, p. 124) that is done from a formal analytic perspective, due to the aforementioned reflexivity of the methods.

Therefore, the classic ethnomethodological paradigm represented an innovative, radical change and separation from mainstream social science, albeit not without some fierce criticism. Coser

(1975) for instance defined it a method in search of substance, and compared early ethnomethodologists to an inward-looking sect with its own jargon that has "separated in protest from a larger body" (p. 697). Similarly, as once pointed out to me by Claudio Baraldi (pers. com.), the German sociologist Niklas Luhmann claimed that the biggest mistake in the history of American sociology has been to part ways from Parsons' theory.

Despite the 'external' criticism, the reach and innovation of classic EM developed into different areas of inquiry, or legacies (Heritage & Maynard, 2022), that include studies on the organization of work (Lynch, 2022), multimodality (Mondada, 2022), membership categorization analysis (Sacks, 1992) and, of course, conversation analysis (Clayman et al., 2022). Studies in each of these fields have been carried out with different methodological approaches (ten Have, 2002), such as breaching experiments to make sense-making activities prominent (Garfinkel, 1967), auto-ethnographic/post-phenomenological accounts of extra-ordinary situation (Sudnow, 1983), traditional ethnographic fieldwork (Meier zu Verl & Meyer, 2022) and the use of audiovisual recordings and transcriptions of naturally occurring encounters (Sacks, 1984).

However, in later writings (Garfinkel & Wieder, 1992; Garfinkel, 2002), Garfinkel shifted towards a more radical version of EM that is prompted, according to Arminen, by the following question:

> How would this science [EM] be defended against those (such as the later Garfinkel) who would claim that EM understood in this way simply becomes another interpretative social science with all its problems?" (2008, p. 169).

In a quest for the ultimate solution to the topic/resource shift, radical EM emphasizes the centrality of unmediated experience, of the single case, the here and now, while exacerbating the divide with social sciences. The "quiddity" or "just whatness" is replaced by "haecceity" or "just thisness", and from topic of EM inquiry, social scientific activity now coincides with the "rendering theorem". The rendering theorem concerns the relationship between actual experience, a methodic procedure to make sense of the experience and its generalization into a signed object (Clayman & Maynard, 1995). The process is represented as follows:

[ ] → ( )

As explained by Arminen (2008), the squared brackets stand for the members' practice *in vivo,* the right arrow indicates the operations that social scientists perform to describe and explain the practice under analysis, while the round brackets represent the descriptive result of the process of analysis. In other words, for radical EM, analysis implies a process of reification of the phenomena, which are ironicized and turned into signed objects, thus losing their local, endogenous, lived experience.

Radical EM, on the contrary, proposes a non-interpretative approach based on the 'unique adequacy requirement of methods' and the concept of 'praxeological validity'. The former specifies that in order not to lose the details of lived experience, the analyst has to be competent in the use of methods investigated (ten Have, 2002). The latter refers to the idea that the descriptions provided by the analyst should also be read as instructions on how to reproduce the phenomenon itself (Meier zu Verl & Meyer, 2022). As a consequence, the most radical interpretation "[…] of the rendering theorem seems to preclude analysis in *any* form" (Clayman & Maynard, 1995, p. 26), which is substituted by unmediated experience grounded on common sense and on the predominance of vernacular understanding and vulgar competence, over analytical understanding. This approach, characterized as post-analytic ethnomethodology (Lynch, 1993), marks the internal radical departure from classic (or, for some, proto-) ethnomethodology. However, according to Arminen (2008), by denying scientific methods and bonds with anything other than the experience itself, radical EM becomes an endless search for pure form that is inevitably destined to what tries to eschew: it loses its phenomenon.

Still, and to sum up, the two radical moments presented allow us to single out two staples of the EoE critical enterprise and reference to a radical agenda: the rejection of formal analytic procedures and the centrality of single case experience.

1.8.3 Radicalism, CA and Epistemics

Considering what was presented above, the accusation of formal, "constructive analysis" is thus to be understood as an imposition of categorical, scientific generalizations that miss the local organization accomplished by members in practice (Button et al., 2022; Lynch, 2019a, p. 196). In other words, the EoE group sees the use of K+/K- codes, the epistemic engine, and the widespread reliance on collections in the epistemic literature (along with coding, quantification and experimental settings, cf. Macbeth, 2020) as a return to Formal Analysis. The argument is anchored to the fact that one of Garfinkel's early treatment of the topic was part of a paper co-authored with Sacks on the indexical nature of linguistic expressions (Garfinkel & Sacks, 1986[1970]). Sacks' original work thus becomes the "benchmark of a radical project" that has been "corrupted in latter-day CA by the shift toward specimen collection" and epistemic investigations (Maynard & Clayman, 2018, p.129).

Lynch (2020), for instance, contrasts the epistemic engine (Heritage, 2012b) with the metaphor of the inference making machine proposed by Sacks (1992, p. 113). In one of his lectures, Sacks presented this extract taken from a phone call between a member of a suicide prevention center (A) and a man who was told to call the center because he was having marital problems (B). The two

had had four or five previous conversations, but Sacks refers that A did not know anything about the story being reported:

[26] [Sacks, 1992, p. 113]

```
01 A: Yeah, then what happened?
02 B: Okay, in the meantime she [wife of B] says, "Don't ask the child
      nothing." Well, she stepped between me and the child, and I got up
      to walk out the door. When she stepped between me and the child, I
      went to move her out of the way. And then about that time her sister
      had called the police. I don't know how she... what she
03 A: Didn't you smack her one?
04 B: No.
05 A: You're not telling me the story, Mr B.
06 B: Well, you see when you say smack you mean hit.
07 A: Yeah, you shoved her. Is that it?
08 B: Yeah, I shoved her.
```

What Sacks was interested in here was how speaker A was able to infer that there was a physical altercation between speaker B and his wife: the missing link in the narrative between "moving her out of the way" and the arrival of the police, and the fact that there were good, common-sense reasons to reject the negative answer in turn 04. The extract certainly presents challenging aspects to take into consideration and is an example of what research in epistemics may set out to tackle and of the complex interrelations between orders that constitute interactions (Heritage, 2018). However, Lynch opts for an intentionally over-emphatic focus on coding by engaging in a turn-by-turn attribution of K+ and K- codes to highlight the ambiguities of the process and the limitations of the idea that speakers with first-hand knowledge retain epistemic primacy and authority over those with second-hand knowledge. In doing so, he dismisses the institutional nature of the encounter thus not doing justice to the interactional nature of the epistemic analytic framework.

As explained above, my understanding of the EAF is not just (and not at all) a matter of "making unilateral assignments of epistemic rights" (Lynch, 2020, p.157), but to see how these assignments become sequentially relevant in the interaction, how members' knowledge and common ground are negotiated in a way that can lead to the accomplishment of recurrent, accountable practices.

This point leads us to the problem with collections. Maynard and Clayman (2018) explain that while Sacks' initial interest for social reasoning and membership categorization was undoubtably one of his analytic foci, the same can be said for sequential organization and for the pursuit of empirical generalizations (Sacks, 1984). In fact, while the ethnomethodological roots of CA have extensively been recognized (Heritage, 1984b; 2008; Clayman et al., 2022 i.a.), and Garfinkel and Sacks' paper certainly put the properties of indexical expressions on the map as an investigable phenomenon *in se*, in the paper, the programmatic focus remained largely unspecified (Clayman and Maynard, 1995),

and eventually Sacks went on to develop his own empirical, scientific program. As Lynch (2019a) concedes:

> Sacks envisioned the possibility of a science of practical actions that would elucidate formal structures exhibited in actions; structures that are recognized and used by participants to constitute social orders. […] Garfinkel treated the possibilities for achieving formal analysis—discovering and analyzing structures or machineries—as a phenomenon rather than a goal for ethnomethodology. He was less concerned to build a distinct science that would develop its own program of formal analysis. (p. 196).

Therefore, the use of collections does not represent a betrayal of Sacks' original program. On the contrary, it carries on its interest in transforming "our sense of what happened from a matter of a particular interaction to a matter of interactions as products of a machinery" (Sacks, 1984, p. 26).

Furthermore, the methodological steps for building collections imply that the analysis of single instances are both the starting and the finishing line of the enterprise. The identification of a phenomenon starts from the single case and its analysis in context, as "publicly and observably present" (Clift & Raymond, 2018, p. 95) and then becomes the reference point to collect other similar occurrences that display similar properties and systematicity in practice, which can ultimately be used in a comparative way to analyze a particular instance. In this way, CA does not deny the appreciation of the haecceity and details of single action, nor does it put forth that single case analysis are to be discarded (Schegloff, 1987).

Of course, this does not mean that collection building is infallible or that the inclusion of particular instances cannot be contested. In their rebuttal article, Clift and Raymond (2018) respond to Lindwall et al.'s contention that in the fragment discussed earlier as extract [10], epistemic matters are not necessary to recognize the action as doing informing because of the lexical and syntactical packaging of the utterance "I've just rung to tell you". To do so, they compare that instance to the following extract:

[27] [SBL 3.5 R in Clift and Raymond, 2018, p.101]

```
01 Mil:     I've (0.2) prayed abaht it'n evryone e:lse ez prayed about
02          't for me? a:n' uh p tch khhhhhhhh°hh° EN THEY SAY PRAYER
03          CHA:NGES EVRYTHING en (.) e- SO IT'S J'S WO^:NDERF'l UHhh
04          HU[hh
05 Gin:       [Tha::t's right[ °Mill]y°
06 Mil:                    [^uhh! ]hh-huh hu[h
07 Gin: ->                                  [hhh We:ll 'ee wil hh I
08      ->  tell you wha:' wu- (.) eh-ihHe (.) You haven't eaten yet?
09 Mil:     No wir jist[now]eating. ]
10 Gin:               [W'l]why don'cb]u go ahead Milly hh
11          (0.2)
12 Gin:     En u-Ah:'Il sto:p o:n my way down en:nif you feel like (.)
```

```
13          coming with me fi:ne'n:d if y'[do:n't w h y]
14 Mil:                                   [Yer still go]↓*ing.
15          (0.3)
16 Gin:     hh Yeh I think ah'll go o:n.=
```

Clift and Raymond do not give many details about the fragment, but we can presume that the call had been going on for a while since Millie is reporting a story about prayers in the first lines. In this case, the focus is on the use of "tell" in line 8, which does not produce an informing action, but a request for confirmation, and through this direct comparison Clift and Raymond illustrate that the use of "tell" in a turn "does not *a priori* guarantee that what comes next will be a telling." (p. 101). Button et al. (2022) though point out that there is a difference between the use of "tell" in announcing the reason for the call during the opening of a phone conversation as in [10] and the use of "tell" in an idiomatic phrase like "I tell you what", in a middle of an ongoing conversation and in a turn position where it could also be interpreted as an interruption and abandonment of the utterance, as in [27].

While Button et al.'s objection in this case is agreeable, this does not dismiss the fact that what follows the verb "tell" is a declarative formatted utterance ('you haven't eaten yet') which is understood as a question, nor does it mean that every collection in the epistemic literature is to be jettisoned as crafted generalizations. For example, recent studies that take epistemic matters as one of the criteria that guided the collection building phase have been grounded on detailed accounts of how the collections were assembled (cf. Heritage and Raymond, 2021; Raymond and Heritage, 2021; Robinson, 2020 on the relevance of epistemic stance and valence as cross-cutting preferences in the production and understanding of polar questions).

If seen as an attempt to preserve "both the situated specificity and the ordered systematicity" (Mondada, 2022, p. 295) of the phenomena, collections can be one of the many possible points of convergence between EM and CA and can sustain a use of coding and quantification that thrives on the findings of previous EMCA research. As pointed out by Maynard and Clayman (2018), a relationship of interchange and exchange, rather than full-scale criticism and "adherence to some fundamental versions of EM or CA by way of purported radicalism can better motivate further inquiry fully consistent with Garfinkel's as well as Sacks' original initiatives." (p. 133). To say it with Drew, "CA is a science, not a religion" (2018a, p. 10).

Arminen (2008) identifies such a form of scientific EMCA, or ethnomethodologically inspired CA , in the strand of research that focuses on workplace studies, multimodality and practical activities. EMCA, literally understood as a scholarly synthesis that acknowledges continuities and divergences between ethnomethodology and conversation analysis, investigates "social action as situated accomplishments that emerge from their practical management within language, social configuration, and material resources" (p. 186), by retaining talk as the primordial site of intersubjectivity, while

providing analysis of both verbal and physical action in context (p. 188). From this perspective, knowledge displays are made manifest and negotiated in interaction not only in terms of propositional knowledge, but also of practical, procedural competence, or expertise. In the next chapter, I will outline how expertise is oriented to as locally, publicly available interactional domain, and how it is interrelated to the notion of epistemics.

Chapter 2 – Expertise in Interaction: Orientations to Knowing-how and Procedural Knowledge

2.1 Introduction

In defining the concept of epistemic status in chapter 1 (cf. par. 1.4), it has been pointed out that participants' understanding and entitlements to the same experience (e.g., a doctor and a patient watching an X-Ray scan) can vary depending on their different background and access to the specialized domain of knowledge at hand (medical in this case), and that their relative epistemic positions can change or even be overturned in case of change of topic (e.g. if interaction shifts towards the patient's personal history) (Heritage, 2012a). The dynamic, adjustable nature of epistemics hinted at the fact that there may be multiple types, or qualities, of knowledge that participants orient to when displaying knowledge in interaction. Heritage (2013b) himself, in the concluding remarks of his chapter on epistemics in the *Handbook of Conversation Analysis* (Sidnell & Stivers, 2013) has stressed the multidimensionality of epistemics as one of the future directions of investigation.

Over the last few years, in fact, research in epistemics has seen a growing interest in one such type of knowledge which revolves around the domain of procedural, practical knowledge, or knowing-how, and its conventionalized form, 'expertise' (Arminen & Simonen, 2021). Expertise and know-how have been the topic of a workshop held in Helsinki in 2019 and of two panels (one at the 2019 IIEMCA Conference in Mannheim and one at the 17th IPrA Online Conference in 2021), as well as of a Special Issue of *Discourse Studies* (Arminen et al., 2021), which included some of the contributions to the 2019 meetings and offered a first attempt at systematizing the study of expertise in interaction as a domain and its interlinkage with epistemics.

The relevance of procedural knowledge in investigating the organization of members' participation can once again be traced back to Garfinkel's classical studies and experiments. While the experiment presented in 1.2 exemplified the orientation to what is known or not by the parties in interaction in terms of factual knowledge, there are two examples worth mentioning for procedural knowledge. The first has to do with Garfinkel's study of jury deliberations and his interest for 'what makes a jury a jury', which eventually led him to coin the term 'ethnomethodology' (Garfinkel, 1974). Garfinkel observed a preoccupation among jurors for methodological issues such as "demonstrations", "facts", and "opinions" which were used in the interaction with a range of different meanings affecting deliberation on cases (with possible consequent unequal decisions) (Heritage, 1984b, pp. 4-5). The second concerns the breaching experiments with which Garfinkel tried to bring

to surface the methodical organization of practices by breaking social expectations. In one of these, he instructed the experimenters to play a game of tic-tac-toe (or 'noughts and crosses', or 'tris' in Italian) against the subjects, who were to make the first move. The experimenters were supposed to deviate to the rules by either erasing the subject's X/O mark and putting it in a different cell, or by writing their mark on the lines between the cells (Heritage & Clayman, 2010, p.10; Heritage & Maynard, 2022, p. 10). The majority of the subjects objected to the experimenters' behavior as a departure from how the game was supposed to be played, making an orientation to a procedural organization of the activity evident. Studying expertise in interaction from a 'scientific' EMCA perspective thus implies taking into account how these orientations are made relevant in interaction in terms of talk and embodied actions, to investigate the role and relationship of different domains of knowledge in the accomplishment of interactional practices and activities.

This chapter aims at providing an overview of the interactional study of expertise. It starts with the theoretical background on the distinction between knowing-that and knowing-how, skills, and views of competence that constitute the notion of expertise (par. 2.2), to continue with a discussion of the main characterizations of expertise in interaction, its relationship with epistemics, its public and tacit dimensions and some considerations of the role of language and discursive practices (par 2.3), and of some methodological issues concerning the analyst's competence (par. 2.4). The final part is dedicated to the introduction of other two practical domains that are connected to epistemics and expertise: deontics and benefactives.

2.2 Theoretical Background: Knowing-How and Knowing-That

Arminen et al.'s (2021) investigation of expertise in interaction arouses from the distinction between orientations to knowing-that and orientations to knowing-how, as proposed by the philosopher Gilbert Ryle (1945; 2000[1949]). Ryle introduced the concept of knowing-how in opposition to what he defined the "dogma of the ghost in the machine" (2000[1949], p. 28), the predominant view of the intellectualist doctrine informed by the Cartesian body/mind division, according to which intelligence is primarily defined in terms of theory and the activity of theorizing, which takes place in the mind. Consequently, for Ryle the primacy of theory-in-the-mind implied that practical activities are seen as subordinate to a process of internal thinking, they are never "an exercise of intelligence but […] at best, a process introduced and somehow steered by some ulterior act of theorizing" (1945, p. 1).

Contrary to this view, Ryle argued that intelligence could be exercised in practical performance without reducing it to knowledge of truths or facts, and that it could be found in the ways and methods of doing things proficiently. For instance, comparing skilled and 'stupid' chess players, he pointed out that even if the less talented players were told rules, tactics, or maxims during

play, they still would not be able to put that into practice efficiently (1945, p. 5). With knowing-how, in other words, Ryle was concerned with the actualization of knowledge and skills in performance and emphasized that, even when acting is governed by rules, principles, and canons, action is not the result of an aprioristic reflection in the mind:

> Knowing how, then, is a disposition, but not a single-track disposition like a reflex or a habit. Its exercises are observances of rules or canons or the applications of criteria, but they are not tandem operations of theoretically avowing maxims and then putting them into practice. Further, its exercises can be overt or covert, deeds performed or deeds imagined, words spoken aloud or words heard in one's head, pictures painted on canvas or pictures in the mind's eye. Or they can be amalgamations of the two (2000[1949], p. 46).

For Ryle, expertise is thus defined as "dispositional excellence" that co-exists with factual knowledge (or knowing-that) not in the form of subalternate, but in parallel. This disposition can be exercised in different ways, and it has both convergences and divergences with knowing-that: for example, whereas we can talk about learning, finding out or forgetting both factual and procedural information (2000[1949] p. 29), this happens in different ways. Facts can be learned instantaneously; expertise requires repeated training to master competencies.

Related to the theme of learning, Dreyfus and Dreyfus (1986) drew on Ryle's distinction to introduce different levels of expertise that cover the trajectory of skill acquisition from the state of beginner to that of expert. Coming from a phenomenological tradition, the Dreyfuses give prominence to the embodied, experiential development of knowing-how, which, in line with Ryle, often escapes verbal formulations and cannot be reduced to knowing-that, as in the case of a carpenter who knows how to use tools but may struggle with describing the procedure with words (1986, pp. 16-17). The learning of skills, according to Dreyfus and Dreyfus (1986), takes place over time and can be represented as a model that they called "the five stages of skill acquisition" (p. 20ff.): novice, advanced beginner, competent, proficient and expert. These five levels vary according to four categories that include (i) context-free or context-sensitive components of skills; (ii) absent, chosen or experienced perspective in performing a skill; (iii) analytical or intuitive decision-making; (iv) detached or involved commitment and understanding of the skill and the situation. The novice will act by following rules in a context-free, detached situation, e.g. beginners who are learning to drive may be told to shift gear when the engine reaches certain RPM, no matter of the real situation in which they are driving. The expert, on the other hand, relies on involvement and experience to act intuitively: an expert driver does not think of RPM as rules, but is able to hear the engine, read the traffic and the road ahead and decide when to shift, all in a fluid movement. Both Ryle's and Dreyfus and Dreyfus' definitions of expertise are thus based on a holistic view and even though Ryle

mentioned the possibility of reciprocal assessment of other's expertise (cf. 2000[1949], pp. 59-60), their accounts have mostly been concerned with a solipsistic perspective of skill and competence.

Collins and Evans (2007) tried to include the communicative aspect of expertise in their formulation of the 'Periodic Table of Expertise', developed within a program of social scientific studies of expertise and experience. In their typology, the authors talked about 'expertises' in plural form and distinguished between ubiquitous expertise, such as the knowledge of a language, and specialist expertise, the actual mastery of activities. Regarding the latter, they rejected the phenomenological distinction between explicit and embodied knowledge (i.e., knowing-that and knowing-how), proposing that embodied knowledge can include both contributory expertise, i.e. the ability to participate in an activity, and interactional expertise, the ability to talk in a knowledgeable way about a specialized topic, without necessarily being able to perform the embodied actions.

Although Collins and Evans's theory of expertise has been criticized, among other things, for remaining focused on the individual and cognitive account of skill acquisition and for missing out on the interactional nature of expertise in an ethnomethodological sense (cf. Lynch, 2008), the separation of linguistic socialization as interactional expertise echoes Ryle's reference to "words spoken" as a way of actualizing orientation to knowing-how. The role of language in instantiations of expertise has also been remarked by linguistic anthropological studies (e.g. Carr, 2010; Cicourel, 2000) which pointed out the centrality of language and discursive practices to attribute and reveal hidden aspects of expertise, for instance between novice and expert doctors (Cicourel, 2000, p. 72).

The several theoretical nuances of expertise presented thus far, such as the distinction between propositional and practical knowledge, the public and tacit nature of skilled performance the formulation of different stages of skill acquisition contrasting novice/lay and expert knowledge, and the role of language for accessing and displaying know-how have been the ground upon which expertise has been investigated as a domain in social interaction. To this we move in the next section.

2.3 Expertise as an Interactional Domain

The EMCA analytic approach to the study of expertise in interaction takes as its starting point the idea that different qualities of knowledge, such as knowing-that and knowing-how, "may have different, even contradictory, implications for parties in interaction" (Arminen & Simonen, 2021, p. 578). Within the epistemic framework, studies of expertise are thus concerned with the relevance, the orientations, the negotiations, and the consequentiality of procedural knowledge vis-à-vis information-based knowledge, in the temporal, sequential production of talk and action in interaction, as manifested "through specific practices and expert ways of doing things" (ibid., p. 580).

The authors acknowledge that expertise is not a brand-new topic of investigation, as it was already featured in several studies that tackled epistemic issues in institutional or workplace settings (e.g., Gavioli, 2015a; Hutchby, 2006; Mondada, 2013; Peräkylä, 1998). However, Arminen and colleagues aim to cope with a lack of systematicity in the treatment of knowing-how in epistemics, not only in professional contexts, but also in everyday interaction. To do so, in outlining how expertise can be investigated, they include orientations to experience and expertise in performing procedures as well as orientations to know-how in understanding and orienting to the practical implications that lie behind facts in mundane activities (p. 584).

Starting with the interactional orientation to expertise, Arminen and Simonen (2021) explain that this is most evident in pedagogic interactions where trainer and trainee, differing in terms of level of expertise, experience the same situation together. Consider the following extract [1], taken from an air traffic control (ATC) training session where trainer (TR) and trainee (TE) have the same epistemic access to the scene and the same theoretical knowledge of air traffic control. Before the beginning of the transcript, the trainee (TE) has just cleared a runway and then receives a request from a ground vehicle (fire engine, F8) to cross it:

[1] [Arminen & Simonen, 2021, p. 581]

```
01 F8:     fire eight at yankee bravo may I cross runway
02         [one two.]
03 TR: ->  [could charlie] charlie continue approach.
04         (2.0) ((TE looks at the flight information))
05 TE: ->  yes it can.
06 TR: ->  yeah.
07         (3.0)
08 TE: ->  oscar charlie charlie continue approach.
09         (1.0)
10 OCC:    continue approach oscar charlie charlie.
11 TE:     tower.
```

Upon hearing the request from the ground crew, in line 3 the trainer intervenes and anticipates TE's reply by asking a test question that also reminds TE of an incoming aircraft (OCC) that is waiting for instructions. This prompts TE's refocusing on the details of the flight, before providing an affirmative answer to TR (line 4) which is acknowledged as correct (line 5). Consequently, TE gives priority to OCC and suspends the answer to the fire engine. What Arminen and Simonen (2021) point out here is that TR's intervention and test question make explicit an orientation to the procedure of ATC work, namely that air traffic takes precedence over ground traffic, and display that TR knows what should be done next. The orientation to procedural knowledge guides the trainee in performing the task both by alerting and directing to the most incumbent professional judgment to be made and by confirming the correct reading of the air space.

A similar orientation to different levels of expertise is also reported by van Braak and Huiskes in a study on doctor/resident teaching interactions (2022). The authors account for two main discursive practices with which expertise is actualized, which are defined as 'requested expertise' and 'licensed expertise'. The former usually comes in second position in situations where expert doctors are required to confirm and support residents' claims or decisions. The latter is operationalized in sequential environments where the display of "doing being an expert" builds, but is not conditionally relevant, on previous talk to provide clarification on hospital procedures (p. 6).

Expertise, however, is not only relevant in teaching or professional settings. As an example of the role of expertise in mundane activities, Arminen and Simonen (2021) present the following extract where "parenting" skills are taken into account. In the extract, a health visitor (HV) is commenting on the sucking behavior of a newborn baby with his parents:

[2] [Heritage & Sefi, 1992, p. 367, in Arminen & Simonen, 2021, p. 585]

```
01 HV:     He's enjoying that [isn't he.
02 F:                         [°Yes he certainly is°=
03 M:      =He's not hungry 'cus (h)he's ju(h)st (h)had 'iz bottle .hhh
```

The different answers by the father (F) and the mother (M) display, Arminen and Simonen argue, the difference between knowing a fact and understanding the implications of a fact. While the father's reply to HV's comment is a straightforward agreement, the mother takes a defensive stance that signals her understanding of the comment as implying blame. She thus anticipates potential trouble by emphasizing that the baby had just eaten, and in doing so, she displays a knowledge-how of the visit as an institutional encounter and of the competence required for her role of mother. The father, on the other hand, treats the commentary as a seeable and accessible fact. The two extracts therefore suggest that even in ordinary activities, there can be a gradient of expert levels relative to different areas of expertise, both professional and ordinary, which is socially organized and displayed in interaction in a complex relationship with the broader domain on epistemics.

2.3.1 Expertise and Epistemics

In positioning the study of expertise in interaction, Arminen et al. (2021) recognize the undeniable intersection with epistemics and do not aim to provide an alternative to or subvert its framework. On the contrary, they aim to contribute to better our understanding of how knowledge is socially negotiated in interaction by focusing on a specific domain of knowledge, expertise, as an integral, but detachable domain that at times can work in contradiction to participants' propositional knowledge displays.

The idea of the interoperability of different knowledge domains was already foreseen, and welcomed, by Heritage. For instance, Heritage (2011) built on Sacks' (1992) distinction between knowledge and experience and described how access to knowledge and access to experience may entail different rights and responsibilities in the evaluation on emphatic moments. Expertise follows a similar path, introducing differences and similarities with the study of knowledgeability.

Arminen and Simonen (2021) talk about an expert status and expert gradients, drawing on Heritage's framework of epistemics. However, the two systems encompass differences that are due to the Rylean distinction presented above: while knowing-that can be shared and brought to equal access as transient information, this does not necessarily mean that speakers have equal know-how, as shown in extract [1].

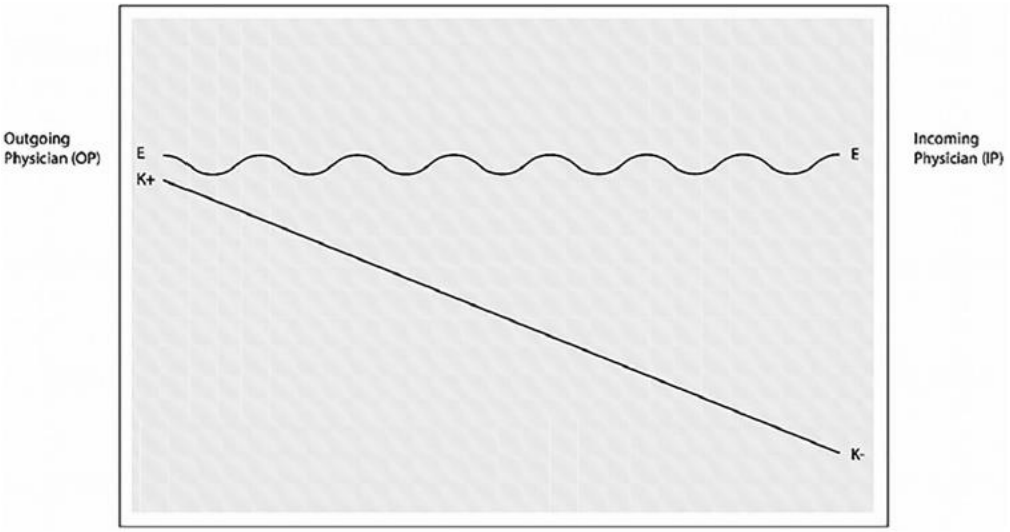
To cope with the potential incongruence between the two domains, Harms et al. (2021) formalized the expertise gradient by introducing E+/E- positions and investigated its interrelation with epistemic positions (K+/K-), in terms of factual knowledge. By analyzing interactions in simulated intensive care unit shift handovers between outgoing physicians (OPs) and incoming physicians (IPs), they identified that physicians oriented to two domains of knowledge: knowledge of facts related to the patient's status, over which OPs were found to have more authority, and knowledge of clinical procedure, reasoning and practice, which instead was treated as shared by both OPs and IPs. While the former can be considered pertaining to factual knowledge, the latter displays an orientation to expertise, as it can be seen in the following extract, featuring the English translation of a conversation between two Dutch doctors:

[3] [Harms et al., 2021, p. 640 (adapted)]

```
01 OP:     uh also an ECG was made at the emergency department here that
02         did not really show any (.) clear abnormalities
03         in any case no ST elevation or negative T or signs of ischemia.
O4 IP:     hmhm
05 OP: ->  uh off the top of my head we do not have troponins yet,
06         (0.6)
07 OP: ->  and the blood gas has (.) just come in I see
```

In completing the simulated shift handover, the OP is passing on information about the patient with heart issues to the IP. Harms et al. (2021) focus on the different discursive practices employed when referring to the patient and the procedures. On the one hand, the piece of news concerning the patient's ECG and the results of the monitoring belong to the OP's territory of information and are presented as new to the IP, as marked by the use of the indefinite article "an" (line 1). With regards to the patient's conditions, the OP is in K+ position and the IP in K-. However, Harms et al. argue that the formulations the diagnostic procedures that OP does in line 5-7 ("we do not have troponins yet", "the blood gas") suggest an attribution from OP to IP of shared competence of clinical practice: troponins

and blood gas are presented as known, expected measurements to be performed in a situation where a patient suffers from cardiac problems, as also suggested by the use of definite article or no article. In addition, the clinical reasoning that is verbalized in line 3 addresses explicitly the clinical competence of the IP. In sum, there seems to be an orientation to both balances and imbalances of knowledge, depending on the domain: the relative epistemics position about the patient can be represented with a steep gradient, whereas the relative expert position about medicine remains on a horizontal gradient, as shown in the following graph in Harms et al. (2021, p. 648).



Harms et al.'s (2021) study thus brings about two important considerations for the study of expertise. First, it shows one of the ways in which different domains of epistemics can be oriented to simultaneously in the practical performance of activities. In the air traffic control interaction discussed above (cf. [1]), for instance, the gradients were flipped, with equal factual knowledge, but steep expert positions. Studying expertise as part of epistemics may lead to systematize how different access to knowledge and expertise are procedurally relevant to interaction, and to reimagine Heritage's epistemic seesaw as a four-way seesaw (at least, cf. Nishizaka, 2021 on the tie between knowledge and perception). Second, the emphasis on shared specialized language and discursive practices opens up the investigation of one of the resources with which expert participants constitute their common ground, when expertise is considered as socially organized, and not as a solipsistic account.

2.3.2 Expertise and Discursive Practices

Being the primordial site of social interaction, the micro-properties of turn design, or of talk and language use more in general, represent a key point to ground displays not only of knowledge-that, as presented in chapter 1, but also of knowledge-how. The idea that expertise may be assessed based on the use of discursive practices was already envisaged in Clark's notion of common ground and in

the collaborative theory of reference (Clark, 1992; Clark & Wilkes-Gibbs, 1986), and experimental studies have demonstrated that participants do track and adjust the way they speak according to coparticipants' level of expertise (e.g. Isaacs & Clark, 1987). Admittedly, Isaacs & Clark's definition of expertise is more concerned with factual knowledge than with orientations to procedural competence, since their experiment was based on two groups of people with different degrees of knowledge about New York City who were asked to arrange ten pictures of landmarks of the city while discussing about it. Still, the results indicated that both 'novices' and 'experts' were capable of assessing each other's knowledge right from the start and of then designing their turns at talk to adapt to the co-interlocutor, in line with Sacks and Schegloff's (1979) findings on preference for reference organization. For example, former New Yorkers' use of proper names decreased when they realized the other party did not know anything about the city, whereas novices relied more on content description.

Despite the focus on knowing-that in Isaacs and Clark (1987), the idea that word-selection and specialized jargon can be one of the resources with which participants display orientation to their status of experts or novices, as suggested by Harms et al. (2021), resonates with previous conversation analytic studies on expertise as interactional accomplishment. Kitzinger and Mandelbaum (2013) for instance argue that the choice to use specialized terminology in place of explicit lay formulations can be relevant to the construction of expert identities and procedures in situ, as shown in extract [4], which comes from a call to British Crisis helpline:

[4] BCC 3 in Kitzinger & Mandelbaum, 2013, p. 189]

```
01 Cal:     <I suffered (0.2) toxemia preeclampsia (.)
02          you name it. I suffered it.
03          (.)
04 Clt: ->  toxemia IS preeclampsia by [the way ]
05 Cal:                               [Oh sorry] yes
06          [(                 )]
07 Clt: ->  [It's alright I just]= SAY that because if you're dealing
08      ->  with paralegal things and everything it's important to know.
09 Cal:     mm[m]
```

In reporting a syndrome that she suffered from, the caller inappropriately uses the medical expressions "toxemia preeclampsia" by combining two synonyms. The call-taker (Clt) repairs the formulation specifying the semantic relationship between the words (line 4) and then accounts for the other-initiated other repair by reference to potential legal implications of the disease that may benefit from the correction (lines 7-8). What is worth pointing out here is that the use of specialized words makes available and accountable the competence and know-how of the speaker in using the words correctly. In this case, it displays a lack of expertise on behalf of the caller, which is, in itself, recognized in line

2 (‘you name it’), and at the same time it offers the opportunity for the call-taker to display her expertise in the use of medical terminology, but also the potential consequences that a wrong wording of a disease may have for paralegal implications. Knowledge-that and how, seen in this way, are not only claimed, but demonstrated in relation to procedural implications and institutional activities.

This leads us to the second point where language can be one of the resources that provides access to expertise: the distinction between claiming and demonstrating. This was first articulated by Sacks in one of his lectures, where he used the following invented examples to illustrate the difference between the two concepts:

[5] [Sacks, 1992, II, p. 141]

```
01  A:     where are you staying
02  B:     Pacific Palisades
03a A:     oh at the west side of town
      vs.
03b B:     oh Pacific Palisades
```

While answer 3a provides a reformulation of the place reference and a display of recognition, answer 3b simply repeats the information. According to Sacks, the first answer demonstrates knowledge of the location and of understanding, while the latter is limited to claiming to know. Discussions of this distinction (see Enfield, 2011; Heritage, 2007; Mondada, 2011) point out that answers like 3a explicitly demonstrating knowledge and understanding are rare in interaction, for mainly two reasons: the first is that a demonstration of understanding would presumably lead to an interruption of the progressivity of talk with an insert-sequence; the second, related to the first, has to do with the fact that an overt display may draw attention to the demonstration itself, which in turn could be understood as a request for confirmation, or a display that what was said by A was not actually known to B. As a matter of fact, Heritage (2007) reports that sequences featuring explicit demonstrations are extremely rare and, as pointed out by Mondada (2011) “most often talk proceeds with tacit claims of recognition” (p. 544).

However, if conceived in relation to the notion of expertise, the distinction between claiming and demonstrating can fruitfully be applied to recognize orientation to expert behavior either in verbal or embodied ways. Enfield (2011), in fact, relies on Ryle’s reference to “assemblages of dispositions” and dispositional excellence in the formulation of his notion of status, and in particular, in relation to enablements. From this perspective, expertise as competent practice can be understood in terms of what “one can do”, which is interwoven with “what one can know”, and forms part of one’s status. Expertise, like knowledge and understanding, can therefore be claimed or demonstrated in (inter)action, remain tacit, or made publicly available by relying both on language and embodied actions.

In addition to the use of specialized language, one of the areas where the interrelation between discourse practices and procedural competence emerges as a demonstration of competence concerns Goodwin's idea that language "can be used by members of a profession to shape events in the domains subject to their professional scrutiny" (1994, p. 606) or activity and perception more in general. Following Goodwin, Arminen and Simonen (2021) argue that the expertise of a member of a professional community relies on the ability to understand, address and "turn into an object of knowledge" the contingency of here-and-now experience within a professional domain in a way that is distinct from lay perception. Discursive practices, in this case, work to "translate" events in professional terms: procedures and competence are situated and actualized "within a web of discursive practices", that make them "transparent" (Goodwin, 1996, p. 398). Consider extract [6], which is taken from the Rodney King trial in Los Angeles in 1993. Four police officers were put on trial after an amateur video of their beating of Rodney King, an African American citizen, was circulated on television. In the extract, the defense (Def) has called an expert witness (Exp) to testimony in order to offer his professional account of the footage:

[6] [Goodwin, 1994, p. 617]

```
01 Def:    Four oh five, oh one. We see a blow being delivered.
02         Is that correct.
03 Exp:    That's correct. The- force has been again escalated
04         (0.3) to the level it had been previously, (0.4)
05         and the de-escalation has ceased.
06 Def:    And at- At this point which is, for the record four thirteen
07         twenty nine, (0.4) we see a blow being struck and thus the end
08         of the period of, de-escalation? Is that correct, Captain.
09 Exp:    That's correct. Force has now been elevated to the previous
10         level, (0.6) after this period of de-escalation.
```

While playing the tape, the defense lawyer formulates the events from a lay perspective. In line 1 he mentions "a blow being delivered" and asks the witness to confirm the correctness of his view, which is done at the beginning of line 3. However, in doing so, the expert witness changes the framework, or "coding scheme" (Goodwin, 1994, p. 617) of the description and translates the action on the screen in police terminology. The "blow" is rendered in terms of "force" that is "escalated or de-escalated" without any use of agentive referents, thus offering a different interpretation of the beating from the perspective of competent, masterful and systematic police work, and not as uncontrolled violence (Goodwin, 1994; Arminen & Simonen, 2021).

Goodwin's treatment of "professional vision" (1994; 2018) is strictly related to the relationship between knowledge and perception. These two concepts can be mutually informative, but also inconsistent, as pointed out by Nishizaka (2021) and therefore should be conceptually separated. In fact, seeing a tree in vivo, in a precise moment, and knowing from past experience or

hearsay that there is a tree in the garden belong to two different conceptual orders, which may contribute differently to the implementation of actions in interaction. Indeed, Nishizaka (2021) shows how participants involved in outdoor activities such as route reading for trekking, and skewering fish implement their action while orienting to different sets of knowledge that can either be perception-based or knowledge-based. Nishizaka's analysis suggest that "knowing" and "seeing" can be treated as separated domains that contribute to knowledge.

The concept of "professional vision", i.e. the "socially organized ways of seeing and understanding events that are answerable to the distinctive interest of a particular social group" (Goodwin, 1994, p. 606), instead brings together perception and professional expert knowledge as a locally constructed, endogenous phenomenon of interaction. In other words, it adds a third level, "knowing how to see" (and render verbally), to the concurrent domains that operate in interaction, which have been applied extensively to study orientations to expertise both in terms of public and tacit displays of skilled performance.

In conclusion, this brief overview has pointed out how language contributes to the social display and negotiation of expertise in interaction in terms of use of specialized jargon and identities, in making available both claims and demonstrations of skillful procedures and reasoning, and in presenting a professional account of a perceptual field as public demonstrations. The next section will focus on this last point by considering how perception and knowledge come into play in the public and tacit realms of expertise.

2.3.3 Public and Tacit Dimensions of Expertise

Among the studies that have investigated expertise as an interactional order, we can distinguish between two main areas of research: one concerned with how expertise and expert roles are made publicly relevant in contexts where talk reflects orientations to expertise and epistemics as a locally constructed activity in interaction, such as expert contributions to broadcast talk in media settings (e.g. Corradini, 2019; Fele & Campagnolo, 2021; Hutchby, 2006; Lindwall & Lynch, 2021); the other concerned with the tacit, implicit orientations to members' professional competence in performing the task at hand, for instance in workplace settings (e.g. Bassetti, 2021) or in embodied leisure or sporting activities (e.g. Jenkings, 2013).

Starting from public displays of expertise, Fele and Campagnolo (2021) study post-game analysis of football matches as a perspicuous setting where "expertise" as 'knowing how to see' is concretely enacted in the way an expert commentator instructs the audience to appreciate relevant details of technical play, by deploying multiple resources that include discursive, embodied and video practices. Consider the following extract, where the analyst, a former British player, is comparing

two instances of a similar episode, an indirect free kick, arranged in split screen mode on a touch screen:

[7] [Fele & Campagnolo, 2021, p. 624]

34 #9 what's the difference? #10 (1.0)

#9 presses control button

#10 presses control button

35 #11 the difference is they've got no one in that role,

#11points to Oscar

36 that #12 Oscar is taking up there, #13 in this position.

#12 pointing

#13points to the right screen

37 that's the big difference.

Before the beginning of the transcript, the analyst has circled the disposition in line of the blue players (the white circular arrow in picture #9), who are defending their goal from a potential cross coming from the red player at the bottom of the screen. Having highlighted the similar arrangement of defensive players, in line 34 the analyst asks a rhetorical question about the difference between the two stills, which works as a preannouncement of the upcoming display. He then clears the pictures (#10) and points with the pen to a player which was guarding the near side of the area (#11 and #12) with the use of complementary meaning-making practices: the verbal identification and highlighting of "that role", the player ("Oscar") and the use of deictic terms, together with the movement of the pen that point to the empty space on the right screen (#13). Expertise here is thus enacted in multiple ways: by means of comparison, the analyst is capable of "making concretely visible an absence" (p. 625) through the selection of relevant details from the pictures, but at the same time he is also capable of instructing and guiding the audience by manipulating the footage with the operationalization of the

touchscreen. The multiple resources make publicly available the expert, multi-layered work that the analyst is doing in deploying professional vision for an overhearing audience.

The publicity of expert vision can also be debated and contested, as shown by Lindwall and Lynch's (2021) analysis of an interview that took place at the end of a professional hockey game. During the game, the interviewee had delivered a stiff hit when bodychecking one of his opponents, who remained unconscious. The hit was not sanctioned by the referee but became a highly debated topic for both fans and experts after the game. Lindwall and Lynch's argument revolves around the ways in which interviewer and interviewee frame and problematize expert vision and legitimate expertise. While the interviewer's interpretation of the hit implied that it was a cheap shot that should have been penalized with a foul, the interviewed player (IE) tries to reject the blame:

[8] [Lindwall & Lynch, 2021, p. 658]

```
01 IR:     You: didn't know that your elbow came up and
02         (0.3)>hit him in the head?<
03         (1.7)
04 IE:     Are you asking me or are you telling me,
05 IR:     No I'm asking.
06         (0.3)
07 IE:     Are you an expert?
08         (0.6)
09 IR:     No it was on the replay.
10         (0.3)
11 IE:     So you're an expert.
12         (0.3)
13 IR:     No it was on the replay.
```

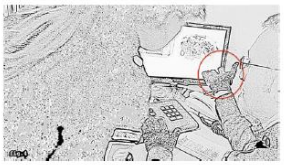
The formulation of the question in line 1 presents the hit as an unquestionable fact. Instead of answering, the player relies on counter-questions to neutralize the first move. The IE anchors his argument to the fact that the hit was something visible and accessible to everyone ("it was on the replay"), whereas the player contests IR's competence in seeing what is relevant on the screen, due to the fact that he is not part of group of professionals that gain first-hand knowledge and experience of hockey. In this way, as the authors put it, "seeing the video evidence as an infraction (or not) is a matter for 'expert' determination whereas the reporter invokes what might be called *seeing simpliciter*, requiring no special qualification" (Lindwall & Lynch, 2021, p. 661). In this case, consequently, seeing and formulating are open to debate, and publicly contested, to put forth alternative interpretations of the same visual experience.

While the two studies just discussed exemplify how expertise can be enacted and even explicitly topicalized, when members of a certain professional or specialized group perform ordinary tasks, expertise can remain tacitly under the surface of interaction and identified in the smooth, flawless performance of dispositional excellence. Bassetti (2021) for example investigates how

professional vision constitutes the tacit grounds for accomplishing airport security work. Based on an ethnomethodological ethnography of teamwork at security checks, she shows how the objects of vision "are not made intelligible through explicit descriptions, inscriptions or instructions on how to look" (Bassetti, 2021, p. 599), but are rather acted upon by taking for granted the competence and ability of the co-workers, when no problems arise. As explained by Bassetti, security line teams include three members with different assignments: the unpacker, who tells passengers to remove liquid from their baggage and handles the queue; the screener, who keeps track of the X-ray monitors, and the attender, who stays at the metal detector and manually inspects luggage when required (2021, p. 601). The work consists of checking that no problematic objects, either dangerous or prohibited (e.g. liquids over 100 ml) are taken on the plane. In the following extract, the screener has just identified a problematic object and requested the presence of the attender, who approaches the monitor:

[9] [Bassetti, 2021, p. 607]

```
3 SC   (0.7)◊ + §(0.3)§#
        ->◊looks at Cmonit.◊looks at AT-->
           ->§.....§Rhand points Cmonitor-->
  AT                §Ecco:m◊i@
                     Here I am
                           >>@approaches-->
                     #fig.3
4 SC   (1.5) @◊ΔB§@e(h)#h
                Be(h)h
             ->◊looks at Cmonitor-->
                §Rhand palm up-->
  at       ->@....@bends over Cmonitor-->
              Δlooks at Cmonitor-->
                    #fig.4
5 sc          ->◊#looks at AT—>>
        ->§,,§Rhand on Lwrist-->>
  at       ->@,,,,@#turns torso—@departs-->>
           ->Δ,,,,Δ#looks to belt-->>
                  #fig.5
```



In line 3 the attender (AT) uses a presentative ("here I am") to signal his presence, while the screener's (SC) right hand is already pointing to the monitor to establish a shared domain of scrutiny. Once this is established, SC opens the palm of his right hand and accompanies the movement with an interjection ("beh", i.e. "well"), while AT is looking at the screen. In line 5, AT departs from the monitor towards the belt to remove the prohibited object. Bassetti stresses how the screener relies on the colleague's competence in understanding both the problem and the procedure. In other words, neither the formulation and discussion of the object, nor the consequent request to intervene were topicalized or made publicly available. The showing of the monitor is sufficient to establish what is implicit, i.e. that there is an issue with a bag that the attender needs to deal with, and its understanding

is displayed by AT via locomotion, by departing and intervening. The orientation to the co-worker's know-how and the display of common-ground and professional competence is thus visible in the fact that the team is acting like a well-oiled machine in accomplishing the work. As a matter of fact, Bassetti (2021) also shows that security members explicitly account for their actions only when expertise is challenged, e.g. by a misreading of the image or a mistake. In these cases, expertise moves from the background to the forefront and is explicitly negotiated. However, when no such problems occur, expertise remains tacitly taken-for-granted and is demonstrated in performance, rather than in words. This is true not only for working activities, but also for leisure or sporting ones. Jenkings (2013) for instance points out that in rock-climbing, lack of verbal communication is one of the ways with which climbers display expertise and familiarity with both sport and collaborative teamwork.

In conclusion, in this section I have tried to single out some of the features that can contribute to the systematic study of expertise and knowing-how in interaction, namely the relationship with the epistemic framework in determining orientation to concurring epistemic matters, the role of language in claiming and displaying expertise, and how it can be treated either as explicitly or implicitly organized in social interaction. In the next section, I will address some methodological issues that result from this overview.

2.4 Methodological issues

In the light of what has been discussed in section 2.3, there are two methodological issues that should be considered in relation to expertise in interaction: the sometimes-problematic entanglement and coincidence of knowing-that and knowing-how, and the role of the analyst's knowledge and competence in seeing the distinction.

Starting from the know-that/know-how distinction, we have defined the former in terms of knowledge of facts and information, while the latter is concerned with orientations to action, procedures and reasoning. In addition, both can be displayed by means of language use in form of discursive practices and can be considered as different domains of knowledge that contribute to the organization of interaction. Nonetheless, there can be situations where the professional task or the situated trajectory of the interaction may imply that (i) an orientation to knowledge-how becomes generalized into knowledge-that; (ii) knowledge-that constitutes *in se* the grounds for performing a task, which may pose a challenge to the analysts' attempts to distinguish between the two.

For instance, going back to public displays of expertise in media settings, Fele and Campagnolo (2021) argue that reference to knowledge claims of first-hand experience, hence to the broader domain of epistemics, concur to the technical explanation and analysis when analysts try 'to fill in the shoes' of the players on the field. When the enactment of professional vision and the

assemblage and manipulation of the video are not sufficient to ground the game analysis, expertise is discursively negotiated by reference to experience and by adopting the players' perspective. This also happens, and most frequently, in live sports commentaries, where, due to time constraints of the ongoing action, analysts do not have the chance to manipulate video and rely solely on discursive practices to display and negotiate their professional competence. In my MA dissertation (Corradini, 2019), I focused on the ways in which commentators acknowledge experts' 'know-how' in order to organize actions in commentary. This work was also presented as a contribution to Arminen and Koole's panel on orientations to knowing-how at IpRA 2021 and the presentation considered how experts refer to their competence to make explicit claims about players' feelings and behaviors. However, as Tom Koole put it (pers. com.), the orientation to know-how lives on the edge of becoming a "generalized knowing-that". The following extract (my data) comes from the first inning of a baseball game commentary. The player at bat, Fowler, from the visiting team, has fallen behind 0-2 in the count and the crowd is roaring for the pitcher (Syndergaard) to deliver the third and final strike to eliminate the batter. At this point, the batter steps off from the plate and asks the umpire to call time and reset the pitching sequence. In the extract, the commentators, two analysts (AN1, AN2) and the play-by-play commentator (PBP), discuss Fowler's move:

[10] [MLB on TBS]

```
01 AN1:     good move there by Fowler (.) quiet the crowd down
02          (.) slo:w (.) Syndergaard down.
03          (3.5) ((players reset))
04 PBP:     the oh two,
05          (3.0) ((pitch is delivered))
06 AN2:     it's interesting when you're at the plate, (.) and I can-
07      ->  my experience at Yankee stadium when you get two strikes and
08      ->  the fa:ns start yellin' for the strike[out,]
09 AN1:                                           [°ri ]ght°
10 AN2: ->  you wanna quiet that down you wanna get out of the box
11      ->  and say okay I'll make you start all over again.
```

Fowler's move is initially positively assessed by AN1 in lines 1-2. After the oh-two pitch, which resulted in a foul ball, AN2 goes back to the request for time and frames the analysis by first, referring it in general terms, with the use of a generic "you" (Kamio, 2000), in line 6, which works as [players in similar circumstances], second, legitimizing the generalization by inserting an explicit reference to his experience as a player in similar situations (line 7), and third, by presenting how players are supposed to behave when facing a decisive pitch in a hostile environment (lines 10-11). In this case, experience and knowing-how are the discursive grounds that transform the specificity of the single occasion into a generalization of behavior which, while certainly involving procedural orientations, is presented to the audience as a claim of fact.

The entanglement of knowing-how and knowing-that is difficult to unravel in situations where they are so mutually informative as in the sports commentary example. Similar instances can also be found in other media settings, as, for instance in Hutchby's (2006) work on advice-giving calls in radio shows. In this type of institutional interaction, experts' display of knowledge is mobilized to provide procedural advice and indications on how to act not only to the caller, but to the entire audience of the show, thus also adding a deontic dimension to the issue (cf. par. 2.5). Additionally, if we think of activities like guided tours (Gavioli, 2015a; Mondada, 2013), which presuppose that the guide's competence is put into practice precisely by "displaying knowledge in comments and explanations" (Mondada, 2013, p. 622), it becomes evident how discerning potentially fuzzy domains of knowledge may pose a challenge to the analyst.

To partially cope with that, and to avoid ascribing expertise in terms of professional titles, Arminen et al. (2021) remind to the importance of maintaining an agnostic stance towards the data, based on what parties make relevant in talk, while applying what Arminen and Simonen call "a special skill from the analyst" (2021, p. 587). This leads us to the second methodological point about the analyst's know-how of the domain under investigation. As they put it:

> When an agent orients to expert knowledge or expertise that is taken for granted in the practice in question but known to outsiders, the recognizability of the activity may depend on the analyst's ability to see the locally relevant distinctions. In other words, *the analysis of expert action is dependent on sufficient knowledge to be able to recognize what the activities mean for the parties themselves*. (Arminen & Simonen, 2021, p. 586, authors' emphasis).

From a methodological perspective, what they argue is that, in order to study expertise, the analyst may need to be, and benefit from being, an expert as well, so as to appreciate the tacit, silent nuances of expert conduct that may be inbuilt in efficient performance. The question to tackle then is to what extent one should be expert, i.e. how much expertise is needed to be able to appreciate the masterful work that members perform in talk and action in interaction. This a recurrent question in the ethnomethodological tradition, and the 'extreme' answer would coincide with what Garfinkel (2002; see also Garfinkel & Wieder, 1992) called "unique adequacy requirement of methods" (cf. 1.8.2).

With unique adequacy (UA) Garfinkel refers to the "necessary policy" that researchers need to provide a valid ethnomethodological description, i.e. the fact that they need to be familiar with the methods, and be recognized as competent members in situ of the setting or activity that is the object of study (Hofstetter, 2022; Jenkings, 2018). A convoluted topic, UA designates a concept that has been conceived in different forms, e.g. by separating a strong version and a weak version of UA. The weak version refers to the requirement of having vulgar competence of the methods and skills of the activity as a methodological requirement; the strong version adds to that the concept of 'praxeological

validity', i.e. it requires the researcher to be able to provide adequate descriptions that would be understood as instructed actions by members, and for this reason this version of UA is also known as "presentational" (Hofstetter, 2022).

Less extreme versions of UA are nonetheless possible, as pointed out by Jenkings (2018). Jenkings' interest for the military and militarization led him to question how to acquire sufficient competence about the field without having enrolled in the army or having being part of it. While emphasizing the importance of accounting for the acquisition of competence and membership constituted in situ, what he renders with the metaphor of the researcher's "biography" (2018, p. 41), Jenkings points out that it is possible to acquire competence from indirect sources such as audiovisual recordings, the study of the literature about a specific topic, the reliance of other members' non-academic analysis or topicalization of skills (e.g. Ivarsson, 2017) or during the ethnographic phase of data collection (e.g. Bassetti, 2021). Or to acquire what Collins and Evans (2007) called "interactional expertise", the ability to understand, communicate and contribute to a field without necessarily having the competence to perform the practical activities of the domain. For Jenkings (2018), UA is a matter of methodological decision, which can shape the extent and the interest in the phenomena that one seeks to analyze but should not daunt any attempt to inspect members' competent practices. On the contrary, it can enrich the analysis by bringing in "the analyst's context-sensitive understanding of practice studied" (Arminen & Simonen, 2021, p. 591).

2.5 Knowledge(-how) and Other Domains

Having presented the interactional focus on expertise and knowing-how within the framework of epistemics, this final section of the chapter aims to add to the discussion other interactional domains that are strictly related to the performance of actions: the deontic order and the benefactive order.

Conversation analytic studies in recent years have delved into the organization of directive-commissive actions such as offering, requesting, proposing and suggesting (Couper-Kuhlen, 2014), which in and of themselves entail an orientation to a future performance of actions, or to the capability or knowledgeability or entitlement of one of the parties involved to perform the recruited action.

With regards to requests, for instance, Curl and Drew (2008) have shown that different formats are typically used to display an assessment of the contingencies that may affect the granting of the request, and of the entitlements to make the request. Requests formulated with the use of modal verbs "Would/Could you do X" are used when the contingencies are low and the requester is entitled to make the request, while vice versa, when the contingencies are high, and the entitlement is low, more tentative formulations like "I wonder if you could…" are preferred. Similarly, for offers, Curl (2006)

and Couper-Kuhlen (2014) have identified three recurrent formats: questions that mention the need, e.g., "do you want/need X", if-conditional sentences, and declarative offers ("I'll…").

The formation and ascription of these action has been one of the main developments over the last few years, bringing together multiple resources and analytic facets (Heritage, 2022). Among these, Heritage distinguishes between "bottom-up resources", i.e. those at the level of the turn, such as grammar, lexis and prosody, and "top-down resources" which include e.g. sequential organization and rights and responsibilities accruing to roles and identities, in terms of epistemics, expertise, deontics and benefactives and their interrelation (Heritage, 2013a). In the following sections I will briefly outline the last two domains, while trying to touch upon their relationship and potential contamination with epistemics and expertise.

2.5.1 Deontics

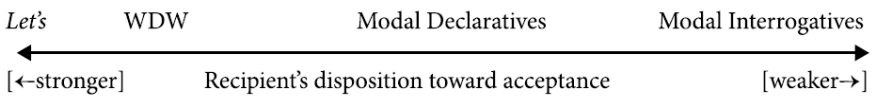
The deontic domain, introduced by Stevanovic and Peräkylä (2012; 2014), concerns the rights and obligations to request for, determining and deciding about future actions. Like epistemics, it is to be understood in terms of locally organized practices and it entails a distinction between deontic status, "the position that a participant has in a certain domain of action, relative to his/her co-participant" (Stevanovic & Peräkylä, 2014, p. 190) and deontic stance, i.e. the resources with which participants display their power and authority in determining future courses of action. Additionally, Stevanovic distinguishes between "distal" and "proximal" deontic claims (2015). With distal deontic claims, she refers to participants' rights to decide and control future actions, whereas "proximal deontic claims" are conceived as the rights to initiate, continue or interrupt locally emergent sequences of interaction about future plans, or, in other words, the right to topicalize the theme of future arrangements in the here and now of interaction.

Hiramoto and Hayano (2022) for example have shown that the orientation to different deontic rights can affect how actions are ascribed in everyday activities. In their study, based on video recordings of interactions between members of a Japanese family while shopping at a grocery store, they focus on the different ascriptions that mother, father, and child make of the same format of utterance – a noun phrase containing the name of a product – depending on who pronounces the turn. When the noun phrase is uttered by the mother, it is understood as an instruction to pick the product and put it in the cart, which is attended to by the rest of the family with an embodied response, by performing the requested action. When it is the father, or the child, who name products while walking through the isles of the store, these utterances are understood as requests for permission to the mother, who typically verbalizes and assesses what to do. Hiramoto and Hayano's paper thus provides an

account of how participants can display an orientation to the mother's deontic authority in ascribing actions and how deontic matters can contribute to the organization of talk.

The role of deontics has also been addressed from an interactional linguistics perspective. In particular, the notion of deontic stance has led to comparative studies of formats to realize proposals in interaction, which also considered the orientation to the likelihood of compliance and commitment on the part of the recipient. Thompson, Fox and Raymond (2021), for instance have compared four main grammatical formats and their sequential and deontic implications, varying in terms of recipient's disposition to accept. The following scheme synthetizes their findings:

[11] [Thompson et al., 2021, p. 5]



While "Let's" formatted proposals display a strong expectation that there will be an uptake, and hence are deontically strong, the strength gradually decreases with respect to "Why don't we…" (WDW) questions, the use of modals in declarative utterances and in interrogatives. WDW questions still project acceptance of the proposal but are employed after an initial indecision as a way of introducing a compromise; modal declaratives are used when a general disposition to a future course of action has been displayed, but not related to any particular activity, whereas interrogatives appear in contexts where no disposition has been put forth by the recipient.

Additionally, the deontic domain and the epistemic one can intersect and mutually elaborate, as shown by Stevanovic's work on joint decision making in interactions featuring pastors and cantors about the arrangement of the functions (2015; 2021). Stevanovic (2015) focuses on a collection of cases where an initial proposal either by the pastor or the cantor is followed by an epistemically framed "post-proposal display of uncertainty" (2015, p. 85) triggered by a lack of response from the co-participant. Her analysis concentrates on how different types of responses to the display of uncertainty may reveal different orientations to the proposer's deontic rights. In fact, even though all proposals are eventually abandoned, when recipients of the proposal negate and overcome the doubt, they endorse the proposer's proximal deontic right and legitimate the initial action, whereas when the doubt is confirmed, the recipient challenges the proposer's deontic authority.

Furthermore, Stevanovic (2021) also considers the interplay of deontics and expertise in extracts coming from the same data. Pastors and cantors in Finland have different trainings and backgrounds, the former being a theologian, while the latter a musician, but they collaborate in planning functions and church activities. Stevanovic (2021) takes into account proposal sequences where the supposed "non expert" is making a proposal about a topic that belongs to the area of

expertise of the co-interlocutor, i.e. when the pastor makes proposals related to music, and the cantors related to religious aspects. The analysis identifies a recurrent pattern that, according to Stevanovic, indicates how expert responses implicitly remark the proposer's lack of expertise as well as lack of deontic authority in setting forth the suggestion. They do so by complying with the proposal, but at the same time they refer to either past or future decision, or frame the decision as inevitable and beyond control. Extract [12] features the English translation of one of the example's discussed in Stevanovic (2021):

[12] [KM2 5:40 in Stevanovic, 2021, pp. 675-676 (adapted)]

```
01 C:    .hhh it would be quite, (1.3) quite delicious I mean I guess
02       if one thinks (0.2) about the confirmation school so couldn't one
03       think about this bible teaching something uhh, .hhh could be done
04       (0.5) on the basis of this text,
05       (0.4)
06 P:    yeah.
07 C:    like,
08 P.    ye[ah]
09 C:      [di]g into it with [them ]
10 P: ->                     [I had] the thought that we'll focus on that
11    -> just on that, (0.2) second (0.2) week when I'll probably finally
12       write also that sermon then
13 C:    yeah
14 P:    so we, (0.4) would deal with it in some way °then°
```

In the sequence, the cantor (C) proposes the use of a bible text for teaching purposes. He does so in a tentative way, as shown by the long pauses and use of modal declarative ("it would be") and modal interrogative ("couldn't one think"), which frame the proposal as one from a non-expert, with weaker expectations of acceptance (lines 1-4). The pastor (P) acknowledges the request twice (lines 6 and 8) but then claims to have already had the same idea in the past (lines 10), provides detailed information on when she plans to use the text (line 11-12) and foresees the future action in first person, by referring to herself ("I"), or to her and the students ("we"), thus excluding the cantor from the activity. In this case, according to Stevanovic, despite the compliance with the request and the lack of explicit rejection, the pastor reframes the decision away from the here and now of the interaction, so that the asymmetry between herself and the cantor in terms of expert identity is reaffirmed. By making a proposal, albeit tentative, the non-expert is claiming rights to participate in the decision-making process: this type of response, for Stevanovic, avoids the involvement of the non-expert by preventing a legitimation of the proposal, which in turn is presented as the natural outcome grounded in past, future, or inexorable decisions.

The sequence thus shows both how expertise may "enable deontic authority" (Stevanovic, 2021, p. 672) by affecting the framing of proposal and answer, but at the same time also how deontic

matters reflexively reaffirm expert status in displaying who is entitled to, and capable of, making correct decisions with regards to the domain of expertise. More in general, deontic matters can tangle up with epistemic ones and are displayed in the different grammatical realizations of actions in both institutional and ordinary interaction. In the next section, we will concentrate on a specific facet of directive-commissive action, the notion of benefactives.

2.5.2 Benefactives

While deontics focuses on matters of rights, obligations and commitment to future course of actions, the notion of benefactives (Clayman & Heritage, 2014; Heritage, 2013a) focuses specifically on orientations to costs and benefits for the parties in the production and recognition of future directive-commissive actions.

In her taxonomy of these action-types, Couper-Kuhlen (2014) argued that different actions imply a different distribution of roles between the participant that is supposed to perform the action, and the one that will benefit from it. Participants can hence be arranged differently in terms of "agents" and "beneficiaries", depending on the type of action performed: in proposals, both parties are simultaneously agent and beneficiary, in offers, the cost of performing the action is on the party that makes the offer, while the recipient will benefit from it, whereas in requests it is the opposite: the requester will benefit from the action performed by the recipient.

As mentioned above (cf. 2.5), these actions can be realized with several grammatical formats in interaction, depending on different contingencies that may emerge from the local, sequential organization of talk. The notion of benefactives is concerned precisely with the "underlying conditions for the actions" and on how these conditions can affect action formation and ascription (Clayman & Heritage, 2014, p. 58)

Clayman and Heritage (2014) thus distinguish between benefactive stance and status. As with epistemics and deontics, benefactive stance indicates the action that is encoded in the linguistic signal, following Couper-Kuhlen's taxonomy (2014). Benefactive status, instead, refers to the set of conditions that come into play in the design of action such as whether the service committed to will benefit the recipient or not, whether the supposed agent (or "benefactor") is willing and able (or has the know-how) to provide the service, the high/low cost of doing it, and the temporal nuance of the service, whether it is 'proximal', i.e. immediate, or 'distal', i.e. for a later time.

Benefactive stance can include different formulations of benefactive matters in both initiating and responsive action. Initiating actions may be formatted including a reference to participants' needs or preferences (e.g. "would you like to get out"), the explicit formulation of agents and recipients, or the rendering of the nominated action in either compacted or expanded formats. Responsive actions

on the other hand include benefactive appreciations which can take the form of explicit thanking, assessment of the service, or promises of reciprocation as a compensation. Benefactive appreciations usually come in second position in offering sequences and in third position in requests (Clayman & Heritage, 2014, pp. 59-65). However, according to the authors, the ascription of the action and the import of the stance will be dependent upon the endogenous benefactive status of the action and vary on a case by case basis.

Focusing on offers and requests, Clayman and Heritage argue that these actions are performed by parties in interaction by pursuing a "felicific calculus", i.e. by orienting to the cost/benefit ratio that is implied by the action. In other words, participants interactionally work to manage the benefits and costs by simultaneously maximizing the benefits and minimizing the costs. Maximization of benefit is usually achieved by accounting for the benefit that is tied to requests and offers, whereas minimization can be achieved by means of lexical choice (e.g. with verbs that convey the brevity and low cost of the action), or by framing the action as a minimal departure from the routine, as in the following example, featuring two co-workers:

[13] [Clayman & Heritage, 2014, p. 69]

```
01 Skip:     Good morning Ji:m,
02           (0.5)
03 Skip:     Uh it's Skip.
04 Jim:      ↑Hiyuh,
05 Skip: ->  You coming past the doo:r,
06 Jim:      Certainly?
07           (0.8)
08 Jim:      What time wouldju like the car Sah.=
09 Skip:     =Uh ↓well ehhh hhehh hhhehh hhehh.hh Oh that's
10           m:ost unexpected of you hhh::: n(h)o it's v(h)ery
11           nice'v you to offer huhh uh-↑heh heh-u-hu-.ehhh
12           £Thanks very much.£
```

In this extract, Skip's use of the expression "coming past the door" as a way of asking to be picked up to go to work frames the request as a minimal cost for Jim, due to the minimal departure from a pattern. If Jim is supposed to pass by in any case, picking up Skip would not require an extra effort. In fact, after the initial response to the pre-request (line 6), Jim jokes pretending to be Skip's chauffeur (line 8), prompting laughter and extra thanks by Skip in lines 9-12.

For Clayman and Heritage, the felicific calculus implies a preference for minimization of costs and maximization of benefits. As they put it:

> beneficiary should strive to provide for the least burden of costs to the benefactor, while maximizing the projected benefits of the projected action. Correspondingly, a benefactor should strive to minimize

the burden of costs that the projected activity imposes, and with it any burden of reciprocal obligation that the beneficiary may incur (2014, p. 73).

Divergences from this preference may lead to resistance in complying with the service requested/offered or be exploited to conceal an action as a different one, to yield either uptake or rejection. Consider for example the following extract from a dinner conversation:

[14] [Clayman & Heritage, 2014, p.80]

```
01 Dad:     You wanna pa:ss [dow:n the: stir:ng bea:ns
02                          [((Tim looks over))
03          (.)
04 Tim:     [No.
05          [((Mom looks at string beans))
06          (0.3)
07 Dad:     [Well do it anyway please,
08          [((Mom unfolds arms, reaches for string beans}}
09 Tim:     No:.
10          ((Mom picks up string beans and passes to Dad.))
11 Dad:     *Tha:nk you.=very much.*
```

In line 1, Dad's utterance includes a grammatical form that is typical of offers by highlighting a reference the recipient's will ("you wanna"). However, Dad's action contradicts the syntactic and lexical format of the turn, and projects that he will be the beneficiary of the projected service, thus revealing the requesting nature of the action. Tim resists the requests (line 2), and Dad then makes the request explicit in a more assertive by reformulating it as an imperative ("do it anyway").

In addition, benefactive stance can also reflexively influence action formation, as shown in a joint study by Raymond, Robinson, Fox, Thompson and Montiegel (2021) on offers. Raymond et al.'s argument is that participants orient to recipient disposition toward acceptance by minimizing the grammatical format of offers. By comparing variant cases of the interrogative utterance "do you want", "you want", "want", they found a correlation between form and likelihood of acceptance which suggests that the more minimized the grammatical format, the higher the chances that the offer will be accepted.

Therefore, the study of benefactives further amplifies our understanding of how, in accomplishing social actions, participants orient not only to what they know how to do, and have the right to do, but also how future courses of action may affect co-participants both in terms of demands and benefits. As Heritage (2013a; 2022) argued, the accruing of rights and responsibilities that contribute to action formation and ascription as one of the top-down resources of interactional organization provides a key domain for future investigation, which is further complicated in embodied or institutional situations, where for example the offering of something implies the performance of

the action, such as the offering of a taste of cheese in a store (Mondada, 2021). In similar cases, the modalities with which knowledge, expertise, authority and benefits are enacted are multiplied, as it will be shown in the next chapter.

Chapter 3 – Multimodality and Video Data in Social Interaction

3.1 Introduction

In the last chapter we saw that knowledge and expertise can be displayed and put into practice not only verbally, but also relying on multiple resources, as in the case of the airport security checks discussed by Bassetti (2021) or in the football video analysis in Fele and Campagnolo (2021), where the orientation to procedural knowledge was actualized by performing an embodied action in the former case, and by combining gestures and technologically-mediated artifacts in the latter. In other words, the examples hinted at the fact that human action can be organized, actualized and interpreted not only from a monomodal, i.e. verbal, perspective, but also from a multimodal one, and that consequently "multimodality" can be considered an equally fundamental dimension of social interaction (Goodwin, 2000; 2003; Mondada, 2014a; 2014b; 2016; 2018; 2019a; 2022).

The notion of multimodality is not new, nor exclusive, to EMCA research. As pointed out by Streeck, Goodwin and LeBaron (2011), the word "multimodality" has been used as a technical term in different domains, including logistics, in reference to the different transportation channels; medicine, to indicate a combination of treatments, and computer science, to talk about multiple input interfaces (p. 9). Within social sciences, 'multimodality' commonly designates the combination of multiple semiotic signs as meaning-making modes, for instance text and images, or other multimedia objects, in socio-semiotic frameworks usually inspired by Hallidayan systemic functional linguistics (e.g., Kress & van Leeuwen, 2001; Ravelli, 2006 i.a.) (Mondada, 2014a).

Contrary to the view that sees multimodality in terms of static signs, from an ethnomethodological and conversation analytic perspective 'multimodality' is used to refer to the multiple resources that participants can mobilize to produce, interpret, and make accountable locally situated actions in interaction (Mondada, 2018; 2019). In line with EM's notion of indexicality and accountability, the focus of multimodal EMCA is thus on what participants make visibly relevant in the course of interaction, what they demonstrably orient to in organizing ordered, intelligible actions (Goodwin, 2000; Mondada, 2018; 2022). Therefore, multimodal resources are not treated as interpretable meaning-making components a priori, but rather they contribute to an endogenous realization of action with a specific temporality that can include both simultaneous and successive resources (Mondada, 2018).

Taking advantage of the implementation of video recordings of naturally occurring interactions, multimodal EMCA has sought to de-emphasize the centrality of language while including other modalities such as gaze, gestures, body movements, prosody, or object manipulation in the description of participants' production of actions. This point leads to two important features of multimodality: the first has to do with the praxeological and endogenous nature of the aforementioned resources, which are not only to be understood in general, abstract terms, but first and foremost as strictly tied to the local ecology of the activity (Mondada, 2018, p. 86). Going back to Fele and Campagnolo's (2021) extract, the use of language, the pointing gesture, and the graphic manipulation of the image via touchpad with which the analyst highlighted a feature of the image were all strictly related and co-constitutive of the action being performed in situ (Mondada, 2014).

The second point has to do with the relationship between language and multimodal resources, which, according to Mondada, should be treated without prioritizing language at the expense of other resources. For Mondada, EMCA should not be conceived as a logocentric discipline, but rather language should be integrated, in principle, within a plurality of resources (2014). This plurality can be mobilized in different ways according to the activities that participants are involved in, and therefore any form of prioritization should be dependent upon an empirical analysis of participants' orientation to what is relevant (Mondada, 2018), their participation framework (Goodwin, 2000), or the research questions. In addition, from a terminological point of view the multimodal approach proposes to go beyond the distinction between 'verbal' and 'non-verbal' modalities, as such distinction, in and of itself, takes language as its starting point and presupposes that there can be different types of communication (Streeck et al., 2011; Mondada, 2014a).

The multimodal nature of human interaction has been one of the major focuses in recent EMCA studies, to the point that the definitions of "embodied turn" (Nevile, 2015) or "multimodal turn" (Mondada, 2016) in the study of social interaction have become widespread. Nevile's (2015) quantitative study on the number of articles on "embodiment" published in the journal *Research on Language and Social Interaction* over a 26-year span (1987-2013), for instance, shows that there has been an increase from the 5,9% articles on the topic in the first 13 years, to over 25% in the second 13-year period considered (p. 127). The figures have not been updated to my knowledge, but it is plausible to presume that they have kept rising, given the numerous collections, publications, and developments that, exploiting the use of video-recordings, have presented systematic analysis of the interplay of multiple resources in social interaction, workplace settings, and digital environments in the last few years.

The approaches to the study of multimodality applied in these works can be grouped into two different categories, depending on the analytic focus of the investigation. On the one hand, there have

been studies concerned with a single resource and its import on the organization of interaction, as, for example, Mondada's (2007) study on the deployment of pointing gestures around transition relevance places to project self-selection. On the other, studies have focused on complex multimodal Gestalts, i.e. on the interplay of multiple resources, a "web of resources" (Mondada, 2014, p. 139) that constitute the methodical practices of participants' actions (Mondada, 2018, p. 87).

After this short introduction of the main features of the concept of multimodality in EMCA, in the remainder of the chapter I will selectively try to touch upon some of the related topics that have been foundational in carrying out the present work. The following section (3.2) will focus precisely on the interrelated nature of multiple resources that come to constitute "multimodal gestalts" (Mondada, 2014a), by taking into account the phenomenological grounds upon which the concept is based, its interrelation with Garfinkel's theory, and the issues related to routinization and assemblage of collections. I will then briefly outline some of the current developments in multimodal analysis, with a focus on orientation and manipulation of objects in interaction (3.3). The final part of the chapter will consider the role of video for multimodal analysis, both as method and as research topic (3.4).

3.2 The Concept of Multimodal Gestalt

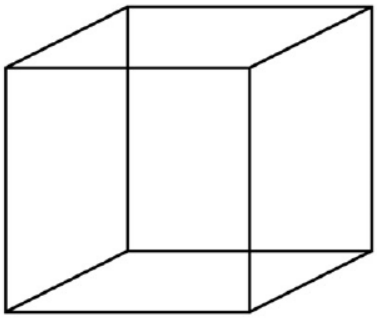
The notion of "complex multimodal gestalts" introduced by Mondada (2014) to focus on the co-constitutive relationship of different resources for accomplishing actions is indebted theoretically to the influence of Aron Gurwitsch's phenomenology on Garfinkel's program (1967, 2002), and practically to conversation analytic seminal work on action and embodiment as situated practices (e.g. Goodwin 2000; 2003) In this section, I will first illustrate the foundational treatment of the notion of "gestalt" (3.2.1), to then present its actualization and features in naturally occurring interactions (3.2.2). Lastly, I will discuss the problems of ephemerality and routinization, both in theoretical and methodological terms (3.2.3).

3.2.1 Gestalt and Garfinkel's Phenomenal Field

The relevance of the notion of "Gestalt" for ethnomethodology and conversation analysis is made evident by Garfinkel's acknowledgment of Aron Gurwitsch's work in the formulation of the concept of "phenomenal field" as grounded in Gurwitsch's gestalt phenomenology (Fele, 2008; Meyer, 2022). First developed in psychology, the notion of gestalt can be summarized with the idea of "the existence of a whole" (Fele, 2008, p. 301), which is not just the sum of the single constituent parts as single unrelated entities, but the result of particular, mutually informative relations that constitute the unity

of a set (ibid.). This whole, or gestalt, is perceived as such without the need to single out each element. Imagine for instance to enter a room at the university, and to see a professor at the desk and a group of students listening to the lecture. Our immediate perceptual understanding of the scene would imply the recognition of the assemblage as a university lecture, and while we still would be able to discriminate each of the components, the unitary perception would be the first to be gained. As Fele puts it, the single elements "continue to be separate and distinct, but at the same time they instantly give rise to what is perceived as some sort of specific unit" (2008, p. 301).

The emergence of the unitary perception is the result of the self-organizing, or autochthonous, nature of gestalts (Meyer, 2022, p.115), which implies that its recognition is not a voluntary act, but inherent to immediate experience. To demonstrate this point, Gurwitsch relied on the use of reversible figures, such as the Necker Cube, or Rubin's Vase. If we consider the former, as printed in Meyer (ibid.), we can appreciate how often our perception of the cube is not dependent on our will, but it may take some effort to make the alternative image emerge. And even when we learn to focus on the angles to flip the image, we do not control how the lines saliently and coherently recombine.



In respect to the coherence of a gestalt, Gurwitsch stressed that the perceptual units, the parts of the whole, do not carry an intrinsic meaning *per se*, but only a relational one that functions within the unity and at the same time contributes to reflexively constitute the whole. The reciprocal, internal definition of the functional meaning of constituents also implies both a spatial and a temporal arrangement which emphasizes how perception is always situated and never the result of isolated appearance (Fele, 2008, p. 305). Think of two dots (e.g.: ● ●). Together, they produce a gestalt coherence of a 'pair' in which each dot has the functional significance of being a member of the pair, one as the left member, the other as the right member, in terms of spatial disposition. However, their being left/right members is not intrinsic to the dots themselves, but only dependent on the internal configuration that the current combination comes to constitute. If we add a third dot to the pair e.g. (● ● ●), the internal relations between the dots are altered, and what was the right dot before, it is

now the middle one. Moreover, the units no longer constitute a pair, but a trio (Meyer, 2022, pp. 118-126). In other words, these features point to a local, holistic conception of gestalt contextures.

Considering the discussion of Garfinkel's approach to members' methods and practice presented in the previous chapters, it is not difficult to grasp why "Gurwitsch's argument on the functional significations and their coherence of figural contexture in its empirical details […] has been foundational" to Garfinkel's ethnomethodology (Garfinkel, 2002, p. 84). In sum, Garfinkel's notion of phenomenal field takes gestalts as the core of his interest for methodic practices. As we have seen, the phenomenal field is first of all organized, as it prioritizes the whole and not the constituents; secondly, it is unmediated and concrete, because of the local, spatial and temporal arrangement of the parts which elude a priori superimpositions but make sense in the act of the experience; thirdly, it reflexively constitutes both the whole and the constituents. In ethnomethodological terms, these three features run parallel to the orderliness, situatedness and reflexivity which make members' methods accountable (Fele, 2008). And when applied to multimodality in EMCA, they are found in the organization of multimodal gestalts "which are both specifically adjusted to the context and systematically organized" (Mondada, 2014a, p. 140; 2022, p. 292).

3.2.2 Multimodal Gestalt in Interaction

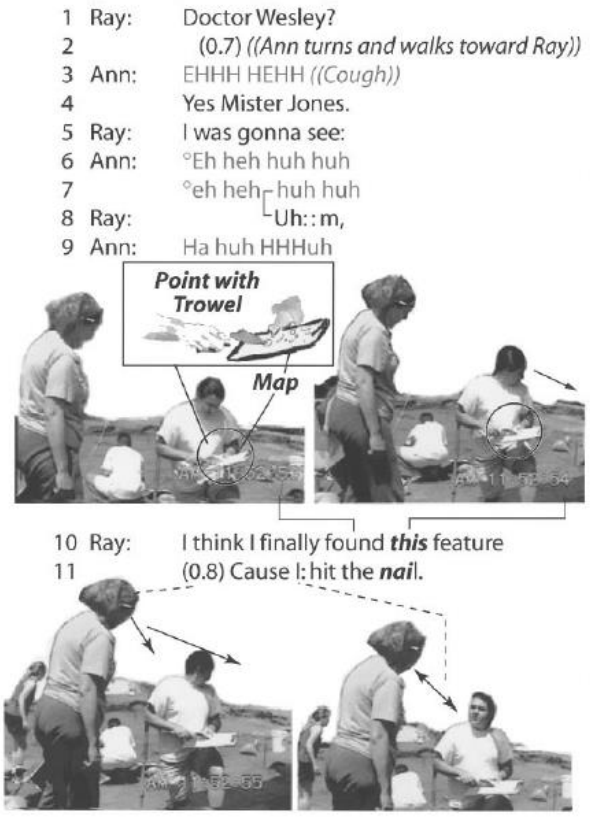
In sketching out the development of multimodal studies, Nevile (2015) marks the year 2000 as the turning point in the literature, with the publication of the first of Goodwin's articles in which we can find one of his first accounts of the interwoven, multimodal constitution of human action, in the form of what was then defined as "contextual configuration" (Goodwin, 2000).

With contextual configuration, Goodwin indicated a "locally relevant array of semiotic fields that participants demonstrably orient to" (2000, p. 1490) and proposed to blur the boundaries between language and environment by taking into account the multiple semiotic resources that participants use to produce and understand co-participants' actions in interaction. Goodwin later referred to this complex interrelation of resources also in terms of "multimodal package" (2003) and stressed how language, gestures, gaze, and embodied action can be "laminated" (2013) and "environmentally coupled" (2018), thus emphasizing the multi-layered, reciprocal relationship between the resources and the environment in the constitution of action.

For instance, Goodwin (2003) introduces the problem of the local, ecological constitution of embodied actions – pointing, in the case at hand – by referring to an iconic anecdote related to one of the most legendary players in baseball history, Babe Ruth. The anecdote goes back to the 1932 World Series, and says that during an at bat, Ruth, down two strikes in the count and facing elimination,

raised two fingers, pointed towards centerfield, and then sent the next pitch out of the ballpark exactly in the point indicated by his gesture. While the legend says that Ruth "called" the upcoming homerun, other witnesses to the scene have contested the meaning of the two fingers, arguing that they were a reference to the strike count. Goodwin points out that the two versions of the story are both plausible because the gesture is located in, and tied to, the local environment in which it took place. For the gesture to be understood as pointing, the interpretation of it in terms of "predicting a homerun" is dependent upon the fact that Ruth pointed to a fair zone, and not to a point in space that was foul territory. If the gesture is understood as counting, instead, this is possible because of the reference to prior events, i.e. to the fact that there had been precisely two strikes. In other words, with this example Goodwin suggests that actions are embedded in specific scenes by tying one resource to other meaning making resources that collaborate to accomplish actions in the *hic et nunc* of interaction (2003, p. 218). Moving to a video-recorded, naturally occurring example, we can consider the following extract presented by Goodwin where a graduate student (Ray) and an archeologist (Ann) are discussing a feature that Ray has found in the dirt:

[1] [Goodwin, 2003, p. 222]

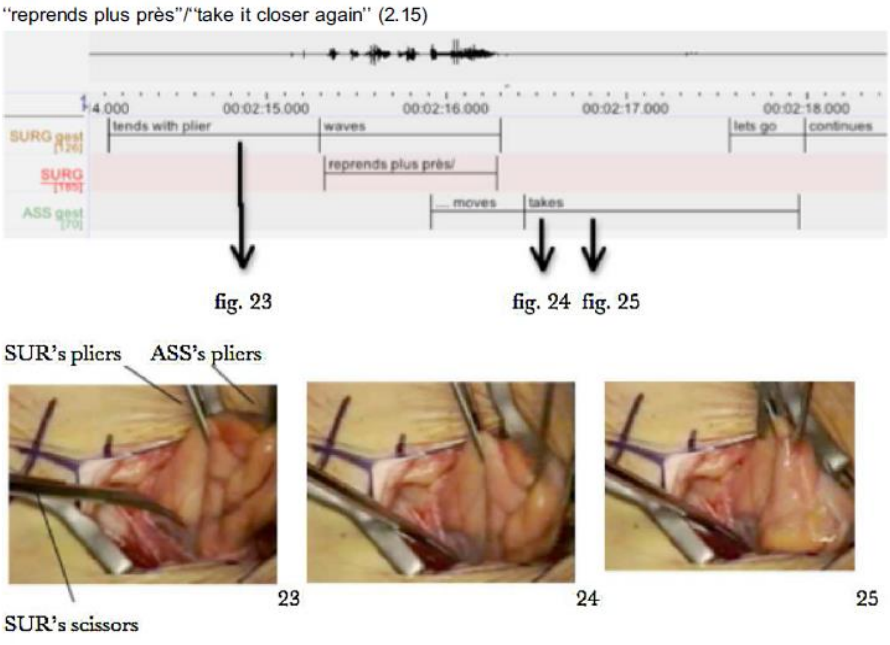


The sequence starts with Ray summoning Ann (line 1), who moves closer to the point where Ray is excavating with a trowel. Goodwin here is interested in the realization of the pointing gesture that Ray does at line 10, to indicate a point in the map he is holding in his hands. According to Goodwin,

this gesture, realized with the trowel works to establish a shared domain of scrutiny towards the map, but it is not the only resource that comes into play in doing that. In fact, the pointing is also embedded in a larger configuration of embodied displays: Ray picks up the map, shows his visual orientation towards the map and postpones the announcement of his finding to secure that Ann's attention is also on the same object. Only then, he performs his pointing by combining talk, and in particular the use of the deictic "this" and the word "feature", which point to a singular kind of entity as the reference of the turn, with a gaze shift towards the point of interest in the dirt. For Goodwin, the combination sets up a dual point that makes "this" relevant both on the map and on the ground, which is attended by Ann who first glances at the map and then extends her gaze beyond it to look at the point in the dirt. In this example then the "contextual configuration" with which Ray is able to establish a share domain of scrutiny in the local ecology of the interaction comprises diverse semiotic resources which include syntax, word selection, enactment of gesture through manipulation of an object, gaze, body positions, mobilization of features of the environment, all embedded in an activity framework, the larger activity that is being performed (2003, pp. 221-225). Goodwin's analysis thus gives a first idea of the multiplicity of human conduct in interaction.

Mondada (2014a) has further expanded the treatment of "complex multimodal Gestalts" by focusing on the local assemblage of resources, the affordances and limitations of the material environment, and how a particular action can be performed by privileging different combinations of verbal and embodied resources. By analyzing video-recorded data of surgical operations, for instance, she focuses on the interplay of instructions and activities, as strictly related to the praxeological work of the surgeon (Mondada, 2014a, p. 149).

[2] [Mondada, 2014a, p. 149]



In extract [2], the surgeon instructs the assistant on how to move the hand and surgical tools to alter the configuration of the anatomical field. Mondada (2014a) presents her analysis based on the combination of ELAN transcripts and stills from the video recording. Both the surgeon and the assistant are tending the tissues to expose the area where the surgeon is operating (fig. 23). Subsequently, Mondada focuses on the surgeon's verbal utterance "take it closer again" which is combined with the waving of the tissue, to direct the assistant to give more tension by changing the position of the pliers. This instruction is thus performed by mobilizing both verbal and embodied resources and leads the assistant to move the position of the pliers (fig. 24) and reset by dragging more tissue (fig. 25). The waving of the tissue establishes a communicative resource that is embedded in the surgical procedure and understood as such by the assistant by exploiting the local affordances of the surgical tools and the here-and-now ecology of the activity (Mondada, 2014a, p. 150).

Mondada then presents other occurrences of the same action, an instruction to alter the tension of the tissue during an operation, where there is a mobilization of a reduced number of resources, such as waving gesture and minimal verbal formulation (e.g. the use of the particle "mh" in place of an extended directive), or the waving gesture alone, silently. The variation and adaptability of the formatting of an action thus exemplify how different multimodal gestalts can emerge in the performance of social actions, but also how these can become routinized (Stukenbrock, 2021), laminated (Goodwin, 2013) and exploited differently depending on the endogenous interpretation and orientation of the participants, to the environment, the activity or the knowledge and experience of the co-interlocutors, as shown by Bassetti (2021) in the case of airport security checks.

3.2.3 Routinization and Collections

The example of directives in surgical operations raises two important issues for the study of multimodal gestalts. The first has to do with the different approaches to the making of collections of multimodal phenomena. As pointed out by Mondada (2022), there is a difference between making collections of the same action realized by exploiting multiple resources, and making collections of the same gestalt. This is due to the extremely local, autochthonous nature of gestalts which represent specific, complex and situated phenomena (p. 308). Therefore, the search for comparable occurrences should not be defined in terms of generalized actions (e.g., giving an instruction), nor by focusing on a single resource. These methods would be suitable to study a specific action more in general, or the mobilization and functioning of a specific resource, but not to unpack the complex interrelation of different resources in a specific ecology, or participation framework, to put it in Goodwin's terms. In other words, the collection should try to preserve as much as possible the local configuration of the first occurrence and what is made relevant by the participants.

When this is done, as in the case of the operating room, the different ways in which constituents are assembled in practice can shed light on the ordered and routinized nature of members' practical action, with potential implications also for the study of procedural, praxeological expertise. Although Mondada (2014a) was not concerned with this aspect, the recognizability of the surgeon's waving gesture to the assistant, in the course of an operation on a specific part of the body, entails an orientation and an awareness of the contextual features of the ongoing activity, and on the repeated, routinized nature of the gestalt.

This leads us to the second issue, related to the idea that routinization and sedimentation can be intrinsic and defining features of gestalts, in different ways. As a matter of fact, Stukenbrock (2021) recently argued that gestalts can be divided into two types, *socially sedimented multimodal gestalts* and *locally assembled, ephemeral gestalts*. The distinction is based on their repetitiveness, the extent of the shareability of practice, and the different processes of routinization that they have undergone.

Gestalts are socially sedimented when the combination of resources "transcends particular participation frameworks, local communities of practice, generations, and even centuries" (2021, p. 8). For example, Stukenbrock argues that the coupling of demonstrative (e.g. "this") and embodied practices to establish joint attention is a multimodal construct which works and is recognized as a socially shared phenomenon that goes beyond the local contextual boundaries of enactment, as also hinted by the previous discussion of both Fele and Campagnolo's (2021, cf. 2.3.3) and in Goodwin's (2003) data.

When socially sedimented gestalts are employed in context-sensitive situations to fit the ongoing activities of the interaction, they can be modified to adapt to the endogenous contingencies in innovative ways that lead to the emergence of locally assembled ephemeral gestalts (Stukenbrock, 2021, p. 14), which in turn can undergo a process of local routinization that leads to subsequent reduction of the resources employed. For instance, Stukenbrock illustrates how the use of demonstrative and embodied practice can be embedded in instructional sequences in self-defense training between German participants:

[3] [Stukenbrock, 2021, p. 8]

```
1  T   un_+dEs*wegen nehmt ihr jetzt +ERST+mal,
       and that's why you now for a start put
   t   gz to S*-gz to hands------------------>
   t      +...lifts hds to hips......+stroke+hds at hips->
2  T   die (.) hän+de *SO+* in [die HÜFte?
       the  hands like this on the hips
   t   -gz to hands--*....*-gz to S----------->
   t   -hds at hips+beat +-hds at hips-------->
3  S                          [((put hands on hips))
4      (1.0)
5  T   das mAchen wir später NICHT mehr;
       we won't do that any more later on
```

In extract [3] we see the trainer (T) instructing the students (S) for the first time to position their hands at the side of their hips. In doing so, T mobilizes multiple resources that include language, gaze and hand gestures, and provides an embodied demonstration of the movement to replicate. She does so by first gazing towards the students and then to her hands, in the act of lifting them, thus marking her movement as the focal point of attention. When T has positioned the hands, in line 2, she beats them on her hips before uttering a demonstrative in loud voice ("so"/"like this") that stresses the exact moment of the performance, and then gazes back at the students to monitor their embodied response (line 3). The first demonstration is thus performed by framing the embodied gesture as the relevant focal point with gaze, clapping and verbal formulation. The embodied reference and the demonstrative concur to the demonstration of a procedural gesture that is locally tied to the ecology of the training session.

However, when the move is repeated, Stukenbrock shows that the ephemeral gestalt that has been established in the first demonstration is subsequently modified and reduced to cope with the new sequential environment of production:

[4] [Stukenbrock, 2021, p. 10]

```
1  T   <<acc>okay nochmal zuRÜCK,>
           okay back again
   t   -gz to S------------------->
2      [(0.4)
   S   [((step back))
3  T   <<acc>+noch+MAL die hände so in die hÜfte?>
           again the hands like this on the hips
   t          +lifts hds+hds at hips palm away---->
4      (0.5)
```

In line 1, T displays an orientation to the known-in-common background established by the first enactment by introducing the repetition in relation to the previous occurrence ("back again"). She does so by keeping her eyes on the students, who take a step back and reposition to start the exercise. After they do so, T recycles part of the instruction delivered in the first instance with a truncated formulation that omits the equivalent of the verb "put" and does not mark prosodically the deictic "so"/"like this". Simultaneously, she lifts her hands at her hips without moving her eyes and head towards her body, and therefore she reduces the embodied framing of the focal point of attention. Stukenbrock thus points out that the formulation of the instruction in this case indexes a shared knowledge-how of the procedure which is part of the locally established common ground between the participants.

More in general, through repetition ephemeral gestalts can be eroded, or laminated, as they become a routinized practice for the participants. According to Stukenbrock (2021), routinization can either be "joint" or "collective". Joint routinization concerns participants involved in a single activity

or participation framework and can take place both in single encounters and throughout the participants interactional history. Collective routinization instead has to do with the emergence of a practice through space and time, between unaware members of a social group, and is understood as an intermediate step between the ephemerality of local and the stability of socially sedimented gestalts (2021, p. 3). The malleability and ephemerality of gestalts thus offers the opportunity to focus on the multimodal constitution of members' practices both in terms of expertise and in terms of adjustability to the endogenous interactional trajectory of the activities, as also shown by the current developments in multimodal EMCA.

3.3 Current Trends in Multimodality: Multiactivity, Materiality and Multisensoriality

To introduce one of the current topics of research in interactional multimodality, we go back to Mondada's data on instructions in the operating room (2014). Previously, in section 3.2.2, we saw how surgeons can rely on a multimodal gestalt constituted by talk and the waving of a tissue to signal to the assistant to intervene with the pliers. This practice was also presented as an example of how the gestalt can become routinized and the number of concurrent resources be reduced and designed to adapt to the contextual constraints of the activity. In the following extract, the constraints are due to the fact that the surgeon is engaged in two activities that are going on at the same time: while operating on the patient, the surgeon (SUR) is also explaining the surgery for an overhearing audience that is attending the operation. Consider the following extract (my adaptation in horizontal transcript) of Mondada's ELAN screenshot (2014a, p. 150):

[5] [Mondada 2014a, p. 150 (my adaptation)]

```
01 SUR:     *ehh I think it's *easi#er*
   sur      *grasps w pliers--*waves--*
   ass                           #grasps-->
02          (0.6)
03 SUR:     under local# *anesthesia
   ass              -->#
   sur                   *continues dissection-->>
```

This very short sequence starts with the surgeon's explanation of the procedure, uttered while simultaneously holding the tissue of the anatomic field with the pliers. During the explanation, in line 1, the surgeon produces a waving gesture on the tissue without resorting to any verbal formulation, which prompts the assistant's embodied response by performing the grasping. In this occasion, then, we see how the instruction to the assistant is delivered silently in the midst of the performance of a second activity. There are two interactional trajectories that the surgeon orients to: the explanation, which is addressed verbally by providing an account of his actions, and the actions themselves, the

operation, which is attended to by mobilizing multimodal resources. In other words, the routinized form of the gestalt, in this case, provides "for the possibility of simultaneously managing multiple activities" (Mondada, 2014a, p. 150).

Research on multimodality has focused precisely on how participants manage taking part in more than one activity (cf. Haddington, Keisanen, Mondada & Nevile, 2014) by orienting to multiple co-existing, interrelated trajectories that entail also different temporal organizations at the same time. Studies on these complex phenomena have been labelled under the name of "multiactivity" (Haddington et al., 2014; Mondada, 2019) and have highlighted how the combination of two or more activities running at the same time takes place as a socially organized display of participants' orientations, by adjusting formats and courses of action in interaction. Multiactivity has been classified depending on the temporal relations of the sub-activity components (Mondada, 2014b; 2019). It can be "parallel", when participants simultaneously manage two activities that can either be disconnected or interrelated, as in the case of the surgeon analyzed above in [5]. Or they can be "embedded", when participants alternate between one activity and the other, as in the following example, taken again from Mondada's surgical data (2014b). During the explanation, the surgeon on this occasion instructs the camera operator who is recording the surgery:

[6] [Mondada, 2014b, p. 53]

```
01 SUR:     we cut here (0.8) the: (.) superior pellicle,
02 EXP:     °beautiful°
03 SUR:     here too (0.6) and euh (.) when that
04          is done, (0.4) after that we kno:w that
05      ->  montre à gau:che (.) on the: ri*ght side,*
            show on the left
   ass                                    *camera moves left*
06 SUR:     we have no problem, and the disSection
07          will be very very easy,
```

In the first lines (1, 3-4) the surgeon is commenting on the procedure with an expert observer in English. In line 4, however SUR embeds a directive in French, addressed to the camera operator, who grants the request by moving the camera. The emergence of the orientation to the second activity as an alternate is made evident by the switch from English to French, and by the timely insertion of the directive so as to suspend the previous utterance at the point of projection of a subordinate clause (i.e., after "that"), which is then resumed and completed by re-orienting to the original activity (Mondada, 2014b). In this case, the embedding is performed smoothly, but Mondada's analysis also shows instances of micro-adjustments such as interruptions, or hitches, as well as extreme cases where one of the two activities is abandoned. On the whole, the multimodal approach to social

interaction and the notion of gestalts can inform the study of the organization of two or more courses of action that go on at the same time.

Another important area of research that has benefited from the multimodal turn in EMCA concerns the interest in materiality and sensoriality, in particular in relation to the mobilization of objects in interaction (e.g. De Stefani, 2015; Mondada, 2019; 2021). According to Mondada (2019a), materiality in multimodality is not only understood in terms of embodiment and gestures, but also as a focus on artifacts, tools and documents that are featured and made salient as part of the contextual configuration of the interaction. We have already seen how some of these objects, such as the archeological map in extract [1] or the surgical pliers in [2] can either become the focus of attention, or the means through which the activity is performed.

In addition, Mondada points out that objects in interaction can also be "sensed" (2019, p.50), thus stressing the importance of perception as one of the multiple resources that can be unpacked with multimodality. Perception, or "multisensoriality", is not only conceived with respect to what Ryle called "distance-senses" (2000[1949] p. 38], i.e. seeing and hearing, but also aims to include taste, smell and touch as socially accountable phenomena which are shared and negotiated with other co-participants (Mondada, 2019, p. 51), even though the negotiations of the latter can become a matter of discursive practices to define the sensation, more than focused on perception per se, as shown for instance by Fele and Liberman's (2021) analysis on how lay coffee drinkers are more preoccupied with talking about tasting, rather than with tasting itself.

Still, a focus on the practices with which objects are mobilized in interaction allows to unpack their endogenous treatment as material, perceptual and categorizable objects. In other words, objects in interaction not only constitute tools or potential foci of attention but can also carry different layers of meaning that are sequentially modified and adapted to the course of the activity. Mondada (2019a) for example has shown that a product like a piece of cheese can undergo a series of material transformations during the buying in a gourmet shop. The cheese can be interactionally transformed from an object of visual perception, when identified on the counter, to an epistemic object, when the seller provides information to describe its feature, to an object of manipulation, which can be cut to offer a sample, to a testable object, and then finally to a purchasable one (pp. 51-59).

Similarly, De Stefani (2015) considered how objects are perceived and interactionally categorized as purchasable as the result of participants' orientation in interaction. Extract [7] below features a couple shopping at a self-service market. While walking through the aisles of the store, they are monitoring the products on the shelves to assess what to buy. The extract in fact begins with Valentina (VAL) ruling out the presence of any potentially purchasable product ("qua niente") until the noticing of one item leads to a referential formulation in line 4 ("una pasta della pizza").

[7] [De Stefani, 2015, p. 277]

```
01          (4.7)
02 VAL:     qua nie:n•te,
            here no:thing,
                     •Fig.5
03          (0.2)
04 VAL:     +una pas•ta della +piz+za.•
            a pizza dough.
   val      +.....................+gaze twds AND-->
   and                        +...+gaze twds pizza dough-->
                  •Fig.6              •Fig.7
05          (0.4)
06 AND:     #hm#
            hm
   and      #nod#
   val       -->+gaze towards pizza dough-->
07          (0.3)
08 VAL:      pr+endi+la.
            get it.
   val           -->+
   and      -->+
09          (3.0)
```

The formulation co-occurs while gazing towards the refrigerator, thus establishing the pizza dough as the point of attention, as a perceivable object, and then VAL shifts her gaze towards Andrew (AND) to monitor his attention and making him accountable as the next speaker. AND attends to the formulation by looking at the pizza dough, and once the same domain of scrutiny is shared by the two participants, AND produces a minimal acknowledgedment and a nod. At this point, VAL orients to the purchasability of the product with the use of a directive that instructs AND to materially operate on the object by getting it. The dough thus moves from being an object of visual perception, to being mobilized and acted upon as a shared constituent of the actvity of shopping. This happens by employing multiple resources that include language, perception, gaze movement and embodied action, and thus stresses a praxelogical conception of objects in interaction which sees them as locally achieved within sequences of actions (Mondada, 2019, p.59).

In conclusion, in this section we have seen how a multimodal approach to social interaction can help shed light on the complex interrelation of activities and in the resources that constitute social interaction. As evidenced by most of the data discussed in this chapters 2-3, video recordings, and the use of video for transcription and analysis, play an important role in the investigation of the multimodal nature of human action. The next section will discuss the role of video both as a methodological tool for research and as a topic of investigation.

3.4 Video and Multimodality: Methods and Topics

The development of studies on multimodality has been possible thanks to the spreading of the use of video to record and collect data of naturally occurring interactions. Generally acknowledged among researchers in ethnomethodologically informed conversation analysis, videos and video practices can be considered a foundational methodological aspect of qualitative investigation, as well as an important area of inquiry *per se*, comprising methods and practice that entail an orientation to videos as interactional resources. In this section I will first touch upon some methodological aspects of the use of video for EMCA studies, and then I will briefly introduce how videos have been taken into account as topic of research in different types of interaction, with a focus on digital, video-mediated encounters.

3.4.1 Reproducibility and Preservation of Details

From the outset, the scientific study of talk in social interaction has been founded on the use of materials which favored the reproducibility and preservation of naturally occurring encounters (Sacks, 1984), offering an alternative to introspection, interviews, field notes or experiments to access participants' methodic organization of action (Mondada, 2013b), and a solution to the ephemerality of interactional phenomena (Fele, 2007, p.118). The pioneering work of Sacks, for instance, was based on a collection of audio recordings of phone calls to a suicide prevention center which allowed him to systematically replay, transcribe and share a record of the organization of the interaction. As he put it:

> Such materials had a single virtue, that I could replay them. I could transcribe them somewhat and study them extendedly - however long it might take. The tape-recorded materials constituted a "good enough" record of what happened. Other things, to be sure, happened, but at least what was on the tape had happened. It was not from any large interest in language or from some theoretical formulation of what should be studied that I started with tape-recorded conversations, but simply because I could get my hands on it and I could study it again and again, and also, consequentially, because others could look at what I had studied and make of it what they could, if, for example, they wanted to be able to disagree with me (Sacks, 1984, p. 26).

In addition to tape-recordings, the benefits emphasized and celebrated by Sacks are also shared by video data, which soon emerged as an alternative way of capturing "good enough" records of interactions. During the 1970s and 80s, in fact, Charles Goodwin in the US and Christian Heath in the UK started collecting video-recordings of interactions in both ordinary and institutional settings, which then became the basis for the embodied turn that took place over the last few years, also favored

by the development of digital tools and technologies that made video recordings cheaper, less intrusive and of higher quality, definition and resolution (Broth, Laurier & Mondada, 2014; Heath, Hindmarsh, Luff, 2010; Mondada, 2006; 2013b; Streeck et al., 2011).

In line with the benefits emphasized by Sacks, video data offer the chance to record not only what is said by the participants, but also multimodal features such as embodied conduct, space disposition and deixis, and manipulation and mobilization of objects (Heath et al., 2010), thus potentially enriching the availability of details that constitute the moment-by-moment organization of interaction (Mondada, 2006). Moreover, what is recorded on video can also facilitate the study on talk-in-interaction by solving ambiguities that may emerge from the lack of visual access when using audiotaped data. With video, instead, details are open to the researcher's scrutiny, who can exploit the affordances provided by the reproducibility of digital media files by, for instance, pausing, replaying, zooming in or out of specific details, both for the analysis and for the presentation, publication, or collaborative sharing of data. By means of repeated viewing and the use of tools, analysts can unpack the multiple resources and details preserved in the video that participants methodically orient to.

3.4.2 Collecting Data

The technological developments and digital tools have also consequently favored the use of video cameras and recorders for data collection and led to the emergence of two alternative ways of producing and gathering video material for research purposes, which, following Mondada (2013b), can be defined as "recordings produced as data" and "recordings turned into data" (p. 38).

Recordings are produced as data when they are created precisely for analytic purposes. In these instances, after having received the informed consent of the participants, researchers either participate in the interaction as camerapersons within fieldwork, or they rely on participants themselves to produce the recordings on their behalf. Either way, researchers have to make practical shooting decisions concerning the number and types of camera recorders to be used (e.g. fixed or mobile cameras) (Heath et al., 2010, pp. 38-48; Mondada, 2013b), their position in interactional space (Mondada, 2006; 2013b), or the use of additional microphones in interactions involving multiple parties.

This approach has historically been faced by critiques that can be summarized in Labov's (1972) "observer's paradox". According to Labov, recording naturally occurring data automatically implies contaminating the naturalness of the encounter because of the presence of a camera or recorder that is believed to alter participants' behavior. Nonetheless, practice has gradually belied this view: recording tools are only topicalized and explicitly oriented to by the participants in the early stages of the interaction, but then generally tend to remain in the background, while participants act

spontaneously (Fele, 2007). Therefore, cameras cannot be considered omni-relevant to the parties, except when there is an overt orientation to the tool, which can in itself be a topic of investigation, as in the example of the surgeon addressing the cameraman directly (Mondada, 2013b).

A possible solution to minimize the problem of the observer's paradox is to rely on "recordings turned into data". These recordings are firstly produced by the participants "for their practical purposes" (Mondada, 2013, p. 38) and then retrieved and utilized by the researcher for the analysis, as ready-made data. Among these we can find recordings of interactions produced for personal (e.g. the video-recording of a birthday) or institutional purposes (e.g. teaching, Mondada, 2006), or for media settings, such as TV and radio programs (e.g., Fele & Campagnolo, 2021; Heritage & Clayman, 2010), and online streaming and social media platforms, like in the case of the present study. Indeed, the array of devices which allow to record and broadcast audiovisual content, and the spreading of video-mediated forms of communication are offering new opportunities and datasets produced in 'unconventional' ways by the participants e.g. with gaming consoles, computers and smartphones. The 'extreme' – and more problematic – case of unconventional ways is perhaps the use of scripted data from tv shows and movies, cf. Magnusson and Stevanovic's (2022) study on sexual consent as interactionally achieved joint decision making.

While the reliance on pre-existing data certainly reduces the burden on the researcher and can provide with high quality materials, especially if coming from media contexts (Fele, 2007), the fact that the recordings have been produced by the participants for their purposes has consequences for what is available (Mondada, 2013b). In other words, the lack of control over what is recorded, how, with how many cameras etc. has to be considered when planning the study in order to cope with what is existing and accessible to the researcher. For example, a streaming of an online videogaming session may be focused on the game on the screen while not including the camera recording of the players from behind the screen. The assessment of what is available is thus important to plan the analytic project.

3.4.3 The Relevance of Video

Having outlined the qualities of video and the different approaches to data collection, a third methodological point worth of mention is what could be called "the matter of relevance" (Fele, 2007; Mondada, 2018). The matter of relevance can be articulated in two ways, one related to the researcher, the other to the participants.

Starting with what is relevant to the researcher, the potentialities and affordances of video-recordings may raise the question of whether this format of data should be privileged vis-à-vis audio recordings only and, if not, when and how to choose between one or the other. As Fele (2007) points

out, these questions cannot be answered in principle, but are strongly dependent on the research questions and design. Of course, if one is interested in studying kinesics or gaze, this would not be possible with audio-recording only, and as explained earlier, the presence of video, even when the interest lies mostly on talk, can still be fruitful and helpful in understanding how the interaction sequentially unfolded by e.g. facilitating the attribution of speakership in cases where ambiguities emerge. However, this does not mean that audio-recordings should be discarded a priori as a type of data that prevents the researcher from fully grasping the events, or from having the Sacksian "good enough" access to participants orientations and interactional trajectories. First of all, there can be settings where the intimacy and confidentiality of the interactions may discourage the use of video to protect sensible data and participants. This is for instance the case of interactions with not always regular migrants (see e.g. Baraldi & Gavioli, 2012, p. 18). Secondly, some of the details made available by video materials may not always be relevant to the participants themselves.

This leads us to the second articulation of the matter of relevance. The emic dimension of interactional practices entails that what is relevant to the participants is "locally achieved and established by the participants themselves in and for their situated action, exploiting and orienting to them as publicly available" (Mondada, 2018, p. 88). Consequently, it is important to avoid turning the richness of video data into bulkiness, by over-interpreting what is visibly and demonstrably oriented to by the participants (Goodwin, 2000). Unlike socio-semiotic approaches to video where every constituent may be taken into account as co-contributing to making meaning, the EMCA approach to video analysis and transcription is grounded on the indexical nature of members' activities. In this sense, the relevance of video requires a doubly contextual assessment on the part of the researcher, both in relation to the research question and, most importantly, to participants' conduct.

3.4.4 Transcription, Tools and Critiques

The orientation to the relevance established by the participants is also the guiding principle for the production of transcripts of both talk and embodied conduct (Mondada, 2018). Transcription works as a form of proto-analysis that converts what is available on tape, into a form of codified medium that reflects the "analytic utility" (Ashmore & Reed, 2000) of the parties' interactional behavior. If recordings already represent a first mediation of the experiential perception of an event based on a process of selection in the arrangement of data collection, transcribing necessarily relies on a second level of decisions about what to include and what to leave out, based on the interplay of the resources that are demonstrably relevant to the parties, and the analyst' competence in identifying and textually represent those same details (Fele, 2007; see also Ashmore, MacMillan & Brown, 2004, for a discussion of the ontological status of tape and transcripts).

These considerations are strictly related to two of the main criticisms that have been moved against multimodal transcripts, and videography more in general: the overwhelming number of details that can inflate transcriptions, and the extensive focus on taped-visuality at the expense of the lived experience (cf. Alkemeyer, 2022). As far as the former is concerned, attentive selection of transcription details is a key step to avoid the 'explosion' of transcripts due the inclusion of too many descriptions, which would run the risk of hiding talk and relevant conduct, and of making the transcript ultimately illegible. The latter, instead, criticizes the use of dissection and crystallization of embodied conduct based on researchers' vision, at the expense of the lived, individualistic account of movement experience (Alkemeyer, 2022, p. 262). However, as pointed out by Meyer (2022), the use of transcripts, usually accompanied by stills, has the advantage of "recreating the public visibility of the social" (p. 127) and the choice of using transcriptions instead of videos or phenomenological accounts still allows to preserve the temporal sequentiality of interactional features.

As a matter of fact, the transcription systems employed both for transcribing talk (Jefferson, 2004) and for multimodal features (Mondada, 2019b) aim to account for the temporality and sequential orderliness of interaction (Hepburn & Bolden, 2013). Mondada (2018) also stresses that the systems are highly adaptable and malleable to fit the objectives of the analysis as well as the multiple temporalities and trajectories that video helps to bring to surface. Moreover, researchers can now rely on a range of computer programs that support the activity of transcription, such as ELAN (2022), Do:te (McIlvenny et al., 2022) and GailBot (Umair et al., 2022).

Taking the case of ELAN, which has been used also for the present dissertation, the software offers multiple applications for the transcription and annotation of multimedia data. For example, ELAN allows to create horizontal tiers for different levels of annotation that are automatically time-aligned to the media file. The annotations can then be exported as text files and rearranged in traditional Jeffersonian transcripts or as statistical data for quantitative studies (e.g. Santi et al., 2022), or can be queried across multiple files to retrieve similar occurrences and compare collections. Additionally, the software features a built-in media player that can be exploited to accurately calculate timings and gaps, to synchronize multiple media files in split-screen mode, or to export smaller clips. In other words, the socio-technical affordances of the tool offer different, malleable ways of using the software to annotate data, to build archives and collections, to simply support traditional transcription on word processors, or even to present and disseminate findings (cf. extract [2] above).

3.4.5 Video as Topic

In addition to the methodological characteristics described in the previous section, video has also recently become a research topic *in se*, with a particular interest in the organization of members'

practices in settings where the video is one of the resources that participants' visibly orient to. As pointed out by Broth et al. (2013), EMCA scholars have tried to bring together research on video, and the practical use of video by developing what they defined "video analysis of video practices" (p. 2).

Among the several approaches to video-based practices (Broth et al., 2014), we can include studies of how video contributes to the organization of workplace settings such as airport and underground control rooms, where the video represents a focus of attention for the accomplishment of institutional activities (e.g. Arminen & Simonen, 2021; Bassetti, 2021; Goodwin, 1996; Heath & Luff, 2000; Heath et al., 2010). Additionally, the media, and in particular television production, constitute perspicuous settings where video becomes the topic and product of participants' interaction, for example in the realization and broadcast of live replays (Camus, 2017; Perry, Broth, Engstrom & Juhlin, 2019), in the collaborative editing, e.g. with use of techniques like the split-screen view, and shooting of TV studio interactions (Broth, 2009; Mondada, 2009), or in the practices by which videos are viewed (e.g., Gerhardt, 2012). Lastly, video as topic can become relevant even outside specific workplace environments to examine how researchers and participants alike adjust the production of recordings to attend to the sequential organization of interaction (e.g., Mondada, 2006).

Moreover, in recent years video has also become central in the study of technologically mediated interactions, both as the medium which makes interaction possible, and as a tool with which participants operate in complex, digitally mediated ecologies (Arminen, Licoppe & Spagnolli, 2016). In particular, studying video mediated interaction (VMI) from an EMCA perspective implies that video and interaction go hand in hand as interactionally achieved and mutually elaborating domains in situations where participants do not share the same physical space, but can either have reciprocal access through the use of camera or complex digital environments (Arminen et al., 2016; Heath et al., 2010; Luff et al., 2016). In these types of situations, EMCA studies have dealt with constraints and affordances of the medium (Housley, 2021), with a focus on the limitations and practical difficulties that participants must face when they find themselves interacting in "fractured ecologies" (Luff et al., 2003), i.e. when the spatial organization and visual or perceptual orientation of the participants is incongruent between the parties, because of their state of non-co-presence. Research in VMI has thus focused on members' practical solution to these problems, as for instance the deployment of highlighting in digitally mediated texts and computer screens (Due & Toft, 2021; Olbertz-Siitonen & Piirainen-Marsh, 2021), shedding light on how the video and its digital manipulation can be simultaneously the access point and a resource to achieve mutual understanding at a distance. In the next chapter, I will consider a type of interaction where this double-sided role of video is of particular relevance: the playing of video games.

Chapter 4 – Video Games and Social Interaction

4.1 Introduction

Over the last few years, video games have become one the most popular leisure activities, thanks to the development of technological devices that made gaming available to a wider audience by differentiating the ways and opportunities to engage in it. The growth of gaming has gone hand in hand with a growth of academic interest in the medium and in the activity of playing. Computer games, in fact, have become the main focus of the field of game studies, or ludology, as also evidenced by the foundation of academic journals such as *Game Studies*, *Games and Culture* and *Journal of Gaming and Virtual Worlds*, just to name a few. While this field has provided a platform that collected multidisciplinary work, videogames have also emerged as a legitimate topic of research in several disciplines from both hard and soft sciences, including for instance computer science, as well as social sciences and humanities (Ensslin, 2012; Mäyrä, 2008). From an EMCA perspective, in particular, video gaming interactions represent a perspicuous setting that allows to study players' activities and practices as they unfold in naturally occurring encounters, as shown by a small, but growing body of research which the present dissertation aims to contribute to.

Having introduced the theoretical and methodological foundations of this study in the previous chapters, I will now attempt to provide an overview of the state of the art concerning video games, to then introduce the data and setting of my analysis. In the first part of the chapter, I will sketch the approaches to the study of gameplay in the area of game studies (4.2) with a focus on linguistics (4.2.1). Then, I will zero in on the interactionist approach (4.3), with a focus on different participation frameworks (4.3.1) and on the notions of expertise in gaming (4.3.2). The last part of the chapter will be dedicated to the description of the data and the game played in the recordings (4.4).

4.2 Approaches to the Study of Gaming

As mentioned above, the field of game studies is a multidisciplinary area that includes different perspectives on the study of gameplay. One of the main factors that can help navigate through the distinctions has to do with the ontology of video games and the multiplicity of definitions that scholars can take as the starting point for their investigation. In particular, the definition of "gameplay" encapsulates the two main strands of research which, following Roger Callois's distinction between "game" and "play", take either the former or the latter as their subject matter (Crawford, 2012;

Ensslin, 2012; Larsen & Walther, 2019; Mäyrä, 2008; Stenros, 2017). Crawford (2012), for instance, distinguishes between a conception of games as media, which implies a narratological account of video games, and games as the activity of playing. Similarly, Stenros (2017) dichotomizes gameplay in terms of "objects", i.e. the artifacts, and "activities", i.e. the socially negotiated engagement with gaming.

Based on these distinctions, Mäyrä (2008) classifies studies either as "game-centric" or "play-centric": game-centric studies are those that focus on the game as an object, trying to identify its intrinsic features, the code and mechanics, questions of game design, graphics, interface, or the diegetic part that is narrated with it (e.g. Salen & Zimmerman, 2004; Wolf, 2001). Play-centric studies instead are concerned with players in the sense of users of the game, their activities, choices and experiences (e.g. Muriel & Crawford, 2018). Of course, the two are not impermeable categories, but rather a continuum that leaves room for contamination as well as criticism.

As a matter of fact, more recent studies (e.g. Crawford, 2012) tend to criticize the play-centric approaches which rely on classic views of gaming, grounded on the theory of Callois and on Huizinga's "magic circle", a model that sees the activity of gaming as distinct from ordinary life, with a suspension of rules and behavior to enter in an isolated world with its own rules and conventions. For Crawford (2012), however, setting such a boundary is a limitation to the understanding of gameplaying since this always takes place in the social world and cannot be dismissed as a special appendix to ordinary life. Crawford (2012) and Muriel and Crawford (2018) instead stress the importance of the experiential and interactional facets of the activity of gaming. Relatedly, Larsen and Walther (2019) propose an ontology of gameplay that tries to synthetize the two perspectives by basing their model on Heideggerian phenomenology. In their view, the distinction between game and play is a phase of the analytical enterprise, which should be balanced by a phenomenological perspective where the game is experienced through direct play. For Larsen and Walther, gameplay is thus understood as a constant oscillation between analytic categorizations and experiential immersion (2019).

4.2.1 Video Games, Digital Humanities and Linguistics

The distinction between game and play-centric studies also affects scholarly approaches to games in other disciplines outside game studies *stricto sensu*. Among these, given the intrinsic digital nature of video games, digital humanities have tackled games from a transdisciplinary perspective, considering both their potentialities as methodological tools and as objects of critical design. Ensslin (2021) for instance includes among such approaches the interest for the language of gaming (Ensslin, 2012; Ensslin & Balteiro, 2019), games for pedagogy and learning (e.g. Gee, 2003), digital

storytelling, critical games studies, and projects on digital archiving and preservation of video games. Far from being exhaustive, the list exemplifies the array of fields that have focused on games as digital objects.

In the case of archiving and preservation, for example, the rapid obsolescence of consoles, graphic engines or distribution platforms opens the issue of preserving games as cultural artifacts. If we think of flash games published as web interfaces that are no longer supported, retro-games that may become unavailable due to the use of outdated physical supports, such as cartridges or CD-ROMs, or digitally distributed content that may be removed because of the expiry of copyright licensing, preservation becomes a practical challenge for users, producers and scholars alike. In the light of this, video games are being recognized by museums as cultural assets worth of archiving and exhibiting (cf. Eklund, Sjöblom & Prax, 2019).

As far as linguistics is concerned, the multilinearity of games which makes texts in and around games variant and hardly ever the same has provided an area of research that resonates with the distinction between games and play typical of game studies (Ensslin, 2012). This implies that the language of gaming can be grouped into two main subfields, which Ensslin has defined "orthogame discourse" and "paragame discourse" (2012; 2021). The former has to do with "language within video games" (F. Heritage, 2021, p. 95), while the latter with "language around video games" (F. Heritage, 2021, p. 94). Heritage also grouped these two approaches as part of "ludolinguistics", thus adding a new meaning to the word as distinct from traditional logology, to refer to video game linguistics.

Studies on orthogame discourse can be considered game-centric, since they focus on the use of language inside the game, as it appears on screen, for instance in game menus, user interface, quests and characters' lines as part of the game plot. Among these, we can include studies on game localization and translation (e.g. O'Hagan & Mangiron, 2013; Pettini, 2021), linguistic creativity (Pettini, 2022), computational investigations of fictional placenames (Fekete & Porkoláb, 2019), and dialogicity in non-playable characters' speech (Lazzeretti & Gatti, 2021). Additionally, Heritage (2021) uses corpus linguistics to investigate gender representation in three orthogame corpora: a general, 330k words corpus of videogames texts coming from 10 games and two smaller corpora that included texts from two specific games, The Witcher and World of Warcraft. Frazier Heritage (2021) also discusses the legal problems and technical difficulties that may arise when building corpora of in-game texts and suggests possible ways to collect data which include the use of computer coding, by retrieving texts dumps and datafiles from the installation folder, the manual transcription of in game texts, or the reliance on fan-produced in-game content available on websites. Lastly, game-centric approaches also include linguistically informed multimodal analysis of video games as

procedural media (see e.g. Wildfeuer & Stamenkovic, 2022 for an analysis of the multimodal discourse structure of in-game tutorials).

The study of paragame discourse, on the other hand, is concerned with the use of language "around" the game, as it is employed by gamers and other stakeholders in interaction during or about video gaming. These studies thus take into account player interactions through several media interfaces such as written and vocal game chats, online communities and fora, gaming streams, as well as reviews, walkthroughs and other paratextual productions (cf. Ensslin & Balteiro, 2019). Research in this area has dealt with the creation of "ludolects" or "buddylects" as examples of gamers' specialized language from a lexicological perspective, as in Ensslin's (2012) investigation of the Gamecorp Corpus, a collection of 310k words retrieved from multiple sources which included game reviews, comments sections, online fora and recorder conversations. Similar studies on the formation of jargon were also carried out for other languages (see e.g. Francalanci, 2018; Urraci, 2012; 2019 for Italian), which have emphasized the role of English for the language of gamers, in terms of lingua franca (Iaia, 2016; Peake & Reynolds, 2020) or for bilingualism (e.g. Piirainen-Marsh, 2010) and translanguaging (e.g. Arnold-Stein & Hortobágyi, 2021). From a pragmatic perspective, there have been studies concerned with (im)politeness and the use of bad language in online gaming (e.g. Kiourti, 2019), (un)collaborative actions (e.g. Rudge, 2019) and deixis (Ensslin, 2012), characterized by the combination of multiple methods from speech act theory, systemic functional linguistics, and conversation analysis. Pure EMCA studies, however, are rarely included in the video game linguistics literature, despite potentially representing an emic account of how language and other multimodal resources concur in the organization of gaming as it happens. To these we turn in the next section.

4.3 Video Games as Social Interaction

In ethnomethodology and conversation analysis, the study of video gaming has grown into a small but relevant niche which attempts to account for "the gameness of game playing" (Reeves, Greiffenhagen & Laurier, 2017, p. 309) by studying naturally occurring gaming interactions as they happen, as temporally and sequentially organized phenomena (ibid.). From this perspective, video gaming becomes a technologically mediated activity where multiple resources and ecologies contribute the organization of gamers' accountable actions (Piirainen-Marsh & Tainio, 2012). Unlike game study theories that consider gaming as isolated from the "real world", EMCA approaches allow to shed light on how rules, materiality and digitally mediated resources like audiovisual components of games are understood, negotiated and oriented to as recognizable practices from the perspective of the participants (Reeves et al, 2017, p. 310).

Games and play more in general are not a new topic of investigations, as also seen at the beginning of chapter 2, with Garfinkel's tic-tac-toe experiment. In the last few years, in fact, both EM and CA have addressed different areas of play, as evidenced e.g. by Tolmie and Rouncefield's (2014) collection of ethnomethodological accounts of play and leisure activities such as fishing, yachting, rock climbing, and running, by the analysis of the organization of board game and wargame interactions (Hofstetter, 2020; Hofstetter & Robles, 2019; Sterphone, 2022), or by the references to gaming as a resource to build common ground in ordinary interaction (Sierra, 2016; 2021). The first investigation of electronic gaming, instead, was carried out by David Sudnow in a book titled *Pilgrim in the Microworld* (1983). Here, Sudnow provides an autoethnographic, post-phenomenological account of his experience with the video game Breakout.

Originally published by Atari in 1976, Breakout was a game based on simple mechanics: the player was supposed to break a wall of multiple layers positioned at the top of the screen by hitting the bricks with a ball that had to be kept in play and sent back and forth against the wall with the support of a paddle positioned at the bottom of the screen. Despite the apparent simplicity, Sudnow delineates his steps in trying to develop the necessary skills to master the game through repeated practice, which eventually led him to understand the affordances of the paddle, the projectability of next moves and the routinization and improvisation that were embedded in the activity of playing. For instance, in describing what may look like an obsession for discovering the inherent features of game design, Sudnow describes how he decided to cover the bottom part of his screen with black tape to hide the paddle and test his dexterity and sense of position by playing "blindly" (1983, p. 36ff).

As pointed out by Reeves et al. (2017), though, Sudnow's enterprise remains a solipsistic account, whereas recent EMCA works are concerned with gaming as a social activity where two or more participants are involved. According to the authors, video game literature in EMCA can be grouped in different ways depending on the area of interest, e.g., in terms of game genres, analytic focus, or gamers' participation framework (Goodwin, 2018) or ecology.

Concerning genres, EMCA studies have mostly dealt with online first person shooters such as Combat Strike: GO (Baldauf-Quilliatre & Colón de Carvajal, 2015; Brincher & Moutinho, 2021; Reeves, Brown & Laurier, 2009; Rusk & Ståhl, 2020; 2022; Rusk, Ståhl & Sisleth, 2021), and massive-multiplayer online games (MMOs) (Bennersedt & Ivarsson, 2010; Bennerstedt, Ivarsson & Linderoth, 2012; Keating & Sunakawa, 2010; 2011; Liang, 2021; Moore, Cabell, Ducheneaut & Nickell, 2007; Moore, Ducheneaut & Nickell, 2006, Newon, 2011, Sjöblom, 2008). Moreover, other studies have considered games played offline, such as fighting games (Baldauf-Quilliatre & Colón de Carvajal, 2019; Hung, 2007; 2009; 2011), sports simulations (Aarsand & Aronsson, 2009;

Mondada, 2012; 2013c; Tekin & Reeves, 2017), and single player adventure games (Reeves & Laurier, 2014, Piirainen-Marsh 2010; 2012; Piirainen-Marsh & Tainio, 2009; 2014).

In terms of analytic focus, Reeves et al. identify two tendencies of study: one focused on modalities around the game, related to external phenomena, while the other has to do with the organization of activities within the game, as they happen on screen (2017, pp. 312-313). These tendencies are also strictly related to the local ecology and contextual configuration of the participants in the data under analysis, ranging from multiple gaming stations located in the same physical space, through more traditional co-operative co-present gaming at home, to distant online participation. Following Reeves et al. (2017), in the next section I will briefly present an overview of the three main ecological configurations, while illustrating the potentially different analytic foci of the studies.

4.3.1 Gaming, Participation Frameworks and Multiple Resources

Starting from gaming settings with multiple stations, these include dedicated spaces such as internet cafes or LAN party configurations, i.e. settings where more than two gamers are playing together at the same time by accessing the game from different computers or consoles that are nonetheless present in the same physical space. Similar configurations have been investigated by Sjöblom (2008) and Keating and Sunawaka (2010, 2011), who have taken into consideration the interrelation of multiple activities and mobilization of multiple resources that are performed outside the game. Consider the following example, taken from a LAN party interaction with three players sitting at the same table, with three screens in front of them. David is arranging the entrance in the game world and planning the team's strategy:

[1] [Hop-In, Keating & Sunakawa, pp. 347-348]

```
01 David:  [Alright we're gonna try this a little bit different
02         [((puts his left hand on his left thigh and wipes it
03         his right hand stays on the mouse))
04         ((puts his left hand on his keyboard))
05         I'm gonna:: go ahead and
06         (2.0)
07         There we go. Bucks is on=
08 James:  =Cool
09 David:  an-, and in team and- and [I'm gonna bubble Bucks
10                                   [((turns head to Greg))
11         and [you
12             [((extends arm, points to Green))
13         And then:: [some guys bubble [Bucks and [you
14                    [((draws a circle by moving wrist))
15                                      [((points to his left))
16                                                  [((points to Green))
17         And I'm gonna [stagger everybody else in
18                       [((draws a circle twice))
```

After announcing his intention to start the game in a different way (line 1), David begins to explain his plan in line 5 while his hands are both on the mouse and keyboard, thus displaying an orientation to the gaming activity on the computer. In line 7, David interrupts the explanation and comments on the entrance of a teammate in the game world, to then go back to the instructions. Keating and Sunawaka focus on the multiple resources and activities that are mobilized outside the game by David to facilitate coordination within the game in lines 9-18. In particular, they focus on the use pointing gestures towards one of his co-participants, Green, as well as on the series of hand gestures with which he draws circles in the air that are coupled with gaze direction and talk (Goodwin, 2018). In this way, the selection of participants and definition of the strategy is negotiated locally outside the game, while at the same time monitoring what happens on screen, as shown by the commentary in line 7. In other words, Keating and Sunawaka (2010, 2011), point out that gaming constitutes a complex multiactivity setting where actions in real space can display a reflexive account of the social organization of the overall activity, as also argued by Sjöblom (2008).

An orientation to the coexisting dynamics between "real world" and "game world" are also evidenced in cases where participants are present in the same physical space and the gaming activity takes place on a single screen. Similar ecologies can be further distinguished by separating cases where two or more players are co-operating at the same time, from cases where only one on them is playing and the other(s) is spectating (e.g. Baldauf-Quilliatre & Colón de Carvajal, 2021; Brincher & Moutinho, 2021; Piirainen-Marsh & Tainio, 2014; Tekin & Reeves, 2017). To zoom in on the activity of cooperative gaming, we will consider a case where two players are actively participating at the same time. The following extract, taken from Mondada (2012; 2013c), in fact features two players, RAP and LUC, who are playing game of FIFA, a soccer video game. The game is on, and the extract begins with LUC in possession of the ball, running open towards the goal with an opportunity to score, as shown in the picture that precedes the transcript:

[2] [FIFA in Mondada, 2012, pp.240-241]

```
01 RAP:     tu le mets hein,
            you score it PART,
02          (1.+5)+
   Luc        -->+luc scores the goal for Real Madrid+
03 LUC:     *[Hu+h↑
04 RAP:     *[bi+en[::]
             [good [::↓
            *..... turns to LUC-->
```

```
   luc          +.....turns to RAP-->
05 LUC:      [voi ]:l*+à:
             [here]it is:
                  -->*+mutual gaze and handshaking-->
```

The extract begins with both players looking at the screen, orienting to the activity of playing. RAP (the one on the right) encourages and instructs LUC to score the goal. As LUC does so (line 2), RAP assesses the outcome of the play and compliments LUC (line 4). While changing the arrangement and participation framework of the activity, they step away from the screen and mutually orient to each other establishing mutual gaze and celebrating with a handshake (lines 4-5). What Mondada (2012) stresses here is the concurrent orientation to multiple temporalities that are affecting gameplay in its moment-by-moment performance. Players are able to manage both the temporality of the action on screen and the temporality of the "real world" by adjusting the ways they communicate verbally, shifting from directives to assessment, and in an embodied way, altering their posture and spatial organization. The on-screen action and resources provide the grounds for a shared understanding of the situation: in this case, the fact that scoring a goal momentarily suspends the game and therefore provides a sequential moment to disengage from the activity on screen. Similarly, Piirainen-Marsh (2012) has shown how game text on screen or characters' speech can provide other resources that affect participants sequential organization outside the game.

The contribution of resources "outside the game" necessarily diminishes in the third type of gaming setting investigated in EMCA literature, online gaming. In this configuration, participants are physically distant and do not have access to embodied resources or cues in the organization of their activities. However, the avatar itself can become resourceful and accountably available to co-participants both through verbalization (cf. Baldauf-Quilliatre & Colón de Carvajal, 2015) and through practical performance of actions in-game. In other words, the focus shifts to the action inside the game, to what is performed within the game world through the use of what in the field of human-computer interaction comes to constitute "user representations" (Seinfeld et al., 2021), the virtually available resources that are controlled with physical input devices such as mouse, keyboard or gamepads.

While some of the early studies of massive online games criticized avatar-mediated resources as insufficient to understand social actions in complex online environments (e.g. Moore et al., 2006; 2007), on-screen actions do share the sequential and accountable organization of face-to-face interaction. Bennerstedt and Ivarsson (2010) for example provided a sequential analysis of team play in the MMO game Lord of the Rings Online, where four distant players are cooperating without any use of talk or written chat. The screenshots below show the perspective of one of the four players, Doromir, along with the simplified schematics of the disposition of the avatars. The sequence shows

how in-game actions such as the kneeling of one of the players is recognized by the co-participants as an indication of the upcoming action of laying a trap, thus triggering a rearrangement of the positions in the game world:

[3] [Laying a Trap, in Bennerstedt & Ivarsson, 2010, p. 220)

The team here is preparing to engage in a fight against enemies that are hidden behind a wall door visible in the first screenshot. Eowyn and Gimlin initially position towards the stairs and stop to heal themselves, before the fight. However, in figure two Doromir kneels down and starts to set a trap in front of the virtual door. Recognizing the move, the other players rearrange their position behind the trap, to maximize the strategy and lure the enemies towards the trap. From an EMCA perspective, the kneeling of the avatar represents an accountable action that is "sequentially and environmentally positioned" (Bennerstedt & Ivarsson, 2010, p. 220) to perform an appropriate in-game move, which is understood as such by the teammates who in turn reposition themselves. Seen in this way, in-game actions, like talk and embodied resources, are situated and understood both retrospectively and prospectively, as context-shaped and context-renewing contributions to the interaction (Heritage, 1984).

In conclusion, in the present section we have seen how multiple resources can be mobilized depending on the local organization of the gaming activity. However, as argued by Reeves et al. (2017), while these resources can certainly be unpacked and addressed singularly (e.g. by distinguishing between real world and game world, on-screen and off-screen, talk and embodied resources etc.), the activity of gaming as technologically mediated interaction ultimately relies on the production and recognition of gestalt phenomena where semiotic resources, talk and in games moves are exploited as multimodal packages that constitute the practices of gameplaying, as for example the practice of "laying a trap" in an MMO game. Bennerstedt and Ivarsson's sequence also exemplifies how participants can display procedural knowledge and competence, i.e. know-how, in the ways they

accountably act and react to co-participants' moves in interaction. The next section will be dedicated to the review of research on the interactional accomplishment of expertise in video gaming.

4.3.2 Competence and Expertise in Video Games

Video games offer a rich setting to study expertise and orientations to knowing-how as they are made interactionally relevant in the course of gaming sessions. This is so in part due to the intrinsic reliance on dexterity and competence required to manipulate the tools, and in part to the self-reflexive orientation to expertise that games entail, for instance in the choice of level of difficulty or complications that players are presented with as they progress in a game.

In analyzing gaming as practical accomplishment, EMCA studies consequently reveal the orientations and understandings that underscore players' choices and moves in the act of playing, as situated displays of expertise (Reeves et al., 2009). The masterful work of gameplay, and expertise in general (cf. chapter 2), can either be explicit or implicit, verbalized or salient, claimed or demonstrated. As Reeves et al. put it, "unless one observes a game of novices", players' competence will mostly be visible in the moves in the games (2017, p. 329). EMCA studies on gaming expertise, in fact, can be distinguished between works that take different levels of expertise between participants as pre-condition to the study, and those that investigate the interactional negotiation and display of knowledge and competence as locally accomplished.

Among the former, we can find instances of interactions between expert and novice players (e.g. Brincher & Moutinho, 2021; Liang, 2021; Rusk, et al., 2021) or of gaming interactions where party roles such as that of team leader are pre-attributed before the beginning of the game (e.g. Newon, 2021). These studies show that participants orient to the imbalance of competence in performing social actions such as instructing and explaining, verbalizing the actions as they unfold. For example, Brincher and Moutinho classify their data as taken from "an instructed setting" (2021, p. 239) where an experienced player is teaching her younger brother to play a competitive shooter game and moving competently through the map. The interactional work of the participants in this case makes the learning trajectory of the encounter accountable, as the novice constantly makes his actions available to the expert participant, who monitors the session as a spectator, without playing. Rusk et al. (2021) instead carry out a micro-longitudinal study of teamplay, keeping track of how a player newly introduced to an expert team gradually develops collaborative skills as a member of the party after numerous practicing sessions.

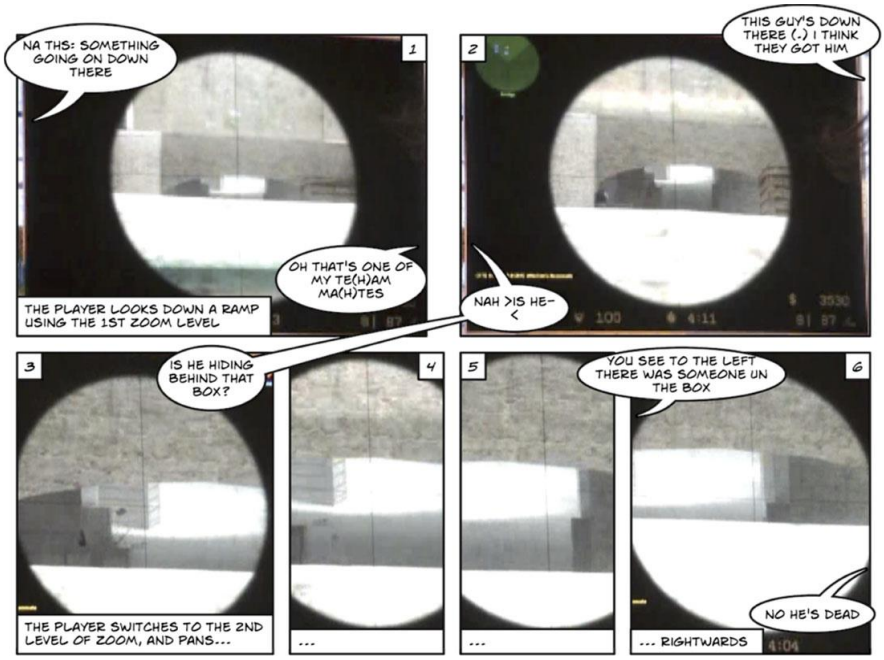
In situations where the expert gradient is not predetermined, instead, competence becomes visible in the displays of procedural knowledge, in the production and recognition of actions, and in treating in-game activities as gestalt contextures that make sense in the here and now that is

established by the current state of the team in play. Think for instance of fragment [3] discussed above. The kneeling performed by Doromir is not simply understood as "an avatar kneeling", but represents the avatar-mediated performance of a specific game move ('placing a trap on the floor') that is recognized as such by competent members' i.e. by expert players of Lord of the Rings online. Similarly, Reeves et al. 2009 discuss how the ability to collaborate as a team, scan the game terrain, and manipulate game tools and inventory are part of the set of seen but unnoticed competences that players orient to while playing a game of Counter Strike, and remark that such competences are seen not as individual actions, but "holistically as 'whatever they are doing'" (2009, p. 223). Moreover, they stress that the endogenous nature of gaming interactions limits the extent of generalizations. Plainly put, skilled gameplay can vary from game to game, or genre to genre, and gamers can always develop new practices to play efficiently in different environments, therefore inviting more studies on different titles and configurations.

As discussed in chapters 2 and 3, expertise can thus be investigated in terms of complex multimodal gestalts that, if we focus specifically on online video game interactions, can rely on the dexterous handling of input devices and game interface manipulation, on the enactment of visual competence and on the use of appropriate language (but see also Sjöblom, 2008 for an example of embodied displays of competence in physically shared gaming settings).

One of the ways in which visual and technological competence can be displayed is by considering the camera work that participants do to adjust their view of the game (Laurier and Reeves, 2014; Reeves et al. 2009; 2017). Consider the following fragment where a player and a spectator are scanning the area by zooming the scope of their weapon in a Counter Strike match:

[4] [Zooming, from Laurier & Reeves, 2014, p. 192]

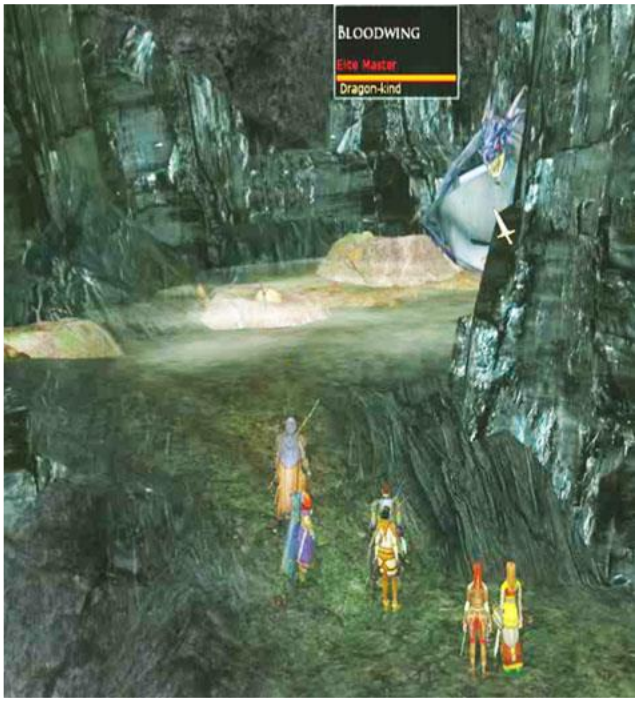


In the fragment, the player and the spectator are negotiating their vision of the tunnel that is framed by the use of the camera. In the first panel, the spectator notices something in a vague way ("something going on down there"), which leads to a negotiation of what is visible between the two parties. The player recognizes the moving figure as one of his teammates, who is described as killed in a fight against the opponents (panel 2, "I think they got him"). To scan the scene, the player switches to the second level of zoom, while aiming with the rifle (and implicitly the camera) towards a box, where crosshairs are visible (i.e. the darker point in the middle of panel 3). Upon noticing this, the spectator asks if the teammate is hiding behind the box without receiving an answer, as the player continues to pan the camera towards the right side. The spectator then reissues his report by referring to "something on the left" near the box, but the player corrects him and confirms that the teammate has been killed (panel 6).

In terms of visual competence, the orientation to the details of the scene is interpreted in different ways depending on the experience and know-how of the participants. In fact, as explained by Laurier and Reeves (2014), the reading of the terrain is based on the different interpretation of the crosshairs in panel 3: while for the spectator, they may hint at the fact that someone is moving around the zone, for the expert player the appearance of a weapon of the battlefield is a clear indication that the player has been eliminated. The ability to decode objects or graphic representations in situ is also combined with the skilled manipulation of the camera, which by zooming on the point under discussion, works both as a clarificatory zoom for the spectator and as a gaming move to check the position of the enemies. In spite of the fact that the interactional trajectory reveals different expert positions between the two viewers, the camera work and the exploitation of the technical affordances of the game interface are an indication of how expert players orient to visual competence and manipulation while they carry out online analysis of the domain of scrutiny.

While this extract points to an application of expertise in terms of screen adjustments and vision, the avatar itself can be employed to perform meaningful accountable actions, as we have seen earlier in example [3]. In this sense, not only the configuration, but also the actions performed on-screen contribute to set up situations that carry over prospective interactional trajectories (Reeves et al. 2017). Extract 5 below shows again how the temporary configurations of parties in the game world can provide the grounds to assess and decide "what to do next, seeing the implications for those actions in the environment" (Reeves et al., 2009, p. 223). The frame is taken from Bennerstedt et al. (2012) data on Lord of the Ring Online and focuses on how players, through their avatars, competently dispose on the battlefield by calibrating their movements with respect to one another and to the enemies. In particular, in this screenshot the party is approaching a boss fight against the dragon Bloodwing, which is visible at the top of the picture:

[5] [Safe Distance, in Bennerstedt et al. 2012, p. 51]



Bennerstedt et al. (2012) point out that, after entering the area of the battle, the leading player Merenwen stopped just before the wide lighter area in front. Subsequently, the rest of the team came to a halt as well and took the opportunity to heal and boost in order to be ready for a coordinated attack. In other words, the authors see a display of competence in the fact that, instead of running straight into the fight, the players stopped just before the virtual wall that would have triggered the fight, thus demonstrating tactical acumen and knowledge of the terrain. A shared agreement on taking the time to get ready was established simply by suspending the attack at a precise point in the current game space, which provided the contextual configuration to understand the move as collaborative preparatory work. Visual competence and on-screen actions thus offer ways to grasp the locally produced details of expert game playing as it unfolds.

A third area of investigation that can concur to the previous two regards the use of language in collaborative team play. For example, Piirainen-Marsh (2010, 2012) and Piirainen-Marsh and Tainio (2009, 2014) analyze instances of negotiations of linguistic competence as one of the resources that co-sitting players orient to when playing together on the same console. They focus on epistemic asymmetries related to knowledge of English as a foreign language and show that participants exploit language from game texts and dialogues to organize their gameplay.

Moreover, Rusk and Ståhl (2022) have instigated the use of English names to refer to set locations on maps in performing “callouts” in the online shooter Counter Strike. Making callouts is described as a gaming practice with which members of the same team who play together online are able to communicate the position of the opponents in the map. The callouts are uttered in English,

even if the participants are non-native speakers and usually talk in Swedish or Finnish. In the following extract, Mastodon has just been killed by an enemy, and communicates the location of the opponent to the rest of the team:

[6] [Rusk & Ståhl, 2022, p. 176]

```
01 Mastodon:     dit   e  en  bench,
                 there is one bench,
02               (0.6)
03 Mastodon:     minus sekstini:e,
                 minus sixtyni:ne,
04               (0.6)
05 Aster:        be?nch, .h
                 be?nch, .h
06 Örnen:        (int vet ja int [vil man nu fa di men)        ]
                 (I don't know   [you don't wanna go there but)]
07 Mastodon:                     [int bench men (.)            ] va heter dendä
                                 [not bench but (.)            ] what's it
08 Mastodon:           pallen    dit   i  [hö:rne.    ]
                 called the stool there in [the corner.]
09 Aster:                                  [chAI:r.    ]
10               (0.3)
11 Mastodon:     [chair]
12 Hatifnatten: [chair] jo.
                        yea.
```

In line 1, Mastodon locates the enemy by making a callout with the word "bench" and updates of the damage he has been able to inflict to the enemy before being eliminated (line 3). However, in line 5 Aster repeats the word "bench" with rising intonation, as an other-initiated repair format that displays the lack of understanding. Mastodon subsequently retracts the use of "bench" while searching for the correct word for the spot. He does it by referring to one of the objects featured on the map ("stool") and by locating it in relation to the spatial configuration of the room. As he does so, Aster supplies the correct name of the location ("chair", line 8), which is repeated by both Mastodon and a third player, Hatifnatten, who confirms the correctness with an acknowledgement token. Although the parties were able to clarify the intended reference, they also oriented to the use of precise English vocabulary that assumes a situated meaning in the game, as an instance of shared knowledge of the game and as a constituent of what the authors define "callout competence". This thus suggests that gamers jargon can be one of the resources that form part of complex gaming practices, such as callouts.

In conclusion, in this section we have seen that players' competence can be displayed by mobilizing language, vision and in-game actions as some of the resources that constitute expert gameplay in online cooperative games. However, while the examples considered were helpful in outlining the possible ways of tackling expertise in gaming, they only offer a partial account of online gaming as a collaborative practice. In the next section, I will introduce the criteria that I followed in collecting the data for the present study.

4.4 The Data

Among the different participation frameworks discussed above in 4.3.1, online gaming has become one of the preferred configurations for both leisure and professional gaming. In recent years, thanks to the improvement of broadband internet connections and the development of gaming platforms and consoles capable of handling complex 3D virtual environments and multiple communication channels, the online component of video games has turned into a fundamental playing mode in several game genres. The technological advancements in fact have allowed players to interact and play together while at a distance, relying on talk and on-screen semiotic resources to coordinate their activities, for example with the support of voice chats integrated within the game interface, or into the console operative systems (i.e. the so-called "party chat", cf. Hung, 2017). The shift towards online gaming thus sets up different social play settings that can either be based on competition, cooperation, or a combination of the two (Myers, 2010, p. 119) and take place in a technology-mediated environment.

While the examples described earlier (cf. 3.4.2) provide a first attempt at investigating the practices and competencies in online gaming interactions, and of teamplay in particular, they nonetheless result in rather solitary, mono-perspective accounts of the collaborative work that players do online. Laurier and Reeves data for example feature two participants, but one of them is not involved in the activity of playing and just spectates the session, whereas the player does not interact with his teammates: in this sense, they do not record how a team plays together, but how one of the players communicates with a spectator while competing online. Similarly, Bennerstedt and colleagues (2010; 2012) base their analysis on autoethnographic, ethnomethodological accounts of sequences of actions that are mostly based on the perspective of only one of the players (Bennerstedt, the recorder player herself), without considering the temporal organization of verbal (either written or spoken) communication, when used. Rusk and Stahl data indeed represent a first attempt at analyzing interactions between co-players, studying recordings from an educational eSport program team of five players, who compete as part of a broadened classroom activity, with both novices and expert players involved. In addition, they only have access to the perspective of one of the participants and therefore "do not have 'complete' data to understand other players' full participation in the situations" (Rusk & Ståhl, 2022, p. 170).

As a matter of fact, in online multiplayer interactions gamers do not share the same domain of scrutiny through the same screen, but may have asymmetries in visual access, depending on their position in the game space, their current activity, or the orientation of their camera. Moreover, as shown in 4.3.2, avatar-embodied actions can be used to perform both initiating and responsive actions that participants orient to, which may not be available to the analysts from a single player perspective.

In collecting my data, I thus decided to record the perspective of each of the members of one team and I chose to study interactions between teams of peer participants, without a predetermined attribution of competence or roles, so as to study the negotiation of competence as a sequentially achieved negotiation.

The data include interactions between three distant gamers who play together as a trio in the popular online battle royale game Fortnite (2017) (cf. 4.4.1 below), while also communicating via the vocal chat system of the game. The corpus comprises ten matches in total, five featuring the English team, and five the Italian team. The two teams are not competing against each other, and recordings have been made at different times. The dataset totals three hours of interactions in English and Italian, including the recordings of the vocal chat and the three players' screen.

The English data are based on video streams made by North American professional esports players competing in Fortnite ranked mode on pc, as part of a qualifying round of an amateur cash tournament, open to everyone. Therefore, the data have been produced by the participants themselves for live streaming purposes and have then been retrieved from their respective Twitch and YouTube channels. The choice was based precisely on the fact that all three players decided to stream and upload the same session, making it possible to access each of their perspectives. As live streams, the data feature the picture-in-picture recording of the players' webcam and one of them also had a camera set on his keyboard and mouse. However, webcam recordings have not been considered for the analysis, since they are produced for the spectators and were not available to players during the session. It is additionally worth stressing that sessions were not broadcast as "Let's Play" or similar type of audience-oriented streams, where players typically comment the game for the audience during its live experience, but rather as professional cooperative streams of gameplay between members of the same team.

The Italian data include the audio and screen recordings of three Italian amateur gamers also playing Fortnite in ranked mode on the PlayStation 4 console. Despite not being professionals or renowned streamers, all three of them had over five hundred hours of experience on Fortnite at the moment of the collection. In this case, the clips have been produced by the participants for research purposes as private occasions of cooperative gameplay. To do so, they used the PS4 "Share" functionality, a built-in screen capture system which automatically records what happens on the screen as a temporary file that can then be streamed or stored on the console hard drive. This function allows to include the party vocal chat in the recordings as well. After saving the videoclip, the file can be exported via USB drive and shared as an .mp4 video, in either 720 or 1080p resolution. One of the participants was instructed to make the clips and ask his teammates to do the same. No webcams or other PiP videos have been included in the videos.

The recordings of the three perspectives then been synchronized, also including the vocal chat recordings, with the help of the video editing software DaVinci Resolve and have been transcribed according to traditional Jeffersonian conventions (2004, cf. appendix 1), by using ELAN as a support and archive tool. Initial raw transcriptions were in fact produced on ELAN and then exported as .txt and converted in traditional word processor transcript. The media player functionality of ELAN was also exploited to produce multimodal annotations of selected sequences (Mondada, 2019, cf. appendix 2). When transcribing online video-mediated screen captured recordings, micro-lags, latency and video glitches can be a cause of problems in the transcription phase (Seuren et al. 2021). This was also the case in a few instances in the Italian dataset, with lags and bugs verbalized by gamers, which still did not cause any differences in the final outcome of the transcripts.

4.4.1 The Setting: Fortnite

The game played in the recording is called Fortnite (2017), one of the most popular video games of the past five years, with an average of 250 million active players per month. Developed and produced by Epic Games, Fortnite is a battle royale online video game. The genre of battle royale games has become one of the most played in recent years and owes its name to the homonymous film by Kinji Fukasaku (cf. Jarrett, 2021), which in turn was inspired by combat fighting sports competitions such as professional wrestling, which introduced battle royale matches in the early 90s. What the movie and the wrestling format have in common is the idea that all participants start to compete at the same moment in the same conditions and must fight to be the lone survivor.

Fortnite's core mechanic follows the same principle: in order to win a match, a player or a team, as in our case, must be the last one standing at the end of the match. Every match features as many as 100 players, who start the game without any weaponry or inventory when entering the game world. Each game starts with all the players jumping off a battle bus that flies over the game map, an island, and must decide where to land to begin the competition. As the game progresses, the map gradually shrinks, forcing players to converge towards a specific point in space (endgame), in order to induce players to cross paths with opponents and engage in fighting.

Relatedly, the main gaming activities of Fortnite include looting, farming, building and shooting mechanics. Since players start the game without any items, the first goal is to secure a safe landing spot and loot the surrounding area in search of equipment, while also 'farming' resources by breaking objects in the virtual environment of the game. Farming resources (wood, brick and metal) can then be used to build structures to defend themselves from opponents' attacks, while weapons are key to the shooting mechanics, with which enemies can be eliminated. Players are eliminated when they lose all their shield and life points. In team modes, when this happens, they first enter a state

called ‘downed but not out’ during which they can be revived by teammates. If all members of the team are eliminated, instead, the match instantly finishes for them. As a consequence, there is not a set duration for a game: even though they usually do not last more than thirty minutes, a match could finish after thirty seconds if the entire team is killed by an opposing faction right after the landing phase.

In trios mode, the mode recorded in the data, there are a total of 99 players, and thus 33 different teams involved in each game. The three players recorded in the datasets thus represent a single team. Members of the same team cannot damage one another, as friendly fire has been removed from the game just after its official release. The remaining 32 teams are composed of real players. That is to say, the battle royale game mode does not include AI-controlled enemies and linear progression as in other classic video games genres but combines a mixture of cooperation (between members of the same team) and competition between teams, in a series of unscripted games that are never the same.

As a matter of fact, randomness is an important feature of Fortnite, since it guarantees unpredictability and variation in the experience. With a few exceptions, weapons and loot chests are never located in the same spot from game to game but are generated casually by the game engine. In addition, as every game features different human-controlled teams and different end-game zones, it is impossible to live the exact same experience twice. Moreover, the game is constantly updated by the developers, who modify the availability of weapons, the ecological configuration of the game space, the mechanics etc. Ever since 2017, the game has in fact been updated on a regular basis once every two weeks on average and has seen major overhauls to its mechanics and environment, for instance by completely changing the gaming map more than once.

In regard to the interface, figure 1 below helps us to clarify the in-game perspective:

Fig. 1 (In-game perspective)

Fortnite is a third person game, as can be seen from fig.1. This means that the game camera is located behind the player and can be controlled independently of the avatar, unlike first person view where gamers take the perspective of the avatar (Laurier & Reeves, 2014). The game camera can be controlled by using the right analog stick on consoles, or by moving the mouse on pc, whereas avatar movements are enabled with the left analog stick on consoles, or with a combination of keys (usually the W-A-S-D keys), working as arrows on the computer keyboard. The game view also features multiple sections at the corners of the screen. At the bottom left of the screen (white rectangle), players have details about their shield points (blue line) and health points (green line), whereas at the bottom right side they can find information about their inventory (white circle) with the current items placed in the five slots, also including the number of ammunitions, and, above that, the quantity of farming resources available. On the top left of the screen (white circle) information about team member's health status is available, while on the other side players can monitor a bird's-eye view of a portion of the map relative to their current position.

As for the game spaces, Fortnite combines a three-dimensional interactive space to 2D "mapped spaces" (Wolf, 2001). The 3D space is visible in Fig.1 and constitutes the actual game world, which includes inside and outside locations that develop in altitude and depth depending on the area and features 3D elements that can be destroyed to farm materials (e.g. in fig 1, the street lamp and the walls of the house can be 'farmed'). This is the space where most of the gaming activities take place. However, the game also includes 2d mapped spaces as the one represented by the bird's-eye view on the top right screen, which provides a mapped representation of the game world and of players' position. The map can also be activated in full screen mode, thus providing access to the entire game space. Further details about the mechanics and features of the game will be given when relevant in the following three analytic chapters.

Chapter 5 – Orientations to Knowing-that and Knowing-how in Video Game Interactions

In the previous chapters, we have seen that expertise and access to knowledge are not attributed to participants beforehand but are the result of a moment-by-moment negotiation that takes place in social interaction. This negotiation can entail orientations to different qualities of knowledge, some factual and some practical, which in turn can be realized by mobilizing different resources, both verbal and embodied (or mediated).

In this first analytic chapter, I will focus on the interactional negotiation of epistemics and expertise in cooperative online video gaming. In particular, I will consider how gamers orient to different domains of knowledge in the act of playing, which co-contribute to determine their courses of actions and the outcome of their collaborative play. I will first start by introducing a conceptual distinction between orientations to knowing-that (5.1) and knowing-how (5.2) in order to illustrate how both informational and procedural knowledge are made relevant, displayed, and negotiated in the course of cooperative play. For the sake of my argument, in these two sections I will selectively focus on the orientation to either one of the two domains of knowledge, even in cases where the two may appear interrelated. In section 5.3, I will then zero in on the mutual elaboration of know-that and know-how in the performance of larger in-game activities and in accomplishing playing together.

5.1 Orientations to Knowing-That: Epistemics and Video Games

Research on epistemics (cf. chapter 1) has pointed out that participants' access, primacy and responsibilities in relation to a piece of knowledge imply that they assume different epistemic positions relative to their co-participants in the here and now of the interaction. Within this framework, we have defined "knowing-that" in terms of knowledge that has to do with factual information, and saw that participants display and monitor one another epistemic status in producing and ascribing actions. With respect to the orientation to knowing-that, the two social actions that feature displays of negotiation of knowledge between gamers in my data are question/answer sequences and accounts or explanations. For the sake of my argument, I will describe both in the next sections by selectively focusing on the negotiation of knowledge-that, even in cases where other domains of knowledge may appear relevant.

5.1.1 Question-Answer Sequences and Factual Knowledge

In online gaming, the use of questions is a practice frequently used to explicitly negotiate access to information either about the overall game mode mechanics or about the qualities of certain weapons or items that are encountered in the course of gameplay, and thus constitute loci of overt displays of gamers' epistemic status which are locally oriented to. Consider the following instance, where the players are starting the third game of the session. As explained in chapter 4, the game mode they are playing is a competitive qualifying round to score points for a cash tournament. The qualifying session is not infinite, but based on a set number of games that a team can play to rank. In the first extract, Pun launches an information seeking sequence about the number of total games they have available in the current round to score points for the qualifiers:

[1] [FortEng G3 – How many games]

```
01 PUN: ->  so how many games we have? =is it twelve (.) or is it [ten]
02 NIC:                                                           [ten]
03 DAW:                                                           [we ]
04          have ten >ten.
05 PUN:     Okay it's ten alright we want a good game here then,
06 NIC:     Yeah.
```

In line 1, Pun first formulates a content (wh-)question that projects a number as a relevant response ('how many games'), which is then incremented and reframed as an alternative (X or Y) question (Drake, 2021), with which he offers two candidate choices ('is it twelve or is it ten'). As he does so, both Nic and Daw answer by providing the number requested ('ten', lines 2-4), uttered in overlap with Pun's second alternative, which is then registered by Pun in line 5 with a repetition. In terms of epistemics, Pun here positions as the least knowledgeable speaker of the party and, notwithstanding the upgrade of knowledge provided by the offering of two alternative candidate answers (cf. Pomerantz, 1988), he still displays his lack of certainty over organizational details of the game mode they are currently playing.

Other examples of questions displaying partial knowledge-that of the game mode mechanics can be seen in the following two extracts where the participants are discussing the rewards and milestones that allow to score points for the team overall ranking mode. In [2], two participants, Ste and Cav, are talking about the different classifications that award points:

[2] [FortIta G3 – Ranking]

```
01 CAV:     quindi cosa c'è, c'è top dodici top quattro e top?
02          (0.7)
03 CAV:     basta?
04          (0.7)
05 STE:     top due.
```

```
06          (1.6)
07 CAV:     davvero? (.) tristezza.
```

Cav begins the sequence with an initial content question (‘cosa c’è’), which is expanded into an open list of items. In this way, Cav displays that he knows some of the features, but at the same time attributes superior epistemic status to his teammates in confirming the possibility that the list may not be complete. In fact, Ste provides the missing information (line 4, ‘top due’) which is in turn received with surprise as newsworthy (‘davvero’) and then assessed as a sad consolation reward.

Similarly, in extract [3] Pun’s question is understood as a request for confirmation about the ways in which ranking points are assigned in the game:

[3] [FortENG G2 – Points]

```
01 PUN: ->  Are points still like the:- (.) like kinda
02      ->  how they’ve always bee:n, a little bit,
03 DAW:     Yeah.
04 PUN: ->  Placement [and then]
05 DAW:               [yeah uhm]
06 PUN: ->  just the first game you drop [like]=
07 NIC:                                  [I’m-]
08 PUN: ->  =you try to drop higher kill game I guess?
09 DAW:     Ye[ah  ]
```

The downgraded epistemic stance is evidenced by the time-framing of the confirmation-seeking action (for example with the use of ‘still’ or ‘like they’ve always been’ in lines 1-2). In other words, Pun shows that he has some previous knowledge of the point system, based on team placement (line 4) and number of kills (line 8), but at the same time he is also oriented to the possibility that things may have changed in the most recent updates of the game or in this mode in particular. In this case, in lines 3 and 9, Daw positions a K+ speaker and confirms the correctness of Pun’s factual knowledge of the point system.

Time-framed questions have also been found in relation to the qualities of in-game inventory objects like weapons and healing items. In the following extract, Pun is again orienting to informational knowledge when asking about the maximum damage that a weapon (‘blue charge’) can make:

[4] [FortEng G1 – Weapon Damage]

```
01 PUN: ->  Does the blue charge still do like one eighty fully charged
02      ->  or,
03 DAW:     I think that’s two hundred fully charged.
04 PUN:     Oh two hundred?
05 NIC:     Re::ally?
06 DAW:     [[   Ye::h  ]]
07 NIC:     [[I actually]] didn’t know [that].
08 PUN:                                [O:h ] it might be good if I keep-
09          I might keep it then.
```

The format of the polar question in line 1 again emphasizes the fact that the information at hand was actually as formulated in previous versions of the game that Pun is knowledgeable of, i.e. that the weapon could inflict a damage of one hundred eighty health points when used with a full charger. However, the epistemic downgrade is again framed in relation to the temporal dimension of access to knowledge ('still') and the use of a truncated alternative ('or') that projects possible differences. In this case, Daw provides the updated fire power of the weapon ('I think that's two hundred'), which was not known to both Pun and Nic, as displayed by the subsequent use of a change of state 'oh' and requests for confirmation by both (lines 4 and 5), and by Nic's explicit claim of not knowing in line 7 ('I actually didn't know that'). In sum, in the extract discussed thus far the focus has been on the use of questions to downgrade the questioner's epistemics stance vis-à-vis the teammates while simultaneously displaying partial access to pieces of factual information.

Moreover, there are cases in which questions address factual knowledge that is completely new to some of the participants, such as the finding of unknown objects. In the next extract, for instance, the players are in the looting phase at the early stages of a game and are looking for items in different parts of the map. After opening a loot chest, Pun notices that his avatar automatically collected a multicolor tear-shaped object and asks about it:

[5] [FortEng G4 – Confetti things]

```
01 PUN: ->  Guys what are these little like confetti things that pop out
02      ->  of chests do they he- like help me in any way like?
03 NIC:     No:h ju(h)st for you battle pa(h)ss (.) to upgrade
04 PUN:     Oh okay
05 NIC:     Ye(h)eah
06 PUN:     I'm just like ma:n is this giving me some superpowers or
07          something?
08 NIC:     Hahah
09 PUN:     The more I get the stronger I am,
10 NIC:     Heheheh
```

In lines 1 and 2 Pun positions as K- speaker and displays his lack of knowledge of the item just collected by first uttering a direct content question about the colorful object he has just found. To do so, he provides a tentative description ('what are these little like confetti things') based on the evidential knowledge that he has been able to grasp by visually encountering it, i.e. the fact that they are colorful and that are found in chests. His initial inquiry is followed by a more precise yes/no question which aims to elicit information relative to a specific quality of the object, whether this is helping him or not. In this way, Pun displays his non-knowledgeable state with regards to the item which is presented as new to him. In line 3, Nic answers both questions by clarifying that the object has no use during gameplay but just as a collectible to upgrade the battle pass, an additional add-on content that allows to unlock cosmetic customizations for the avatars. The answer is given in an

amused way, and after the reception of the information ('oh okay', line 4), Pun justifies his previous inquiry in an ironic way, by joking about the superpowers (lines 6 and 9).

A similar orientation to encyclopedic knowledge about the qualities of objects is also visible in the following extract. In this case, the item under discussion is a proper tool that can be used in the game and collected as part of the inventory. Before the beginning of the sequence, Cav has just found a cow-like backpack, a temporary item that had recently been added to Fortnite at the time of the recordings, which allowed players to transform their avatars into inflatable cows and jump around the map to move more quickly. Just like in [5], here Cav takes an unknowing epistemic stance about the new object:

[6] [FortIta G5 – Mucca]

```
01 CAV: ->  Cos'è la mucca?
02          (1.5)
03 BUF:     [[ La mucca è tipo::-     ]]
04 STE:     [[La mucca: è praticamente]] un salta salta
05 BUF:     Un rimbalzino, (.) un rimbalzino che ti fa andare avanti
06          (1.8)
07 STE:     Buffa qua c'è un altro shieldino.
08 BUF:     [  U::::h  ]
09 CAV: ->  [C'è quindi] serve o no?
10 BUF:     So:: nice. No (.) cioè è utile se devi andar a pushar
11          della gente [però] attualmente [no ]
12 CAV:                 [a::h]             [ci:] sono due shieldini qui
```

In this case the direct open question explicitly frames Cav's absence of knowledge about the new object. Both co-participants instead position as more knowledgeable and try to provide the requested information by self-selecting in overlap. Both Ste and Buf define the object in terms of its motoric features, stressing the bouncing properties ('salta salta', line 4; 'rimbalzino' line 5) and the mobility of the tool ('che ti fa andare avanti'). After a gap where the team continues playing the game and looting, in line 9 Cav reframes the question underlining the usefulness of the tool ('quindi serve o no?'), to which Buf responds both in general terms, with a conditional clause ('è utile se devi andare a pusher della gente') and in relation to the contingencies of their current game ('attualmente no'), thus orienting to both factual and procedural knowledge. Having focused on the former for the moment, we have seen that players' use of questions gives access to what is known, partially known or unknown to them about the game, which is managed locally to provide up to date encyclopedic information about the game.

5.1.2 Accounts and Knowing-That

The second position where participants explicitly orient to knowledge-that is when they provide accounts for their actions in the game. Accountability in conversation analysis is a multi-faceted

concept that includes both the indexical nature of actions and methods *à la* Garfinkel, and the explicit interactional production of explanations and justifications (cf. e.g. Heritage, 1988a; Robinson, 2016). In this section, I will focus on the latter, and in particular on the display of knowledge in providing support to one's claims.

The first example of knowledge displays in accounts can be seen in [7]. Nic and Daw are on a car and Nic is driving to reach different spots where they are going to loot and farm materials for the game. To get to the two spots, they are supposed to drive through a grass field, but in that moment, they are driving a sportscar, very quick on tarmac in the game, but hard to control when used off-road. While driving, Nic notices a pickup truck parked on the wayside and as he stops the car (see fig.1), he starts the following sequence:

[7] [FortEng G3 – Quicker on the Grass]

```
01 NIC: ->  Let's get this one# Dawn quicker on the grass.
                              #fig 1
02 DAW:     Okay (.) yup.
```

#Fig 1 (Nic) Fig 1 (Daw)

What is interesting here with regards to knowing-that is that Nic's account for the proposal to swap cars explicitly displays his knowledge of the different properties of the vehicle ('quicker on the grass'), on which he grounds his position. Epistemic access in this case warrants the legitimacy of the proposed course of action, as also shown in the following example, taken from the very beginning of the first game:

[8] [FortEng G1 – Drop Spot]

```
01 NIC:     Guys, well I just wanna say th- e::h this spot here is
02      ->  insane with the amount [of floor spawns]
03 PUN:                            [Oh is it?      ]
04 NIC: ->  and [you can] max out brick i:n a: second [bro:. ]
05 PUN:         [okay   ]                             [oh wow]
```

Nic here is presenting a spot on the map where the team could land to start the game: he first assesses the place in a very positive way ('insane' which is used with an extremely positive connotation) and then accounts for his assessment by providing factual information about the features of the location

under discussion, such as the high number of weapons and loot chests (‘amount of floor spawns’) available there, and the richness of resources – brick in particular – that can be farmed (‘you can max out brick) in the surrounding environment. In this way, Nic positions as the knowledgeable party, while Pun acknowledges the information as new.

Another instance of epistemically framed account can be found when players provide information relative to the current status of their inventory as a way of legitimizing requests or offers of ammunitions or healing items. Consider for instance the following extract, which takes place after the team has won a fight against other three opponents:

[9] [FortIta G2 – Medi]

```
01 CAV: ->  Qualcuno ha ↑medi perché ne ho quarantasette,
02 STE: ->  Ne ho: novanta.
03 BUF:     >Io io i:o. (.) per tutt’e due.
```

In line 1, Cav makes a request for medium bullets (‘medi’) and justifies it by communicating the very low number of ammunitions that he currently has, only forty-seven bullets. Since information about teammates’ inventory status is not available to the rest of the team unless it is reported verbally by the player concerned, this comes to constitute a Type 1 knowable that belongs to the territory of information of each individual player. The same strategy can also provide the grounds to turn down the request, as it can be seen in Ste’s response in line 2, where his own update on the inventory, which is also relatively low (‘novanta’), accounts for the rejection while simultaneously constituting a further request for bullets, as suggested by Buf’s reaction, who accepts to share some of his mediums with both Cav and Ste.

Lastly, accounts can also be used in responsive actions, as in extract [10] below. Pun, Daw and Nic have just landed on the map and have decided to separate and go loot different spots of the map. While Daw and Nic have chosen their destination, Pun is not sure where to go and seeks advice from his teammates:

[10] [FortEng G5 – Launched on in a Second]

```
01 PUN:     Where do I go by the way now I just go (.) like-
02 NIC: ->  U::hm the thing is if you go Beach Pun, you can get launched
03      ->  on in a [second.]
```

In answering Pun’s initial request, Nic here implicitly discards one of the landing spots nearby Pun’s current location by displaying his knowledge of that specific point of the map, namely Believer’s Beach, an area where it is most likely to cross paths with opposing teams. Nic in fact topicalizes the spot ‘Beach’ with an if-conditional clause, and then illustrates the negative consequences of the place by pointing out to Pun that he could risk running into enemies (‘you can get launched on in a second’).

In this way, Nic discourages the choice of Beach by upgrading his epistemic position in relation to the topology of the game world.

In conclusion, in this first section we have concentrated on the different ways and sequential contexts in which orientations to knowing-that are made salient by the participants for the organization and negotiation of their gameplay. In the following section, I will present some of the ways in which the concept of knowing-how is brought to the surface in interaction.

5.2 Orientations to Knowing-How

In chapter 2 we have defined knowing-how in terms of orientations to procedural knowledge and skillful praxeological performance which is negotiated and displayed both in overt and covert ways in the course of interactions where practical activities are involved. In the case of video gameplaying, the overall activity that participants are engaged in implies that procedures, skills and dexterity are visibly and demonstrably accountable, in ethnomethodological terms, i.e. understandable and reflexively organized as practical methods to play together as a team. In this section I will discuss a series of examples to provide a conceptualization of how knowledge-how and expertise are manifested in the data.

One of the ways in which gamers orient, topicalize and display knowledge-how has to do with procedures and instructions to perform in-game actions. For instance, excerpt [11] below revolves around a discussion on controls to activate a feature that is new to one of the players, Pun. In the version of Fortnite that they are playing, a new tool was introduced which allowed players to become ghost-like invisible figures that can fly in the air and move faster. To enter this mode, players are supposed to interact with a 'shadow stone' that can be found in certain areas of the island, which temporarily transforms the avatar, for roughly one minute. In the extract, Pun has just activated one of the shadow stones as a try but does not know how to exit that form:

[11] [FortEng G4 – Controls]

```
01 PUN:     How do I get out of this form?
02 DAW:     Uh [You hold-]
03 NIC:        [hold down] left [click]
04 DAW:                         [left ] click yeah.
05 PUN:     Left* click okay* perfect. (.) thank you
                *leaves form*
```

In line 1 Pun asks for instructions and displays his inability to handle the ghost-like form in terms of the use of game controls. Daw and Nic position as knowledgeable and expert in regard to controls and provide the requested instruction, with reference both to the key on the mouse ('left click') and

to the procedure (‘hold down’). Pun registers the reception of the instruction (line 4) and is simultaneously able to carry out the action and leave that form successfully.

Similarly, orientations to knowing-how are displayed when the instruction is not just related to the use of game controls, but on the praxeological, avatar-mediated performance of more complex actions in the game. For example, in [12] Pun seeks indications for performing a jumping action with the avatar by using bounce pads:

[12] [FortEng G5 – Instructed Action]

```
01 PUN:     You go straight up?
02 NIC:     O::h no I hit it like (a little grab and) I just kinda let it-
03          let it take me.
```

In this case, how to move the avatar and the direction of the movement are practical problems that are collaboratively discussed in interaction. Pun’s polar question projects an upward movement of his character after the jump, which is in turn corrected by Nic who points out that it is sufficient to let it fly forward without going up (‘let it take me’).

In addition to procedure and practical instruction, players display their know-how by mobilizing procedural knowledge of the game mechanics. In the following extract, Nic and Daw are discussing the shield and healing items collected:

[13] [FortEng G5 – Items cap]

```
01 NIC:     I got four chugs and six minis so we’re looking good.
02 DAW: ->  Okay I can maybe drop you chugs (°then°.)
03 PUN:     I think u:h-
04 NIC:     Okay.
05 DAW: ->  Cause I have two.
```

After Nic mentions the number of items in his inventory (‘four chugs and six minis’), Daw proposes to drop some of his items, ‘chugs’ specifically, (line 2) and accounts for it (‘cause I have two’, line 5), in a way similar to what was described above in extract [9]. While access to knowledge of the number of items still remains a matter of factual content, what is interesting to point out here is the procedural reasoning that Daw and Nic do in deciding to redistribute what they have available. Daw’s account is grounded on the fact that the total number of ‘chugs’ a player can carry is six. Since Nic has just informed the team that he has four, and Daw has two, it follows that it makes strategically more sense to leave Daw’s chugs to Nic so that he can fill his slot to the full, and at the same time Daw can free up an inventory space to collect other items. The account in line 5 thus makes the orientation to the procedure explicit in justifying the initial action in line 2.

Additionally, as shown in chapter 2, knowledge-how can also be demonstrated by mobilizing and orienting to sensorial perception in the performing an activity. In video gaming, players’ ability

to see and listen relevant details of the game are an example of competence performance which contributes to the gameplay, as shown in the following extracts:

[14] [FortEng G2 – Demonstrating how to see]

```
01 PUN:     There's a team straight down under where we did (.) the last
02          one.
03 NIC:     Yup good comms I see that o:ne:
```

[15] [FortEng G2 – Knowing how to listen]

```
01 DAW:     I think he's b- I heard him just build metal build pretty far
02          away.
03          (.)
04 PUN:     He ran?
05          (.)
06 DAW:     I don't know
```

In both extracts, the players verbalize and topicalize their perception as relevant to the organization of gameplay and as a competent understanding of what is happening around them. In [14] Pun is monitoring the aerial space around the team while landing on the game island and he is able to identify and locate an opposing team and to inform the rest of the group ('straight down under where we did the last one'). In [15] Daw recognizes the sound of metal builds, one of the building resources available to players to defend themselves and uses the directionality and provenance of the sound to assess whether the enemy is near or not ('pretty far away'). Vision and hearing thus constitute key sensorial resources that participants rely upon to play efficiently, whereas among other senses, touch in video games can be associated to dexterity and the manipulation of game pads and controllers and may be object to negotiation, even if this often takes the form of claimed know-how, rather than demonstrated as in the cases above.

The final example that I would like to discuss in fact presents a borderline case where an orientation to knowing how is actualized in a claim of procedural knowledge. The extract is the continuation of [4] discussed above. Pun has just been informed that a weapon, the blue charge, can deal a total of two hundred points damage and has decided to keep it in his inventory, thus in a way displaying a competent awareness of the game mechanics and of the fact that inflicting a damage of two hundred points implies killing an enemy with a single shot. However, after Pun has communicated his decision, Nic warns him about the manual difficulties he may encounter:

[16] [FortEng G1 – Claimed Know How]

```
01 NIC: ->  [It might feel] clunky for you though if you're not used
02      ->  to it.
03 PUN: ->  Na:h I remember how to:.
04 NIC:     Okay.
05 PUN:     I used to like it a lot.
06          (0.8)
07 NIC: ->  Yeah you're still a pro gamer I respect it.
```

```
08 PUN: ->  Eheh. Well hey (.) probably not in intense moments my muscle
09          memory has kinda gone on that.
```

Nic's warning in line 1 topicalizes the material, sensorial feelings that Pun may experience when using the blue charge and emphasizes the clunkiness and heaviness which may prevent Pun from using the weapon smoothly. The warning is formatted in a hedged way with the use of 'might' and of a conditional clause that frames the potential issue in terms of lack of habit (lines 1-2), but implicitly hints at the fact the Pun may not be masterfully capable of using the weapon. Pun rejects the warning by claiming competence and know-how ('Nah I remember how to'), and upgrades his epistemic position in relation to handling weapons, even though he does so by aligning with the temporal framing suggested by Nic. The know-how is thus actualized in terms of past experience ('I used to like it a lot', line 5). This constitutes the grounds for the rest of the sequence, where Nic acknowledges Pun's claim of competence by referring to his background as a professional gamer ('you're still a pro gamer'), as a way of countering the initial warning while highlighting Pun's experience and expertise. In turn, Pun mitigates the description of 'pro gamer' by admitting that his practical skills may not be as good as in the past, especially in situations where he may be under pressure ('my muscle memory has kinda gone'). Therefore, in this sequence participants competence in using weapons is constructed as something that is remembered, thus hybridizing knowledge-how and knowledge-that. While there certainly is as orientation to the performance of skillful activities, in this case it is just claimed and not demonstrated.

In conclusion, the examples presented in this section show that practical competence can become overtly negotiated and displayed in multiplayer cooperative interactions, for instance in discussing procedures, controls, game mechanics and sensorial perception. However, as it was the case in 5.1, the entanglement between knowing something, knowing how to do something, and knowing how to exploit factual knowledge to perform praxeological activities, is so strong in gaming interactions that it is often difficult to maintain a conceptual distinction between the two. The goal of this first part was in fact to try to illustrate and make evident the orientation to both as distinct concepts. In the next section, I will move to the analysis of the negotiation of both domains of knowledge in more complex gaming activities.

5.3 The Concurrent Elaboration of Knowing-That and Knowing-How

By considering the interplay between factual and procedural knowledge, it is possible to investigate the practices and methods that gamers use in organizing cooperative team play in the here and now of the gaming sessions and to unpack the orientations, attributions and recognitions of expertise as a situated accomplishment. In particular, in this section I will focus on four different aspects which

matters of epistemics and expertise contribute to, namely the relevance of updated fresh knowledge (5.3.1), orientations to rules, mechanics and procedures (5.3.2), the import of who knows best in making joint decisions (5.3.3) and the collaborative achievement of shared perception in game (5.3.4).

5.3.1 Orientations to "Fresh Knowledge"

Temporality represents an important factor in the development of online games. As explained in chapter 4, Fortnite is constantly updated by the developers who keep the game world alive by rotating weapons, adding new features and changing the locations on the map, so as to provide a fresh and appealing experience for gamers through time. In several of the examples discussed earlier, we have seen that knowledge claims and epistemic positions are usually assumed by referring to the temporality of access and to past experiences. In general, this suggests that participants in the data tend to monitor and display awareness of one another's temporal engagement with the game. In other words, while the core mechanics are usually treated as known in common features of collaborative teamplay between competent participants, epistemic and expert imbalances may arise from the introduction of more recent mechanics that parties display not to be aware of during interaction. Consequently, recentness becomes a quality of knowledge that participants orient to in distributing epistemic rights and authority, which also has implications for conducting interaction.

Consider for instance the following extract [17]: Nic has just been killed, but Pun and Daw have succeeded in defeating the enemies. In team modes, when a player is killed the teammates can recover a 'reboot card' which can be used to bring the dead partner back into the game by inserting the card into several reboot vans that are scattered around the map in fixed locations. Just before the beginning of the extract, Daw has been doing this procedure and reviving Nic:

[17] [FortEng G3 – Reboot cards]

```
01 NIC:     I love how they actually added this here that's actually
02          not that [ba:d!]
03 PUN:              [Yeah ] that's pretty cool
04 NIC:     Yeah.
05          (.)
06 PUN:     [[What do we got here?]]
07 NIC:     [[  And you saw Pun-  ]] (.) you saw with the re- u:h
08          the reboot cards you just walk over them now
09          [and the:y have like a lot of time]
10 PUN:     [    Oh  yeah  I  noticed  that   ] I tried picking it up
11          that's r:eally good I think [that's really good]
12 NIC:                                 [It's three hundred] seconds too
13          or like >two seventy or whatever it is< so: like you had a lot
14          of time
15 PUN:     That's really smart.
16 NIC:     Yeah
```

Nic starts the sequence by expressing appreciation and assessing the position of the reboot van, orienting to the fact that this is the result of an update by the game developers ('they') which constitutes a novelty with respect to previous versions of the game, as also signaled by the use of the verb 'add'. Pun here aligns with the positive assessment (line 3). However, in line 7 Nic self-selects to point out another new feature of the reboot system, regarding the way reboot cards can be collected. The explanation is addressed directly to Pun ('you saw Pun'), who has just experienced this new system when collecting Nic's reboot card after the fight. Here Nic takes an upgraded epistemic position and provides both practical ('you just walk over them') and factual details ('they have like a lot of time') of the new mechanic, while introducing a temporal distinction ('now') between the current and the previous procedures. By topicalizing the recentness of the mechanic, Nic orients to his co-participants' potential knowledge disparity – in this case, Pun's lack of "fresh knowledge" – and works to inform and balance the epistemic see-saw. In response, Pun confirms that he had noticed the difference, but also displays that he was not aware of the change and admits having interacted with the reboot card in the old way ('I tried picking it up'). In this sense, Pun aligns with Nic's epistemic distribution, positioning as less knowledgeable on the topic. Still, with his repeated assessment of the change in positive terms, Pun displays that he is able to process and understand the benefits introduced with the update.

The topicalization and monitoring of potential novelties to update the teammates is a recurrent feature in the data set. In the following extract, chronological modifications are the subject of a local negotiation of expertise between the parties. The three players are looting different areas and Daw has chosen to go loot a military building ('the IO spot') which, in previous versions of the game would provide players with a lot of metal materials, the most prestigious in the game. Nic initiates the sequence to remind Daw about this:

[18] [FortEng G3 – Oh They Changed it?]

```
01 NIC:     And Dawn you know you can max out your metal on the floors
02          there right [at the IO spot]
03 DAW:                 [Oh they're br-] you know they're brick now huhuh
04          they changed ['em to brick]
05 NIC:                  [  O:H they  ] changed it?
06 DAW:     Yeah yeah
07 NIC:     Since whe::n? that's cra:zy,
08 DAW:     This season they changed it I don't know why
09          (0.6)
10 NIC:     Guess it was too oh pi
11 DAW:     Mhm maybe hehehe
12 PUN:     Yeah they added a few more chests on this drop I think
13          (1.3)
14 NIC:     Oh did they?
15 PUN:     There was- there was like a random chest on the rock right
16          here
```

```
17 DAW:     Oh no that was always there
18 PUN:     Oh that's been there? Oh okay.
19 DAW:     Yeah it's been there.
```

Nic's utterance in line 1 projects Daw as knowledgeable speaker and directs the questions towards a confirmation of Daw's knowledge. In this way, Nic is establishing a reciprocal access to that piece of information, while at the same time displaying his competence and knowledge of the game world. However, in line 3 Daw corrects Nic and points out that farming the building no longer gives metal, but brick, a weaker resource. This is marked as a novelty, again with temporal reference ('now') and the verb 'change'. Nic reacts with surprise and a confirmation check (line 5) and then asks for further details about the change, thus downgrading his epistemics position vis-à-vis Daw, who is able to pinpoint the exact moment in which the change was introduced ('this season'), but not the cause for it ('I don't know why'). This gives Nic the chance to provide a tentative explanation of the change and make procedural reasoning overt: Nic grounds his guessing on the fact that the area was too 'OP' (over-powered) and thus the resources available needed to be diminished.

The second part of the extract offers another indication of how gamers orient to (supposed) elements of novelty in the moment-by-moment execution of gameplay. Just after the update on the IO location materials, Pun informs his teammates about chests that have been added in his current spot, which he believes may be new (line 12). The explicit epistemic framing of the sentence ('I think') hedges the degree of certainty of the detail and the news is received only after a long gap, when Nic seeks confirmation with a tag question. Pun then provides a description of what he thinks is the new element, a chest positioned over a rock, but as soon as the referent is clarified, Daw denies the novelty and corrects Pun ('that was always there'). Throughout the sequence, then, matters of access to recent knowledge are made relevant in interaction to inform teammates about the status of the game environment and are also the object of local negotiation to establish who is more entitled to know, who has access to fresher knowledge, what is relevant as new, what is not, and the implications for gameplay.

The monitoring and relative awareness of what teammates know about recent game updates is also manifested when referencing retrospectively to past situations or characteristics of the game that are used as benchmarks to explain current features. In [19], the team has just defeated a zombie horde in a new in-game side event, which Pun was not aware of. Daw has been rewarded with a sideways minigun, a weapon that can only be found after completing the event, and is now asking for resources ('sideways parts') to upgrade it. Pun displays his non-knowledgeable state by asking explicitly about the resource ('sideways parts? What does it do?' lines 6 and 8) and the weapon ('is that gun really good' line 20). What is interesting to note here is that Nic designs his answers by

displaying a reflexive awareness of Pun's lack of knowledge about the current mode, but also of his competence and experience of previous instalments of the game:

[19] [FortEng G3 – Past references]

```
01 DAW:     [O::h I'm gonna take the- wait] wait can I have all your
02          sideways parts I think I can get it to a: mythic
03 NIC:     Yeah you know what here you take mine [I'm gonna drop it]
04 DAW:                                          [Okay I got I got ]
05 NIC:     and keep the harpoon okay
06 PUN: ->  Sideways parts? [ oh here ]
07 NIC:                     [yeah take] that
08 PUN: ->  [what does it do?]
09 DAW:     [I've got a mythic] sideways minigun I've never used it before
10 NIC: ->  It's so you can upgrade (.) you can only get the sideways
11          upgrades fro:m that spot like from the alien spots [a:nd you]=
12 PUN:                                                        [Oh okay ]
13 NIC: ->  =are able to upgrade your sideways weapons with them.
        ((6 lines omitted))
20 PUN: ->  Is that gun really good?
21 DAW:     Oh I think [it's ] pretty good
22 NIC: ->             [It's-]             It's like Brutus's minigun
23          almost maybe it's a little bit worse because at the beginning
24          it's slow but when you get to a certain point it starts to
25          shoot really fast after you shoot for like five seconds.
26 PUN:     Okay.
```

In line 10 in fact Nic first provides procedural details about the functioning of sideways parts and factual knowledge about where these can be found. To clarify the exclusiveness of the zombie mode, he draws a comparison with a previously known side-activity ('the alien spots'), which is acknowledged by Pun in line 12 in overlap with Nic's increment of the turn. Alien spots worked in a similar way as the current zombie area, offering weapons that were not available in other parts of the map, and thus provide a common ground for Pun to quickly grasp the way in which this event works. Similarly, in lines 22-23 Nic compares the sideways minigun to another temporary object that was introduced in previous updates, Brutus's minigun, which is treated as something belonging to Pun's territory of information.

The distribution of authority in relation to the temporality of knowledge access finally plays a role in how players launch and organize instructional sequences about the processes to perform skillful play in practice. In extracts [11] and [12] above, we saw that know-how can be visibly oriented to when discussing game controls and procedures. This orientation to knowledge-how is strictly related to the mutual attribution of knowledge of recent game mechanics, which concur in the organization of team action. With respect to this, extract [20] is taken from the battle against the zombie event that was mentioned in [19]. Pun was going through it for the first time and as he collaborates with Nic and Daw to defeat a wave of enemies, he asks information about the process of the fight, downgrading his epistemic position:

[20] [FortEng G3 – They explode]

```
01 NIC:     We can’t build here.
02 PUN:     Oh yeah.
03 DAW:     °Where’s the chest°
04          (17.0)((team continues to shoot zombies))
05 PUN: ->  It does take quite a while is there like a (big monster)
06          that’s gonna show up or something?
07 NIC: ->  There will be but we can get past it you don’t have to kill
08          him as long as you fill up that met- when you fill up that
09          meter Pun, (.) that’s when you get the good loot and there’s a
10          certain time
11 PUN:     Oh okay
12 NIC: ->  Yeah and watch out the orange ones they explode so don’t be
13          near them when you kill them.
14 PUN:     Oh okay okay.
```

After commenting on the length of the activity, Pun inquires about the presence of potential mini-boss enemies at the end of the fight (lines 5-6). Nic confirms that it will be the case, but also takes the opportunity to instruct Pun on how to face the event, by focusing in particular on a meter that has appeared on everyone’s screen which signals the final target to get the rewards. Nic here displays procedural knowledge of the mechanic and gives Pun relevant details to handle the activity, while also warning him for potential threats (‘watch out the orange ones’), accounting for the warning (‘they explode’) and giving him consequential instructions on how to position his avatar in relation to the foes (lines 12-13). In other words, Nic displays both awareness of Pun’s knowledge of the system and competence in knowing how to conduct the zombie fight efficiently. By communicating this to Pun, he is able to assist him in successfully completing the team task.

In sum, orientations to time-related aspects of the game account for the distribution of epistemic authority. Participants display, monitor and are mutually aware of what may constitute known or unknown characteristics of the game and shape their actions accordingly, recognizing superior epistemic authority to the players who have fresher, more recent acquaintance with the game.

5.3.2 Orientation to Mechanics and Procedures

Another aspect where different qualities of knowledge mutually elaborate each other has to do with the orientation to game rules, mechanics and procedures. In sections 5.1 and 5.2 we have already seen some examples of how players may display their competence and expertise by uncovering games processes or rules when locally accomplishing gaming activities in interaction, as for the example in [13], where the rules and practices for items collection were explicitly verbalized to justify a request to hand over some inventory objects, or in [4], where the decision to keep a weapon was based on the maximum damage that it could inflict. While the examples discussed above were aimed at pinpointing the reliance on either factual or procedural knowledge, and featured explicit orientations to such

procedures, the extracts under discussion in this section deal with implicit management of game mechanics which is informed both by knowledge-that and knowledge-how. The first example resembles in fact the one presented in [13] and concerns the distribution of items to fill up an inventory slot between the participants. In the example below though, this is accomplished without explicating the underlying procedure, which is oriented to as a silent, known in common feature of the game. Pun, Nic and Daw are updating one another on the healing object that they are currently carrying:

[21] [FortEng G5 – Chug Splashes]

```
01 PUN:     I have six minis, four splashes, three bigs.
02 NIC:     Nice. Six splashes, (.) six minis, three med kits.
03 DAW:     I got two splashes u:hm like wait, (.) d'you have four
04          splashes Pun?
05 PUN:     Yeah yeah yeah.
06 DAW:     Okay here, (.) tak- take these.
07 PUN:     Okay (.) okay I'll come (.) I'll come over.
```

The sequence starts with Pun and Nic's description of their objects (lines 1-2). In line 3, Daw aligns with the current activity and starts informing his teammates about the inventory. However, he interrupts after the first item ('two splashes') and after a moment of hesitation, directs a question to Pun to check the correctness of his understanding. Pun's repeated confirmation can be suggesting a projection and understanding of something implicit in Daw's request, also in the light of each other's update. Daw in fact in line 6 gives Pun a directive to pick up his two splashes, and Pun subsequently complies with the request. As we saw earlier, the parties' actions here are guided by the fact that an inventory slot can be filled with up to six chug splashes items. Hence, in this case, Daw's interruption is functional to shift the activity from updating to re-arranging the team inventory, and Pun's amenable reaction displays that both he and Daw are orienting to that specific game procedure, which on the one hand is made sequentially salient by the on-going activity and shaped by the previous updates, but on the other remains verbally implicit, practically actualized, or performed but unspoken. In this way, both players display their knowledge of the inventory limitations, and their competence in playing according to that rule.

On other occasions, game mechanics can be implicitly invoked to dismiss a proposed interpretation of actions on the game terrain. In the following extract, the procedure that is mobilized concerns the distinction between downing and killing enemies. In team play, when players run out of life points, they can either be downed of killed, depending on the status of the rest of the team. If other team members are still alive in play, then the player enters the 'downed' state for thirty seconds, remains visible in the game world and can be rescued by the teammates without losing weapons or inventory. If other team members are already dead or a player is competing alone, then losing all the life points means dying immediately, dropping the loot and disappearing. In sequence [22], Pun has

just killed an opponent, who disappeared immediately from the game world, and the team has been looting the weaponry and inventory dropped on the ground. A few seconds later, they are spotted by other approaching enemies, with which they start a fight. In the sequence, Pun wonders if these new players are part of the same team of the player he has just killed, with a declarative in line 3:

[22] [FortEng G1 – That's a solo]

```
01 NIC:     OH [O:h!      ] up on the hill.
02 DAW:        [kid on top]                Yup.
03 PUN: ->  Tha- that's his team chasing him?
04 DAW: ->  Na:h that w'z a solo. It's just a new team.
05 NIC: ->  Yeah.
06          (2.1)
07 NIC:     spra:yin' >fifteen [blue on the hill<]
08 PUN: ->                     [Yeah I think they] probably chased-
09          [I'm going up right now]
```

Daw's straightforward negative reply and redefinition of the new opponents in line 4 here are based on procedural reasoning of the moments before the new fight: if the player had died and disappeared immediately, it meant that it had to be a solo player, without any team members alive, otherwise it would have been downed, not killed. Nic aligns with Daw's interpretation, while Pun, after a gap, repairs his initial statement by reformulating the new team as chasing the solo player, and not as part of the same group. The unlikelihood of Pun's initial reading of the battlefield is thus acknowledged by all three participants with respect to what had happened before, which again remains implicit.

Still, there can also be situations where procedural knowledge is verbalized and negotiated among team members, as in [23], which expands extract [10] seen above. The players have just landed on the map, noticed a high number of opposing teams flying nearby and are now starting the looting phase. As we saw earlier, Nic advises Pun not to go toward the location called 'Beach' to avoid running into opponents while alone (lines 1-4). Pun then finds a different spot ('straight East') and agrees to move towards that area (lines 5-9). What I would like to focus on here is the subsequent strategic negotiation that unfolds from line 9 onwards:

[23] [FortEng G5 – Enemy rotation]

```
01 PUN:     Ok, I- we need to: (.) okay, where do I go by the way
02          we just goin' like
03 NIC:     U:hm (.) the thing is if you go Beach Pun you can get launched
04          on in a [second.]
05 PUN:             [ I go  ] straight East (.) right here?
06 NIC:     [[You-]
07 DAW:     [[Yeah] yeah yeah we'll meet up with you [there] in a bit.
08 NIC:                                             [Okay.]
09 PUN: ->  Al[right there jus-]
10 NIC:       [ Yeah that drop ] [has changed and you can't]=
11 DAW: ->                       [ just try to be careful  ]
12 NIC:     =really go Beach anymore.
```

```
13 PUN: ->  People are gonna- yeah that's what I was about to say we
14      ->  need to be careful cause there was [three]=
15 NIC:                                        [Yeah.]
16 PUN: ->  =teams? (.) over there? at Holly so: [   we just,   ]
17 NIC: ->                                       [Oh you're good]
18      ->  they're gonna rotate out [you're right.]
19 PUN: ->                           [  Yeah yeah  ] they're gonna rotate
20      ->  out [gonna try to quick heal and then-]
21 DAW: ->      [what we gotta do is rotate (fast)] then
22 PUN: ->  Yeah if we can rotate fast and maybe straight through the
23      ->  [middle,]
24 NIC:     [ Okay  ]
25 PUN: ->  that'd be [clutch.]
26 NIC:              [ Yup.  ]
```

After agreeing to go to a different spot in line 9, Pun starts uttering what may seem to be an objection ('there jus-') which is abandoned while Nic intervenes to provide fresh knowledge about the updated spot, as discussed in 5.3.1. At the same time, Daw warns Pun ('try to be careful'), thus topicalizing the potential threat that Pun may run into while being alone. In line 13, Pun resumes his previous point by referring to other opponents ('people') and aligns with Daw's comments, displaying that he is aware of the risks he may encounter, while signaling that Daw had anticipated him ('that was what I was about to say'). Pun then accounts for the warning by formulating what it is that constitutes the menace ('there was three teams' lines 14-16), which is acknowledged and confirmed by Nic, who in turn brings to surface the implications of having three teams in the area tying it to the local contingencies of the game ('they're gonna rotate out'), as he expresses appreciation for the strategic reading of his teammate ('you're good', 'you're right'). In lines 19-20, Pun expands the prediction about the opponents' moves, whereas Daw offers a countermove to cope with the looming risk of a fight ('we gotta rotate fast'), which stresses the temporal side of the strategy. Pun displays agreement with Daw's proposed solution, repeats the incumbency of the action ('fast') and also adds a spatial indication ('through the middle') which Nic agrees with, ending the sequence.

This complex negotiation and orientation to implicit mechanics is mutually elaborated on knowledge-how and knowledge-that. Knowing a fact such as the number of teams in the area, which is in itself accomplished locally during the game, provides the grounds for how to play, i.e. by taking a cautious approach when moving alone. In addition, knowing how a team will likely move in a certain situation leads to a display of competence in reading the terrain from all the three players who sequentially unpack the implicitness of the fighting situations, showing their expertise in a core game mechanic. This is also the case in joint decision-making, which can also be a locus of contested epistemic negotiations between the participants, depending on the type of decision that is under discussion, as it will be shown in the next section.

5.3.3 Joint Decisions, Epistemics and Deontics

Given the unscripted nature of Fortnite, gamers constantly have to make decisions on the fly about what to do, where to go and how to play together. Since the game does not attribute the role of 'team leader' a priori, these decisions are the result of a negotiation in the here and now of the interaction, as already evidenced indirectly in some of the extracts discussed up to now. Think for instance of [7], when Nic proposed to change car and pick a truck by introducing the request with a 'let's' formulation, that projected high likelihood of acceptance, and then accounted for it in terms of factual knowledge about the truck speed. A similar example shows, in line with research and deontics and expertise (cf. section 2.5.2), that players orient to their expert and knowledgeable status in locally establishing who has the rights to propose or determine the team's future course of action. In this section I will discuss two examples of how such negotiations sequentially unfold in longer stretches of talk where epistemic and deontic matters are manifested, negotiated and, at times, contested.

Extract [24] (which for reasons of clarity is presented as two separate parts) comes from the very first game played in the English dataset. Pun, Nic and Daw are chitchatting and warming in the pre-game lobby, when Nic introduces the topic of the 'dropping spot', soliciting his teammates to make a decision about where to land on the island.

[24a] [FortEng G1 – Drop Spot]

```
01 NIC:   Oh by the way we haven't discussed the d(h)rop spot
02        [e::h where sh- ]
03 PUN:   [oh yeh whatever]
04        (.)
05 NIC:   Where should [ we go? ]
06 PUN:                [Wherever] you guys (usually) do right?
07 NIC:   Guys, well I just wanna say th- e::h this spot here is insa:ne
08        with the amount [of floor spawns]
09 PUN:                   [Oh is it?     ]
10 NIC:   and [you can] max out brick i:n a: second bro:.
11 PUN:       [okay   ]
12 NIC:   there's some things [you hit] 'em five times=
13 PUN:                       [oh wow ]
14 NIC:   =it gives you a hundred and twenty and there's like (.) seven
15        of them scattered around it's insane.
16        (0.7)
17 PUN:   Okay!
```

Nic here starts the sequence by claiming proximal deontic rights, i.e. by topicalizing the decision-making process while orienting to the fact that this is a key procedural step for gameplay, also known to Pun and Daw, who accept the interactional trajectory put forth, the former overlapping with Nic in line 3, the latter remaining silent. Pun in line 3 defers the choice and agrees to any proposed spot ('whatever'). In line 5, Nic explicitly starts the proposal sequence with a modal interrogative, thus

leaving the choice open to debate. Pun continues deferring, this time invoking Nic and Daw's experience or habitual spots (line 6), with which in a way he upgrades his teammates' epistemic and deontic entitlement to determine the landing spot. Nic pre-announces ('I just wanna say') and then formulates a specific proposal by highlighting a spot on the map (the multimodal accomplishment of this highlighting will be taken into consideration in chapter 6) and accounts for the selection by pointing out the incredibly positive qualities of the spot ('insane'), as also discussed in [8]. In this way, he grounds his preferred option in factual knowledge of the characteristics of the spot, which are outside Pun's territory of knowledge, as evidenced by the constant signaling of having received new information. In doing so, however, both Nic and Pun align to the fact that the qualities (amount of loot and materials) are procedurally relevant and desirable to start a game in the most efficient way possible, and Pun in line 17 agrees with Nic. Therefore, while the two share the same knowledge of how to initiate the match, the rights to choose where to go are distributed in terms of who holds more information about the landscapes of the island. Still, in the continuation of the conversation Nic introduces a third element that is worth considering, the suitability of the spot for a trio and not just for a single player:

[24b] [FortEng G1 – Drop Spot (continued)]

```
17 PUN:     Okay!
18          (.)
19 NIC:     [[But-]]
20 PUN:     [[Well]] you guys know more than me so Dawn y- you and Dawn
21          know more so: [I'm dow-]
22 NIC:                   [but I do]n't know if it's a trio spot that's a
23          [solo,] Dawn what do you think?
24 PUN:     [right]
25          (1.4)
26 DAW:     We can try the:re,
27          (1.0)
28 NIC:     Okay.
29 DAW:     Personally I've been landing like in this area but (.) I'm
30          down to land here and try it out.
31 NIC:     It's not bad and plus the thing about that i:s, if we're
32          aiming for that we can kinda go to our spot with the slurp
33          truck if we're a little bit higher up like if there's [people]
34 DAW:                                                          [okay. ]
35 NIC:     conte[sting us,]
36 PUN:          [Ye:ah    ]
37 NIC:     So still [in the same] scenario
38 DAW:              [°yeah cool°]
```

In line 19 Nic utters an adversative conjunction ('but') to introduce a possible negative aspect of his proposal, which is initially abandoned to leave room for Pun who has self-selected, started a turn in overlap and again downgraded his epistemic position relative to Nic and Daw by explicitly admitting

that they have more knowledge than him about the topologies of the map. In lines 22-23, Nic resumes the previously abandoned turn and introduces a potential counterargument, stressing the fact that his acquaintance with the proposed spot is based on solo-play experience, thus downgrading the certainty of his claims in relation to the current mode the team is playing. He then solicits Daw's opinion with an epistemically framed question ('what do you think'), which Daw reacts to hesitantly, providing the answer after a 1.4 second gap. Even though he agrees with the possibility of testing Nic's spot, his utterance in line 26 is heard as projecting more talk, which in turn is produced only after another lengthy, one-second delay. In line 29 Daw then indicates his habitual location, while still agreeing with the idea of trying Nic's spot. In response, Nic re-assesses his proposal, which this time is strongly mitigated ('it's not bad'), if compared to the initial description as 'insane'. Still, Nic adds a third favorable aspect in support of his proposal ('plus the thing about that is', line 31) in the form of a contingency plan in case enemies decided to land in that same area. In other words, Nic orients to a third procedural aspect of the landing phase, i.e. the monitoring of enemies' decisions, and foresees an alternative landing area near the one under discussion, which is taken as known in common to all three players ('our spot with the slurp truck'), and welcomed positively by both Pun and Daw. In sum, in the sequences Nic's epistemic and expert status are contributing to determine the rights to advance a potential course of action, as he interactionally works to provide supportive evidence that meets known-in-common criteria oriented to the general competence in playing the game.

At times, the contingencies of the situated nature of a game can lead to the emergence of cross-cutting orientations to procedures and mechanics which are overtly contested in establishing one's entitlement to decide what to do as a team. To present a case of contested epistemic and deontic status, we go back to the zombie side-event discussed in [19] and [20]. The sequence is again split into two parts and takes place after Pun's first noticing of the event on the map, which leads him to inquire about it and to negotiate whether to activate the zombie event or not.

[25a] [FortEng G3 – Zombie Thing]

```
01 PUN:     What is this zombie thing dude u::h?
02 DAW:     O:h uhm tha:t[’s  like  the:   ]
03 NIC:                  [Oh you don’t want]
04 PUN:     Do we want that?
05 NIC:     [[NO hh!]]
06 DAW:     [[I mean]]
07 PUN:     Oh we don’t?
08 DAW:     [[That might be-]]
09 NIC:     [[I mean if you ]]  want- oh go ahead Dawn
10 DAW:     Y- you probably do want that for like loot (.) like if you
11          [want shield ]
12 PUN:     [Does it give] us a pad or something?
13 DAW:     It’s- no (.) no it’s like a weird zombie
14 PUN:     Right
15 NIC:     So- what it ends up giving you is it gives you sideways
```

```
16          weapons Pun so you can get the sideways minigun you can get
17          the sideways rifle which sucks the >minigun is the only< good
18          one [a::nd]
19 PUN:          [okay ]
20 NIC:     apparently lik- well I forget but I think it drops like
21          shield and stuff but
22 DAW:     Yeah you dro- you can open chests for like minis
23          and then [every zombie ]=
24 NIC:              [the thing is-]
25 DAW:     =you kill you get shield
```

Pun starts the sequences by positioning as K- in relation to the zombie event visible on the map. While Daw' answer in line 2 is initially conforming to Pun's question, making factual information as the topic of the inquiry, Nic in line 3 responds in a non-conforming way ('oh you don't want') with a transformative answers (Stivers & Hayashi, 2010) that shifts the topic from the definition of the zombie mode, to whether it is something that one would want to do or not, as also marked by Pun's question in line 4. Nic's straightaway negative answer ('NO hh!' line 5) is emphasized both prosodically and with the exhalations. Instead, Daw tries to provide a different perspective on the activity ('you probably do want that for loot') and displays his knowledge of the rewards that can be gained by completing the task (lines 10-11) with which he updates Pun, providing him with "fresh knowledge" of the new feature that can be seen as a positive account for trying the zombie mode. In response, in line 15, Nic self-selects and takes an upgraded epistemics stance by enriching the list of the rewards. As he does so, he also offers assessments of the weapons that can be found by stressing that only one is worth, confirms Daw's report by mentioning 'shield and stuff', and projects a negative item ('but') that he is not able to deliver because Daw has sneaked in and taken the floor. In lines 23-25 Daw reiterates that the battle is useful for 'shield' and expands this point with a detail on the simplicity of getting the reward ('every zombie you kill you get shield'). In order to update Pun, Nic and Daw enter an epistemic battle to demonstrate superior knowledge over the zombie event, while putting forth a different interactional agenda that has deontic implications: while Daw is emphasizing the potential usefulness of the event for the loot and inventory, Nic is trying to dissuade Pun from doing it, giving prominence to the limited positive impact this may have, as made explicit right from the start of the sequence and as it can be seen in the rest of it:

[25b] [FortEng 3 – Zombie Thing (continued)]

```
24 NIC:              [the thing is-]
25 DAW:     =you kill you get shield
26 NIC:     Yeah it takes a long time though so I don't know
27          if it'd be worth it like-
28 DAW:     I mean you can always run out of it so
29 PUN:     Even [as ] three people
30 NIC:          [yeh]
31 PUN:     you think like it would take a while?
32 NIC:     Oh [no it'd be quickest] with all of us
```

```
33 DAW:        [  no it wouldn't   ]                yeah
34 PUN:     I'm just thinking like if it gives us sh- I mean I'm already
35          six minis four splashes now but,
36 NIC:     yeah
37 PUN:     if you guys think it's worth it we should do it yeah
38 NIC:     okay
39 PUN:     if you think it's worth,
40 NIC:     I'm [ down  ]
41 PUN:         [I don't] know if we (need) it though
42 DAW:     I think (.) I don't think we beat it but I'm down to just
43          [try it]
44 NIC:     [yeah I]'d rather use that [time farming ]
45 DAW:                                [they're good-] they're good
46          in stacked games for like ammo and stuff
47          cause you get a lot of ammo [out of it]
48 PUN:                                  [you get a] lot of ammo? okay cool
49 DAW:     [[Yeah]]
50 NIC:     [[Oh I]] didn't know that
51 PUN:     I'll do it.
```

In lines 24-26 Nic presents another negative account against the zombie fight, in terms of temporal length ('it takes a long time though'), shifting the description from factual to procedural aspects. Subsequently, Daw counters the objection in terms of possible alternative performances ('you can always run out of it'). At this point, Pun intervenes and builds on the pragmatic side of the issue and asks Nic if the problem of the length would still remain for a trio (line 29-31). In this way, Pun reorients the discussion to the local organization of current gameplay activity. After Nic's concession in line 30, Pun ties the decision to the contingencies of the game: he values the possibility of getting more shield (l. 34), clarifies his inventory status, already rich in shield items (l. 35) and frames the decision in terms of utility for the current activity (l. 37) of which he explicitly positions as uncertain ('I don't know if we need it though'). At this point, Daw and Nic overtly communicate their different agendas (lines 42-44), with Daw willing to try it, and Nic oriented to farming materials rather than fighting zombies. However, Daw finally addresses another benefit, the richness of ammunition that can be earned which are procedurally connected to 'stacked games', with multiple enemies still alive, a detail that both Pun (l. 48) and Nic (l. 50) display they did not know about, and that determines Pun's final decision to activate the zombie event.

This exquisite example of epistemic and deontic competition thus shows that in order to establish who has the right to call the shots, the players work to demonstrate both factual and procedural knowledge of the game world. The player that knows best has the authority to suggest the preferred course of action, but this authority is the result of an endogenous moment-by-moment negotiation that involves all three players, and ultimately rests the assessment of the contingent constraints that each game poses on the team. In this case, the least knowledgeable speaker, Pun, uses the competent accounts of his teammates to situate the decision in relation to the current activities of

the team, and finally decides to play in a certain way by hybridizing his core knowledge of the functionalities of Fortnite with the detailed, expert accounts of the rest of the team.

5.3.4 Professional Sensing and Collaborative Actions

A final aspect to consider where knowledge-that and knowledge-how are mutually informative concerns sensing the game world and displaying an orientation to what is seeable and hearable in the game. As already outlined in 5.2, gamers enact competent sensing while playing the game, with vision and hearing which are often verbalized, topicalized and made accountable during gameplay. In this section, I will focus on sequences where perceptual sensing is collaboratively accomplished to pinpoint both the impact of knowledge and skills in sensing the game world, and how expert sensing may provide the grounds to organize collaborative play. Given the praxeological nature of the practices, the analysis will include multimodal aspects, when these are relevant to the participants.

Starting with competent vision, one of the gaming activities where this becomes overtly negotiated and enacted by gamers is during the landing phase at the beginning of each game. As explained in chapter 4, Fortnite matches start with the entire lobby launching off a bus that flies over the island. In this phase, the team usually first decides where to go on the map and then parachutes toward the chosen spot in order to conclude the landing. During this second activity, players monitor the aerial space around them to check for any potential threats, represented by other teams, which may be 'contesting' the spot, i.e. landing on the same part of the map, which implies having to fight right away, with the risk of doing it without any weapons. This thus constitutes a locus where knowing how to see is interactionally treated as relevant by members of the team, who scan the sky while flying towards their chosen destination, as in the next three extracts below.

Due to the technological and space constraints, the first case [26] will be presented first as a single sequence with verbal transcription only, and then dissected into smaller parts to provide the reader with visual access to the scene and multimodal annotations, so as to clarify the practice. Before the sequence, Pun, Nic and Daw have decided to parachute towards the north-west side of the map and their cameras and avatar are pointing there. Daw is leading the pack and is the closest to the target, while Nic and Pun are following from behind. As they float, Pun starts to provide an online commentary of what he sees:

[26] [FortEng G2 – Landing]

```
01 PUN:     Yeah I'm trying to see there's a guy stretching-
02          (1.9)
03 PUN:     He looks like he's by himself (.) no there's definitely a
04          team with us
05 NIC:     Yeah yeah they're c- they're coming they're contesting
```

```
06          (1.1)
07 PUN:     There's a team straight down under where we did (.) the last
08          one.
09 NIC:     Yup good comms I see that o:ne:,
10          Be:liever, is Believer contested?
11          (1.2)
12 DAW:     U:hm [Yeah]
13 NIC:          [Yeah] it is [   it is   ]
14 PUN:                       [I don't se-]
15 NIC:     Yeah [like kinda right there-ish] yep
16 PUN:          [  mh  hm  mh  hm  mh  hm  ]
```

Pun starts the visual monitoring by topicalizing his activity and perception of enemies in the surroundings (line 1). Nic subsequently aligns with the activity and collaborates with Pun by confirming the presence of enemies, before moving to the scanning of two more areas (line 7 and line 10). In engaging with the scrutiny of the enemies, Pun displays not only his knowledge of the game procedure and mechanics, but also the visual (and dexterous) competence of moving the camera, seeing the landscape and converting his perception into shared understanding (cf. Goodwin, 1994), for his teammates, who respond accordingly, as evidenced by the transcript below:

[26a] [FortEng G2 – Landing]

```
01 PUN:     Yeah I'm trying* to see #there's a guy stretching*-
                           *turns to his left----------------*
   fig                              #fig 1 (Pun)
```

```
02          (1.9)
03 PUN:     He *looks +like* he's by himself+ (.) no there's definitely a
   pun         *turns left *
   nic               +turns twds Pun-------+turns left twds Daw-->
04 PUN:     team with us
05 NIC:     #Yeah yeah they're c- +they're coming they're contesting
                                  -->+
   fig      #fig 2 (Nic)
```

In line 1, while announcing his current activity (‘I’m trying to see’), Pun moves the camera away from the targeted spot to the left, to check for any potential enemies, and identifies a dark figure far away at the edge of the map circled (by me) in fig. 1. He then verbally highlights this presence with an existential (‘there is’) that introduces an enemy ‘stretching’, i.e. extending the trajectory of the landing to travel a longer distance in the air, and then resets the camera to the target and continues the landing. After 1.9 seconds, Pun re-issues the activity of monitoring and turns again towards left. Nic reacts to the second topicalization of the activity by first panning the camera towards Pun, to gain awareness of his position, and then forward to the left, towards Daw who is flying far ahead, displaying an interpretation of Pun’s description (‘stretching’) as a reference to the farther side of their current direction. Pun then communicates that there is more than one figure in that area, and as soon as Nic succeeds in framing the same figure to the left (fig. 2), he confirms Pun’s noticing, thus reaching a shared sensorial perception. Once the left side has been scanned, Pun starts observing the space under him:

[26b] [FortEng G2 – Landing]

06 **(0.3)*(0.8)**
pun *looks down-->
07 PUN: **#There’s a team straight down under where we did* (.) the**
-->*
fig #fig 3 (Pun)

08 PUN: **+last one.**
nic +looks down-->
09 NIC: **#Yup good comms+ I see that o:ne:**
-->+looks ahead twds Believer-->
fig #fig 4 (Nic)

During a short gap, Pun moves the camera towards the area below his avatar and spots two enemies (fig. 3). Here Pun communicates his re-orientation with an existential ('there's a team') referred to a team, i.e. more than one figure, by indicating the directionality of the camera movement ('straight down under', line 7) and by exploiting shared factual knowledge based on past experiences, in particular from the previous game ('where we did the last one'). As Pun formulates his new visual target, Nic adjusts his view towards the same spot, displaying that he was able to interpret the spatial reference, and quickly identifies the enemies below (fig. 4). He then acknowledges Pun's competent perception and update ('good comms'), verbalizes the shared vision, and tilts the camera up front, to move to the next location:

[26c] [FortEng G2 – Landing]

```
10 NIC:     Be:liever, is Believer contested?*§
   pun                                        *looks twds Believer-->
   daw                                         §looks twds Believer-->
11          (1.2)
12 DAW:     U:hm #[Yeah]
13 NIC:          #[Yeah] it is§ [   it is   ]
   daw                        -->§
   fig           #fig 5 (Nic)       (Daw)
```


```
14 PUN:                          [I don't se-]
15 NIC:     Yeah  [like kinda right there-ish]+* yep
16 PUN:          #[  mh  hm  mh  hm  mh  hm  ]+*
   nic                                    -->+
   pun                                     -->*
   fig           #fig 6 (Pun)
```

While in the first two cases shared vision is accomplished retrospectively, i.e. it is first established by one player and then shared by the other(s), this time Nic frames the activity in terms of prospective collaboration to scan the area. In other words, while in [26a] and [26b] Pun had already identified the enemies and formulated them in terms of existence to inform Nic and Daw, in [26c] Nic directs the team's attention toward a location on the map ('Believer', the urban area on the beach with a pier visible in fig. 5/6) and then questions whether there are any enemies going there ('Is Believer contested', line 10). In this way, he establishes a collaborative vision of the location as the ongoing activity and recruits his teammates' contribution to survey that area. In fact, both Pun and Daw move their cameras towards Believer in search for enemies. After a short gap, Nic and Daw successfully spot the enemy (the white circles in #5 and #6) and signal it with the token "yeah", while Pun joins them a moment later with a series of acknowledgement tokens (line 16). In sum, vision becomes a practical achievement which is informed by both factual information, such as the reference to previous games or the reliance upon known in common name locations, and procedural enactments, such as the adjustment of the camera, the recognition of the ongoing activity and the ability to 'professionally' see what is relevant to activity as transparent, and to communicate it to others.

Vision can also become a contested topic, in cases when players have divergent views of the recognition and presentation of the features of the game. Indirectly, in fragment [22], Pun's inability to interpret the disappearance of a dead enemy as indicative of his solitary status could be connected to the idea that vision (and procedures related to what gamers see) is subject to negotiation and dependent upon knowing how to see. Extract [27] offers an example of such a negotiation. The sequence is taken from the same activity discussed in [26], the monitoring of space while accomplishing landing:

[27] [FortEng G5 – Landing]

```
01 PUN:     *There are LOts+ of teams at Holly# bro like seven* teams!
   pun      *looks twds Holly---------------------------------*
   nic                    +turns twds Holly-->
02 NIC:     [HuHahah]
03 DAW:     [Seven? ]§
                       §turns twds Holly-->
04 PUN:     *Bro:: uh it's insane three::s* there's at least+ (.) four.
   pun      *turns twds Holly-------------*
   nic                                                  -->+
05          (.)
06 PUN:     [Probably hahah]
07 NIC:     [Hahahaha maybe] two maybe [three],
08 PUN:                                [These] gu(h)ys are crazy, bro:h
09 DAW:     I think I see two§ or three teams.
                           -->§
```

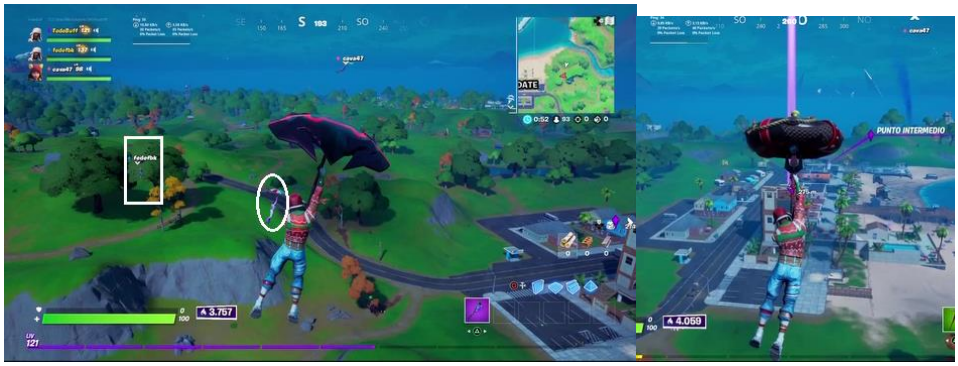
Pun identifies an indefinite number of players over a location called 'Holly', marked both prosodically and with high tone ('LOts'), which Nic attends to by turning towards the place. Pun then

provides a candidate quantification (‘like seven teams’), which is followed by Nic’s laughter (line 2) and Daw’s repetition of the number to require for confirmation, uttered as he moves the avatar towards the spot (line 3), suggesting that Pun’s claim may have been exaggerated (cf. Drew, 2003). Pun then turns towards Holly, scrutinizes the scene and modifies his initial quantification in a more precise way. He does so by examining the area while counting (‘three::’), and then provides an updated quantification (‘four’) followed by an increment (‘probably’) with which he downgrades the strength of the claim, as also suggested by the laughter. In overlap, Nic makes an ironic comment about Pun’s over-statement and subsequent approximate revisions (line 7), thus treating the exaggeration as a joyful opportunity to joke with Pun. Pun seems to align with this trajectory, as he laughs while assessing the craziness of the opposing teams. Daw instead has remained seriously engaged in the monitoring and kept the camera fixed on the spot, to then finally provide an alternative, more precise and more likely report of the situation (‘two or three teams’). The unlikelihood of Pun’s hyperbolic quantification is thus treated as problematic by Daw, and subsequently contested, as matter of proper sensing and interpreting both in relation of the situated consequences for their game, and in relation to core procedural reasoning, i.e. the fact that having seven other teams in the area (or a fourth of the whole lobby in roughly the same spot) is an almost impossible situation.

In addition to being contested, professional vision in Fortnite can also be mobilized and exploited to organize collaborative action and react to the happenings of the ongoing game, as in [28]. Again, the fragment is taken from a landing sequence, but in this case, the localization of an enemy takes place when players are closer to setting foot on the map, and is thus exploited to re-arrange the strategy on the fly, to cope with the presence of a contesting opponent in the same area:

[28] [FortIta G5 – Lo Sacagniamo]

```
01 STE:     e:::hm (.) forse son giusto giusto* per il palazzone
   buf                                          -->*turns twds Ste-->
02          (0.8)
03 BUF:     eh c'è uno: (.) #eh siete- siete bassi tu e lui
   fig                      #fig 1 (Buf)     + (Ste)
```




```
04          uguale* però se vuoi atterro
               -->*turns twds building-->
05          anch'io e lo [sacagniamo]
06 STE:                  [ vai vai  ] atterra che lo sacagniamo.
```

At the beginning of the sequence both Ste and Buf are oriented towards a 3-floored building that has been chosen as the landing spot. Ste topicalizes his vision by projecting his landing spot in relation to the building and hypothesizes to be right on target to reach on top of it (‘forse son giusto giusto per il palazzone’). Buf’s response displays an orientation to help Ste to assess his trajectory, as he turns the camera towards Ste and warns him that is being contested by an enemy with an existential structure (‘eh c’è uno’ line 3). Buf then compares Ste’s position (fig 1, rectangular box) relative to the enemy (fig 1, circled), described at the same height and thus potentially landing on the same spot (‘siete bassi tu e lui uguale’), while Ste maintains the camera on the building to adjust his position for the landing, thus trusting Buf’s report. Given the incumbent contest, Buf offers assistance to Ste with a conditional sentence (‘se vuoi atterro anch’io’) and formulates a joint action (beating the enemy together), which is accepted by Ste (line 6). In the sequence, Buf’s sensorial perception is mobilized to assess the threat posed by the enemy and to react rapidly to guarantee themselves a competitive advantage over the enemy, i.e. being two versus one. In this way, the recognition of the enemy and the ability to foresee the movements in the air are an example of skilled knowledge-how which contributes to accomplish collaborative actions in game.

A similar contribution can also be offered by gamers’ competent hearing. The complex 3D-audio system featured in the game allows not only to discern different sounds, but also to assess the provenance in the virtual space of the game world. Knowing how to recognize and make sense of these features is part of gamers’ professional sensing, in this case of professional hearing, which, like vision, can be topicalized, shared and exploited for collaborative actions. In [29], the team is hiding in a building while other teams are fighting in the surroundings. Pun suddenly hears a noise that he cannot recognize, and which becomes subject to negotiation:

[29] [FortEng G4 – What’s that Noise?]

```
01 PUN:    What is that noise dude?
02 NIC:    U:::h ((alien-ray like noise))
03 NIC:    Oh yeah!
04 DAW:    I don’t hear anything I don’t know
05 PUN:    [[I think it’s the minigun or something (.) I don’t know]]
06 NIC:    [[((imitates the sound))]]
07 DAW:    I don’t know why I don’t hear anything
       ((32 sec. omitted))
      ((sound hearable again))
08 PUN:    See? That way
09 NIC:    I don’t hear it ((sounds))
10 PUN:    THAT!
11 DAW:    [[ °Oh the minigun°  ]]
12 NIC:    [[OH I do I do that’s]] the minigun that’s the minigun yeah
13 PUN:    Oh okay that’s such a weird noise
14 NIC:    >let’s do rotation while they’re all fightin’ we can literally
15         go around
```

```
16 DAW:    Oh yeah.
```

After Pun's question, Nic treats the hearing as available and in line 3 confirms that he has been able to perceive it. Pun then provides a candidate explanation which is downgraded by claiming not to know, while Daw admits that he could not distinguish anything particular. Thirty-two seconds later, the sound is hearable again and Pun keeps tracking and topicalizing it to direct his teammates' sensing. This time Nic is not able to hear the sound, but as soon as it becomes loud again, Pun verbally points to it ('THAT!' line 10). Nic and Daw now discern the sound, are able to recognize it and link it to a specific weapon, answering Pun's initial inquiry while upgrading his knowledge of that weapon. Having identified the sound, in line 14 Nic uses this perceptual information to establish the future course of action, in terms of procedural reasoning: the sound is interpreted as someone shooting, which gives the team an opportunity to leave the building they are hiding in and try to move around the fighting opponents. In this case then being capable of recognizing sounds and the implications of sounds leads to the assessment of the local terrain and provides support to decide how to act together.

Professional hearing can also inform professional vision, by indexing what to scan for, based on auditory perception. In the final example of the chapter, which expands the fragment discussed in [15], Daw and Pun are chasing an enemy, the lone survivor of a fight where Nic has been eliminated. The enemy has run away, and Daw and Pun are trying to locate him:

[30] [FortEng G2 – Metal Builds]

```
01 PUN:     I'mma look for him
02          (.)
03 DAW: ->  I think he's b- I heard him just build metal build pretty far
04          away.
05          (.)
06 PUN:     He ran?
07          (.)
08 DAW:     I don't know
09 PUN: ->  Yeah I think he got th- ye:ah right here metal builds in
10      ->  front of me,
```

In this sequence, Daw topicalizes his hearing by referring to the recognized object ('metal builds') and the position of the source of the sound ('pretty far away'). By sharing this information with Pun, Pun in line 9 reports the recognition of metal in relation to Daw's auditory perception. He confirms the correctness of Daw's hearing ('yeah'), locates the builds with a spatial deictic ('right here'), formulates the objects of perception ('metal builds') and again localizes the builds relative to his position ('in front of me'). Daw's ability to recognize the sound of metal structures thus provides Pun with a clear indication of what to pay attention to. In this way, Daw's hearing and Pun vision are used

to play efficiently and to sense the virtual world of the game together in the moment-by-moment unfolding of the interaction.

In conclusion, in this chapter I have tried to outline how knowledge-that and knowledge-how are displayed, negotiated, attributed and contested in the organization of gaming interactions, and in accomplishing expert, skillful gameplay. The initial conceptual distinction between the two qualities of knowledge has been gradually hybridized to show that expertise and knowledge become local practical problems that gamers deal with by relying on facts, procedures and competent sensing, which come to constitute complex gaming practices, while emphasizing the social nature of this type of encounter. In the next chapter I will provide an in-depth analysis of two of such practices, related to the use of graphic markers.

Chapter 6 – The Use of Graphic Markers in Multimodal Gaming Practices: Gestalts and Expertise

In the last chapter, we saw that gaming expertise includes both orientations to knowledge and performance, which are realized by combining multiple resources such as talk and in-game actions. The multimodal nature of videogaming as a digitally mediated encounter provides both constraints and affordances that gamers can exploit to develop methods to accomplish cooperative gaming as interaction. These methods thus constitute part of gamers' competence in recognizing and organizing actions by relying on multimodal packages that are assembled, produced and negotiated locally among skilled participants.

In this chapter, I will concentrate on one of these resources, the manipulation of the game interface by using graphic markers, and on how this comes to constitute methodical practices in the form of complex multimodal gestalts (Mondada, 2014, see. ch.3) that are shared by the players as part of their competent routine of playing Fortnite. In the first section of the chapter, I will introduce the resource of "marking" as one of the in-built features of the game, showing its basic functioning and characteristics in the context of online distant gameplaying (6.1). Then, I will consider the deployment of markers in relation to specific recurrent activities as part of larger gestalts. In particular, the analysis will focus on the use of markers in the opening of games, as doing 'proposing a landing spot' (6.2), and in relation to game objects as a way of 'offering' (6.3).

6.1 Marking as a Resource

As mentioned in section 3.4.5, video-mediated online interactions feature participants that are physically distant, located in different spaces, which are able to communicate through the medium, the video, gaining partial access to others' ecology. Research in this area has pointed out that the fracturing of such ecologies, i.e. participants' incongruent position in distant spaces (Luff et al. 2003), is treated as problematic in interaction and leads to the emergence and development of new practices which deal with the spatial fracture by employing different semiotic resources offered by the technology and the video (Housley, 2021).

This is the case also for online games as the one considered in the present study, since gamers do not have access to the physicality of their co-interlocutors while playing, but only of their avatars in the virtual space of the world. While the avatar and the interface provide cues to locate other

members of the team in the game space, the different participation frameworks that they constantly assume, and the complex three-dimensional structure of the game world with the possibility of moving both the avatar and the camera, make it difficult to establish other players' relative position in every moment of the game. In the previous chapter, for instance, we saw that gamers do camera work in order to assess teammates' position when accomplishing landing, taking advantage of the fact that the landing phase poses some constraints in terms of freedom of movement and of convergence towards the same spot, thus implying that the avatars are more or less located in the same area. On other occasions, however, players can be in completely different parts of the map or have different visual orientations, which makes achieving spatial awareness and reference more problematic. In other words, due to the technologically mediated activity that they are engaged in, gamers often find themselves having asymmetries in visual access, because of their different positions in space. This becomes a relevant practical problem that is acknowledged and oriented to in interaction, as suggested by the frequent interactional work that players do to locate themselves, enemies and objects in the game world.

One of the resources that gamers mobilize to do this work is represented by the use of graphic markers. Markers, and the act of 'marking' (or 'pingare', in Italian), are user-enabled orientation cues (cf. Kato & Bauer, 2018) implemented in the game head-up display (HUD) that appear on each of the three players' screen, notwithstanding their current position in the game space. In this way, markers act as visual enhancers that highlight a point, or object, in space, making it visible to the rest of the team. Markers can be placed on both locations and objects on the map and have different graphic realizations accordingly. Space markers have the form of colored rays, one color for each player, which appear in the 3D game world. These are also visible in the form of pins on the 2D mapped bird's-eye view that can be monitored on the top right of the HUD, or by opening the dedicated map menu. When markers are used on objects, on the other hand, they only appear in the 3D space and take the form of the object. Each player can mark only one point in space and one object at a time, and the act of marking is also accompanied by a beeping sound that signals its enactment.

The following two extracts are intended to exemplify how the two types of markers can be activated, and aim to show the simultaneity of their appearance and the affordances of the resource. For each case, I will provide the verbal transcript with multimodal annotations, along with the stills taken from the synchronized video recordings. However, for reasons of layout and legibility, the extracts in the rest of the chapter will not always include the multi-perspective view of each marking, but will selectively display moments that treat the marking as accountably relevant (e.g. co-participants' reactions). Nonetheless, despite the limitations of the written medium, the phenomenon under analysis always maintains its synchronous temporal features, even when the simultaneity is not

shown. The first case [1] shows an example of the realization of marked objects, while extract [2] features a marker that is activated and visualized on the 2D map. Starting with the former, Daw here (centered image, lower line) has just opened a loot chest and found a blue shotgun:

[1] [FortEng G5 – Marking Objects]

01 DAW: **Oh +#blue pump for someone right here.**
+marks pump-->>
fig #fig 1 (Nic + Pun + Daw)

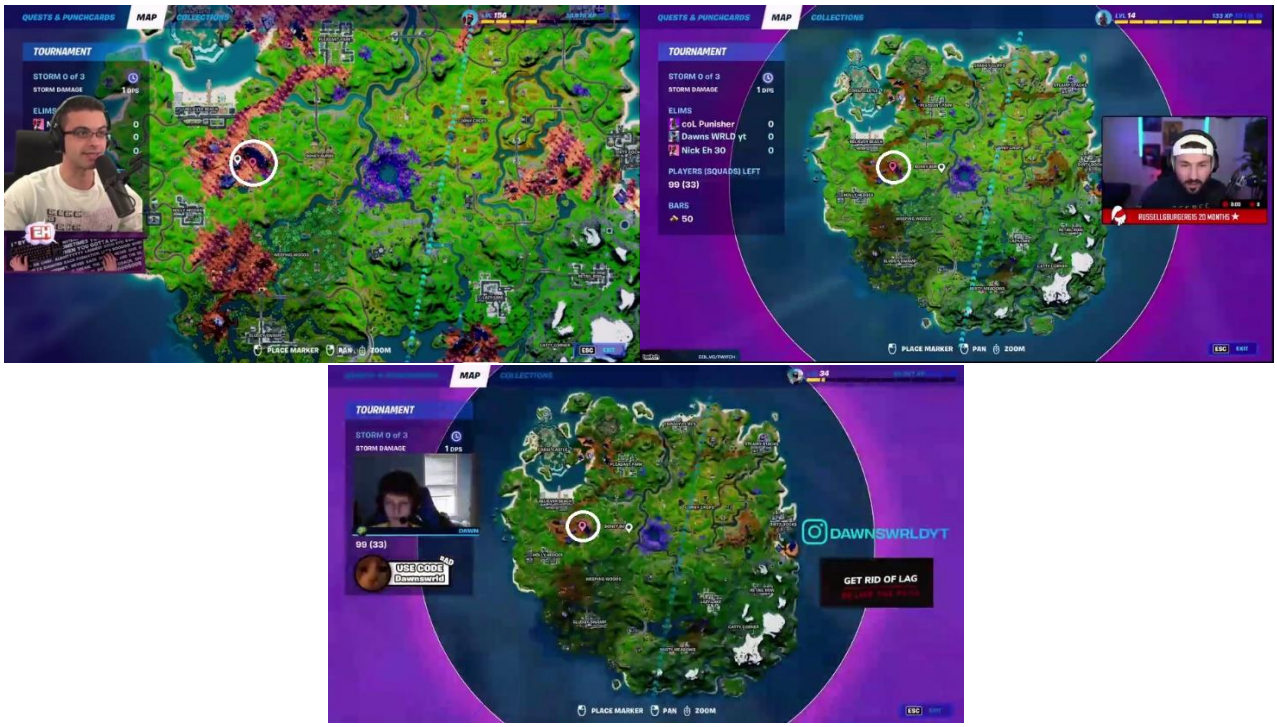
After noticing the object ('Oh'), Daw marks it and then names and describes it ('blue pump'), while coupling it with a spatial deictic (Levinson, 1983). As it can be seen from the three figures, Daw is aiming towards the object right in front of him, in order to be able to activate the marker (circled in white), and in turn this immediately becomes visible on both Nic (top left) and Pun's (top right) screens, in spite of the fact that the blue pump is outside their current domain of scrutiny and avatar orientation. The marker thus highlights a point in space that can facilitate the potential re-orientation of avatar and camera and helps making sense of what "right here" constitutes for Daw's current position. In this case, the marker is environmentally coupled with the verbal formulation of the object and the indexical reference, and enhances the visual perception of Nic and Pun while offering an orientation cue.

Similarly, in [2] we can see an example of how marking the mapped space of the game can be accomplished. As already discussed in chapter 5, Nic here is proposing a landing spot at the beginning of the first game of the session. Once he has opened the map menu, in line 7 he zooms in on a specific part of the map, and then marks a point, which appears on his teammates' screens, who

had not activated the map view yet. Hearing the sound, Pun and Daw react by opening their map to attend to Nic's marker on their respective map mode:

[2] [FortEng G1 – Marking a Point on the Map]

```
07 NIC:     Guys, well I just wanna say th- *e::h this
                                            *zooms in
08          spot *here is £$#insa:ne*
   nic           *marks point on map*
   daw                    £opens map-->
   pun                     $opens map-->
   fig                      #fig 1 (NIC + PUN + DAW)
```



The marker, in this case a pink pin positioned in the orange area of the map circled in white, becomes visible on everybody's screen at the same time. Again, Nic couples the use of the marker with a verbal formulation of the object ('spot') and two place deictic words, the demonstrative 'this', which anticipates the marker, and the locative 'here' which is uttered while activating the screen manipulation. By marking the spot, Nic thus succeeds in pointing and highlighting the exact area he is referring to, exploiting his knowledge-how of the interface system and its affordances. All three gamers display an orientation to procedural knowledge in respect to marking, since they react to it by aligning to the enactment of the resource, which becomes locally available and accountable. In addition, this example also displays how markers leave "traces" in the game world (Goodwin, 2000), as suggested by the fact that the stills are taken two seconds after the marker, just before Nic starts uttering the word ('insane').

These two examples thus offer an overview of the functioning of the mechanic as an interactional phenomenon. Markers are simultaneously activated on each player's screen and provide

the wherewithal to establish precise spatial reference, achieved by coupling them with locally produced discursive practices that frame the object of reference. Consequently, they both work as enhancement of co-players' visual perception and as highlighters that detach elements of the virtual ecology from the ground, bringing it to the front. Knowing how to use this resource thus contributes to the organization of skilled gameplay, in a sense balancing the asymmetric perceptual gap that participants may experience while gaming online, by exploiting the affordances of the graphic interface and adapting to its constraints.

Furthermore, from a methodological perspective, markers offer a perspicuous phenomenon that can be investigated by relying on multi-perspective video recordings in an online setting. The automatic appearance of markers on everyone's screen in fact makes the marker available and accountable not only to the participants, which, as we have briefly seen in [2], can react and respond to it as an embodied action that is situated in an interactional sequence and thus context-shaped and context-renewing, but also to the analyst, who can investigate the organization of online gaming by grounding the claims on details that are visibly available and demonstrably oriented to (or discarded).

In addition to its core functioning, however, markers have also been found to contribute to the realization of complex gaming practices that become part of gamers' routinized, skillful performance. While markers maintain the referential and visual functioning outlined above, they also come to be understood holistically as Gestalt figures, as multimodal ensembles that are produced and recognized in the here-and-now of the interaction. These multimodal practices can in turn be laminated and simplified as they are progressively learned and repeated by expert gamers in the course of the interaction. In the following sections, I will describe the organization of two of such marking practices: the proposal of landing spot, and the offer of weapons and items during gameplay.

6.2 Marking and Proposals: Choosing a Landing Spot

The first marking practice under consideration has to do with the use of graphic manipulation in the first part of landing sequences. As described in chapter 5, the landing phase is a fixed, recurrent moment in every game, in which players must decide where to start the match, jump off the battle bus and achieve landing in the determined spot while checking the position of the enemies. While in 5.4.3 we saw the multimodal handling of the final sub-phase, in this part I will focus on the former, which concerns settling for a landing spot. This is an activity where marking practices not only are frequently employed by the participants but also become one of the resources themselves for proposing a desired destination, which can be accepted or contested either in verbalized or non-verbalized ways. To illustrate how players employ and interpret markers as a specific routinized

gaming practice, I will zero in on the phenomenon in a gradual way, by showing first the extended format (6.2.1) and then the lamination and erosion of its features (6.2.2).

6.2.1 Extended Format

The first extract presents a complete format where marking is coupled with discursive practices and is object to explicit interactional negotiation between the parties. The example is already known, as it was discussed as [24] in the previous chapter, with a focus on the epistemic and deontic positioning of the participants. Here I will also include the multimodal annotation of camera work and of the use of markers. The sequence will be divided into three parts. The first part sees Nic topicalizing the decision-making process, before presenting his own proposal, as also shown in [2] above:

[3a] [FortEng G1 – Landing Spot]

```
05 NIC:     ^Where should [ we go? ]
            ^opens map-->
06 PUN:                   [Wherever] you guys (usually) do right?
07 NIC:     Guys, well I just wanna say th- +e::h this
                                            +zooms in
08          spot *here is £$insa:ne*
   nic           *marks point------*marks point-->
   daw                  £opens map-->
   pun                   $opens map-->
09          with the amount£ [of *floor spawns]
10 PUN:                      [Oh *is it?      ]
   daw                 -->£
   nic                       -->*marks point-->
11 NIC:     and [you can] max out *brick$ i:n a: second bro:.
12 PUN:         [okay   ]
   nic                          *marks point-->
   pun                             -->$
13 NIC:     there's some things [you hit] 'em five times=
14 PUN:                         [oh wow ]
15 NIC:     =it gives you a hundred and twenty and there's like (.) seven
            of them scattered around ^it's insane.
                                     -->^
```

While introducing the topic of the landing spot, Nic opens the map menu, as Pun defers the choice in line 6. As it was shown before, in line 7 Nic subsequently zooms in on the part of the map that he is interested in (the orange area that is visible in the still included in [2]) and then performs the first marking action, in conjunction with the verbal formulation analyzed earlier. The marker appears on Pun and Daw's mini map, while they are warming up in the pregame lobby. Subsequently, they treat the marker as an accountable meaning-making constituent and react to it by opening the map to visually attend to Nic's spatial reference. At the end of the word "insane', Nic moves the marker to a nearby spot, as a way of circumscribing the area. Daw then closes the map and goes back to the warmup, whereas Pun keeps looking at the 2D version of the game world and displays surprise and

reception of new knowledge about the spot. Nic continues with the accounting of the positive features of the area, and as he does so, he highlights specific parts of the spot in combination with 'floor spawns' (line 9), before resetting the marker on the initial spot (before 'brick', line 12). After the first explicit acceptance ('okay'), Pun closes the map and stops monitoring Nic's highlighting, and right before the end of the account, Nic closes the map, leaving the initial marker, the one visible in [2], fixed on the spot. In the meantime, the warming up phase has finished, and players are now on flying over the physical 3D area of the game, with Nic's marker visible as a pink ray on the map. A few moments later, Nic downgrades the certainty of the spot by introducing a doubt and asks for Daw's opinion of the choice:

[3b] [FortEng G1 – Landing Spot]

```
22 NIC:              [but I do]n't know if it's a trio spot that's a
23          [solo,] Dawn what do you think?
24 PUN:     [right]
25          (1.4)
26 DAW:     We can try the:re,
27          (0.2)£(0.8)
   daw           £opens map-->
28 NIC:     Okay.
29 DAW:     Personally I've been landing like in §#this area §but (.) I'm
                                                  §marks point§
   fig                                             #Fig 1 (Daw)
30          ^§#down to land here £and try it out.
   Nic      ^opens map-->
   daw       §marks point      -->£
   fig         #Fig 2 (Daw)
```

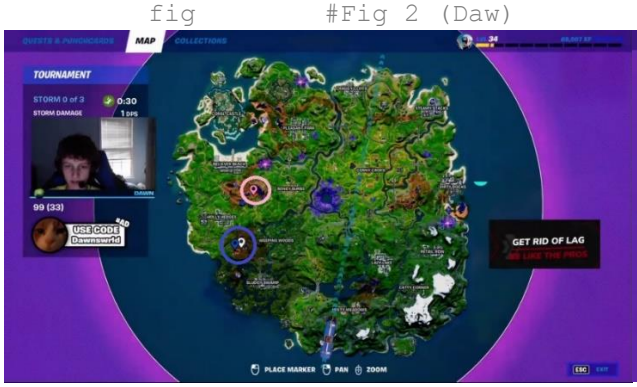


Fig 1 (Daw)

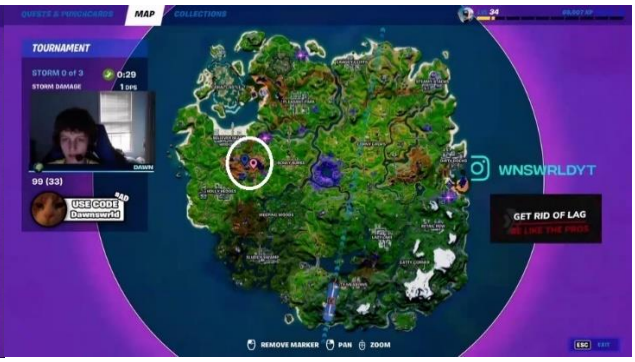


Fig 2 (Daw)

After the initial acceptance in line 26, Daw opens the map menu and marks a different point to signal his usual landing spot (Fig 1, blue circle). The marker is coupled with the deictic 'this' (line 29) but unlike Nic's, it is retracted immediately after the word 'area'. As Daw accepts Nic's proposal ('I'm down'), he marks the same spot as Nic (Fig 2, white circle) for an instant, before removing it and closing the map. In this way, Daw mobilizes the marker mainly with a highlighting function, as a cue to re-orient others' attention, but at the same time, by erasing it straight away, he does not intrude on Nic's proposed, and agreed upon, spot, which remains the only one activated. In the final part of the

sequence, Nic introduces another positive account in favor of the spot, related to the possibility of retreating to an alternative location near the one proposed, in case enemies were going to the same area:

[3c] [FortEng G1 – Landing Spot]

```
31 NIC:     It's not bad and plus the thing about that i:s,
32          if we're aiming for that
33          we can kinda go to our spot with the *slurp
                                                *marks point-->
34          truck if we're a little bit higher *up like if there's=
                                              -->*marks point-->>
35 DAW:     [okay. ]
36 NIC:    =[people] ^conte[sting us,]
                    -->^
37 PUN:                     [Ye:ah    ]
38 NIC:     So still [in the same] scenario#
39 DAW:              [°yeah cool°]
   fig                                          #Fig 3 (Nic + Pun + Daw)
```

In line 33 Nic moves the marker to highlight the backup spot, combined with a description that frames the spot as known-in-common ('our spot') and stresses its features ('with the slurp truck'). Pun and Daw keep track of Nic's account by monitoring the movement of the marker in the game world. Having indicated the spot, however, Nic repositions the marker on the original orange area and closes the map. The marker remains visible on all three screens and the players finally launch towards the pink ray that represent Nic's marker, as shown in figure 3. From this sequence, we can thus see how gamers use markers as one of the multiple semiotic resources that contribute locally to agree on a landing area, together with language and camera work as a multimodal gestalt, and we have also seen two different actualizations of the marker. When used instantaneously, it is employed mainly to exploit its deictic functions as a way of emphasizing a point in the map to clarify the reference. When it remains fixed, however, the marker is treated as an agreed upon proposal that establishes the landing area, as also suggested by the ways in which other markings are used in very brief ways. In the following section, I will show how this use of fixed markers becomes routinized as a gaming practice that is treated as establishing a proposed spot, by subsequently eroding the multimodal layers of the gestalt with which landing is locally organized.

6.2.2 Routinized and Eroded Formats: Marking as Proposing

The first example of how markers become routinized when used in the opening phase shows how the deployment of an initial marker is reflexively treated as being the proposal itself, which is then verbalized and negotiated by offering an alternative spot in a more explicit format. The sequence follows a moment where the three players were joking about non-game-related topics which ends with Ste's laughter at line 1. Here they re-engage in the activity:

[4] [FortIta G3 – Landing]

```
01 STE:     Ahahahaha
02          (0.3)*#(0.6)
   buf            *marks point/Doom-->
   fig             #fig 1 (Buf)
03 BUF:     Mh:::m (.) qua però potrebbe essere intrigante
04          eh lo *+#Stark
   buf          -->*marks point/Stark-->>
   ste             +opens map-->
   fig              #fig 2 (Buf)
05 STE:     d[ai]
06 BUF:      [beh] in+somma decidete voi se Doom o Stark§
   ste           -->+
   cav                                                §opens map-->
07 STE:     per me:: ci sta§
   cav                  -->§
08 CAV:     meglio Stark
```

Fig 1 (Marker on Doom)

Fig 2 (Marker on Stark)

During the gap in line 2, Buf puts the marker on a location named 'Doom' (fig. 1) without verbalizing it, relying on the properties of the interface which becomes shared between the participants. Ste and Cav do not topicalize nor problematize the action and silently accept the marking of a spot as a proposal *in se*. It is Buf himself, however, that after a few seconds opens up the negotiation of the spot by offering an alternative solution as 'intriguing' (line 3). As he does so, he moves the marker from the 'Doom' spot to the 'Stark' area (fig. 2), coupling it with the naming of the new referent. Ste reacts by opening the map to assess the two spots and starts to display agreement ('dai'), while Buf makes the alternative choice overt and leaves the final decision to his teammates ('decidete voi se

Doom o Stark'). By formulating the decision in terms of "x" or "y", Buf reflexively orients to the first, non-verbalized marking as being an explicit proposal. Subsequently in line 7 Ste displays agreement ('per me ci sta') privileging the current marked spot (i.e. Stark) as the relevant topic, while Cav, who has also opened the map and checked the positions, agrees on the latter spot by naming it ('meglio Stark'). The marker thus remains on Stark and the players manage to jump towards the area.

This sequence thus shows how marking spots can be treated not only in terms of deictic reference, but as implicit proposals for deciding where to start the game. In this case, the subsequent negotiation triggered by the emergence of a possible alternative decision brought to the surface the implicit orientation to the practice. In other words, from being one of the multiple resources that are mobilized and understood as a gestalt in order to make a decision by taking advantage of the visual enhancing features of the interface, marking becomes a simplified format of the practice that is interpreted and silently agreed upon as encapsulating the activity of choosing a landing spot.

On other occasions, this routinized and eroded format is employed with minimal reference to the gaming activity, as in the following sequence. Here the players are talking about Buf's arrangements after the gaming session. Breaks between matches in fact often provide room to disengage from gaming to chitchat about personal topics and constitute loci where the multiactivity of gaming becomes salient:

[5] [FortIta G5 – Landing: Marker + Incitement]

```
01 BUF:     ah* (.) eh non lo sapevo neanche questo
              *opens map-->
02          (0.8)*(0.2)
   buf        -->*marks point/Sabbie and closes map
03 BUF:     dai una bella +partita gagliarda: (.) lontana da:§,
   ste                   +opens map-->
   cav                                                  §opens map-->
04          (0.3)
05 STE:     sì: [ma:]
06 CAV:         [ma ] ti fai pagare o ti fai vai per§ fare un favore
                                                    -->§
07          (0.7)
08 BUF:     no no +c'è io ^lavoro tipo dalla Beatrice
   ste         -->+
   buf                   ^jumps twds marker
09          (0.5)
10 CAV:     ah sì?
11          (0.4)
12 BUF      sì&$
   ste        &jumps twds marker
   cav         $jumps twds marker
```

While talking about an acquaintance ('Beatrice'), Buf in line 1 opens the map and after a 0.8 gap he marks a landing spot and closes the menu. He subsequently re-orients to the gaming activity by inciting the team ('una bella partita gagliarda') for the next match, abandoning a potential account

('lontana da'). In the meantime, Ste and Cav open the map and check the position of the marker. Ste tries to take floor but relinquishes it to Cav, who re-directs the conversation on the previous chat about Buf's scheduled tutoring activity. Despite the lack of explicit formulation, the marker is implicitly treated as both being a referential indication of what the spot is and as the proposed landing spot for the sessions. In this case it is not subject to negotiation and only couples with Buf's incitement to play a good game. Eventually all three players jump towards the area.

The most eroded form of the practice in turn is performed without any explicit verbal formulation. One of the players simply marks an area of the map that becomes the agreed destination, as in the following case:

[6] [FortITA G3 – Maximal Erosion]

```
01 STE:     tararam tarara:m ((singing))
02          (3.0)*(2.0)+(12.0)
   ste           *opens map, marks point/Sabbie, closes map
   buf                 +opens map
03 CAV:     quindi cosa c'è, c'è top dodici top quattro e top+
   buf                                                    --+#
   fig                                                      # Fig 1
```


Fig 1 (Ste)


Fig 1 (Cav)

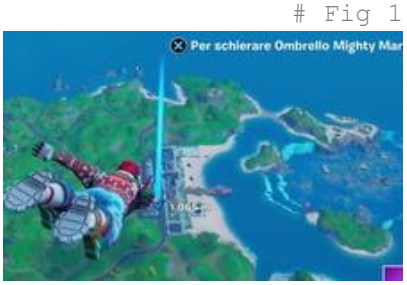


Fig 1 (Buf)

The players are in the pregame lobby and Ste is singing a violin melody that was played by using one of the in-game emojis. After three seconds, he activates the map menu, leaves his marker on a location and closes the map. Buf reacts by looking at the marker, while Cav keeps warming up. Twelve seconds later, while they are getting ready to jump, Cav initiates a question/answer sequence on the game mode rankings, and a few moments later the three players jump towards the area marked by Ste. The marking-as-proposal practice here becomes tacitly enacted and accepted by all three participants and constitutes a taken-for-granted, known-in-common procedure that is part of being expert players of Fortnite. When the proposed landing spot does not lead to explicit formulations or negotiations, gamers interpret markers as routinized resources that still rely on their general properties of shareability and indexicality but are also treated as an expert, recognizable method that, in this sequential phase of the game, constitutes a collaborative resource to organize the game quickly and efficiently.

6.3 Marking Objects as Offers

The second marking practice under analysis is related to the use of graphic manipulation to locate objects in the virtual space of the world. In Fortnite, the collection of weapons and healing items, and the building of an appropriate inventory are key game mechanics that put players in the condition to win the game. Objects in the game world have different affordances and characteristics depending on their category, function and interactivity. Some objects, such as furniture, are only part of the game environment but cannot actively be used by the players. For example, they can be destroyed to farm materials but cannot be collected and cannot be marked. Other objects such as weapons, heals and utility items (e.g. means of transport, or fishing rod) can instead be collected and used in accomplishing the fighting and looting mechanics of the game (cf. 4.4.1). These objects are randomly distributed over the map and inside looting chest, adding randomness and unpredictability to each game. Moreover, some of them, e.g. weapons, can be divided in terms of rarity, signaled by the color with which they are represented, and category (e.g. the category 'shotgun' can include different items). Collectible objects can also be marked, highlighted and located in space, and they consequently offer the grounds to develop collaborative practices with which players can negotiate the building up of their inventory and coordinate in locating and distributing what is found during each game, as shown also in some of the extracts discussed in chapter 5.

In this respect, the core features of markers provide a helpful resource to locate the position of objects while enhancing the visual perception of other players, taking advantage of the instant sharing of the marker on other players' screens. However, as for the case of landing spot proposals, the action of marking objects for the expert player comes to mean more than just locating objects in space, and becomes in and of itself a collaborative practice with which gamers are able to make available and offer objects to their teammates. In this section, I will start by presenting the extended case format of an offer that is accomplished by combining both verbal and on-screen actions and as a multimodal package (6.3.1). Then, I will provide instances of how the gestalt constituents can gradually be eroded while still treated as the same interactional practice (6.3.2). The practice will subsequently be compared to sequences revolving around objects where markers are not employed (6.3.3) and finally I will consider the role of benefactives in the formulation and response to offers as part of a gaming activity (6.3.4).

6.3.1 Marking in Offers: Extended Format

The first sequence under discussion presents an extended format where the use of a marker is combined with a verbal formulation of the action that features multiple components at the level of

turn design. In the extract, Pun, Nic and Daw have just started the first game, and are looting the orange area proposed by Nic, looking for weapons to build up their inventory. They are dispersed in different parts of the area, when Daw opens a chest that automatically fills his five inventory slots. Among the collected objects, he finds a shotgun (‘green pump’) which he already owns, and thus decides to drop it and make it available to his teammates:

[7] [FortEng G1 – Marking Object (Extended Format)]

```
01 DAW:     I got a *green pump for someone ^#over here
                    *drops pump              ^marks pump-->>
   fig                                        #Fig 1
02          if anyone wants it.
03 PUN:     #Y:$up.#
               $turns twds marker
   fig      #Fig 2 #Fig 3
```

Fig 1 (Daw)

Fig 2 (Pun)

Fig 3 (Pun)

```
04 NIC:     Ni::ce!
05 PUN:     Uh:m
06          (0.1)+(0.5)
   pun           +marks twds pump-->
07 PUN:     Oh I tried dibsing it (.) heh.
08          (.)
09 NIC:     O:(h)h way b(h)ack.
10 PUN:     It’s- it’s an Apex thing.
11 NIC:     $Ye[ah.  ]
            $picks up another pump
12 PUN:        [Uh £I]’ve a blue lever but I’m not a: hh
                  £picks up lever
13          here you can take the green pump I’ll (try to craft)
14          this into a charge so that we all have good shotguns
15          that we like
```

Daw starts the sequence with an explicit formulation of the offer (lines 1-2), uttered while he takes the object out of the inventory and leaves it on the floor, to then mark it (Fig. 1). This action is designed and accomplished by mobilizing several resources. At the level of turn design, Daw announces the existence with a stative verb of possession (‘I got’), names the object by specifying both the color/rarity and the type of item (‘green pump’), includes a generic beneficiary (‘for someone’) without addressing directly either Pun or Nic, a space deictic (‘over here’) and an if-conditional clause that formulates players’ interests (‘if anyone wants it’, cf. Curl, 2006). The locative

is formulated in combination with the use of the marker, which takes the form of a green circle that displays a graphic representation of the object on each player's screen. The action is indeed understood as an offer by both Pun and Nic. Pun reacts with an immediate uptake ('Yup'), while Nic responds with an appreciative assessment ('Ni::ce!'). It is also interesting to note Pun's in-game reaction to Daw's initial action, as he attends to the offered object by re-orienting first the camera (fig. 2), and then the entire avatar (fig. 3), towards the green marker. In this way Pun displays an understanding and ascription of Daw's action as "offering" and making the object available for others, as also evidenced by the rest of the sequence. In line 6, Pun tries to claim the green pump for himself by placing his own marker over the object ('I tried dibsing it', line 7, see also ch. 7). However, he fails to do so because he is too far from it and because he is relying on a mechanic coming from a different game ('It's an Apex thing'), which does not work in Fortnite. However, his account of the failed attempt is acknowledged by Nic, who aligns with Pun's self-selection as the beneficiary, and in the meantime has found the same object in a different part of the area. While moving towards the marker, Pun finds another shotgun ('blue lever') and eventually declines the offer, opting to choose a different weapon (lines 12-15).

Notwithstanding the outcome, Daw's initial action is understood as an explicit offer that leads to the following negotiation about who should take the weapon and whether or not one should take it. In this case, the offer is explicitly formatted by including the precise formulation of the object, the overt identification of potential beneficiaries, the verbalization of the offer, and the locative action, coupled with the use of marker. The marker allows to pinpoint the object in space, as shown in [1], but it does so in a contextual configuration which includes other resources that tie the localization to a gaming practice that facilitates cooperative gameplaying and becomes part and parcel of a routinized gestalt move that can be eroded and simplified while still performing the same action.

6.3.2 Reduced Formats of Marked Offers

In this section I will show instances where the offer of in-game items is gradually performed by reducing the verbal components of the gestalt, suggesting that the practice of marking an object can be understood by expert players as doing 'offering an object' *in se*. A first example of possible simplification was already discussed in [1], when the marker on a weapon was coupled with a simplified turn ('oh blue pump for someone right here') which only included the naming of the object, the locative, and the unidentified beneficiary, hence leaving implicit the use of existential or stative verbs and of typical offer formats. In the following example, instead, the turn is designed by completely reducing benefactive components:

[8] [FortIta G3 – Locative + Existential + Naming + Marking]

```
01 CAV:     e qua c'è un pompa*#
                                *marks pump-->
   fig                           #fig 1 (Cav)
02          (1.3)+*#(1.4)
   ste           +turns and moves twds pump
   cav          -->*
   fig               #fig 2 (Ste)
```

Fig 1 (Cav)

Fig 2 (Ste)

In line 1, Cav's turn only includes the deictic ('qua'), the existential ('c'è') and the naming of the type of object ('pompa'), without including the rarity or color, exploiting the fact that the marker already represents visually this piece of information. In this case the verbal formulation is more oriented to the localization of the object, leaving the offer implicit. However, Ste treats Cav's mentioning and marking of the shotgun as a way of constructing it in terms of availability and collectability and reacts to the marking in an embodied way by silently turning, walking towards the weapon (fig. 2) and finally picking it up.

Gamers' orientation to the practice remains unaltered even when the verbal component is reduced to the minimum, e.g. by only mentioning the name of the object, as in the following example:

[9] [FortEng G2 – Marking + Naming]

```
01 NIC: ->  Har*poon
               *marks harpoon-->
02 PUN:     Yeah we I mean-
03 NIC:     Oh §Pun (.) do you have chug splashes sorry?
   Daw         §turns and heads twds harpoon
04          [I have two]
05 PUN:     [Yeah four ][  yeah  four  ]
06 NIC:                   [okay I'm gonna] I'm gonna
07          drop some ^here I'm gonna
                      ^turns twds harpoon
08      ->  take a §*#harpoon oh actually you got=
   daw             §picks up harpoon, drops medkit
   nic            -->*
   fig                #Fig 1 (Daw + Nic)
09 NIC:     =[that I'll take the medkit ]=
10 DAW: ->   [oh my bad no §there you go]
                          §drops harpoon, picks up medkit
11 NIC:     =okay okay^
                      ^picks up harpoon
12 DAW:     t's all you t's all you
```

Fig 1 (Daw)

Fig 1 (Nic)

In extract [9] above, Nic notices a harpoon in the game, one of the utility items that has a fixed rarity, and marks it by coupling the video manipulation with the name of the object (line 3) alone. This is understood by Daw as projecting an offer, which is responded to by turning his character towards the harpoon and heading there to pick it up (line 3). Nic however has second thoughts about whether to collect it or not, and after asking Pun an update on the number of chug splashes he is carrying, he decides to leave his two chugs to Pun (lines 8-9), so as to open an inventory slot that could be filled with the harpoon. As he does so, Nic turns his character back towards the harpoon and tries to collect it but is anticipated by Daw (Fig 1) who swaps the harpoon for a medkit. Notice also that the marker disappears as soon as the object is picked up. Nic verbalizes the convergence to the same object and agrees to take the medkit instead, but Daw apologizes, quickly swaps the two items back, leaving the harpoon to Nic. What is interesting to point out here is that Nic's initial action, the enactment of the marker coupled with the naming of the object is treated by Daw as a proper offer which signals not only spatial reference, but also the availability of the weapon as a 'collectible' object that Nic is providing as a service to his teammates. The response is not verbalized, but embodied through the work of the camera and the avatar in-game. Still, the subsequent negotiation brings to surface the initial categorization of the object and the related ascribed action as something participants demonstrably orient to and negotiate in a collaborative way.

A similar example can be seen in [10], where multiple marking offers are performed in sequence. The extract starts a few moments after Buf has revived both Cav and Ste, who had been killed in a fight. Because of the elimination, the latter two have lost their inventories, but the area is full of the loot left by the team defeated by Buf, who is now making available to his teammates a plethora of weapons and items:

[10] [FortIta G3 – Multiple markings]

```
01 BUF:     fiocina *fiocina,
                    *marks harpoon-->
02          (3.8)
03 BUF:     scu*done,
            -->*marks big pot
04          (3.2)
```

```
05 BUF:    in teoria forse su c'eran scudini no boh non lo so forse se li
06         era già tirati il tipo (.) a meno che non li abbia trovati:
07         nella cassa che non lo so che cazzo abbia trovato.
08         (1.3)
09 CAV:    e::h [là c'è un medikit]
10 STE:         [boh adesso se lo ][prendo ]
11 BUF:                           [qua c'è] *pompa.
                                            -->*marks pump-->
12         (.)
13 BUF:    a erre *verde.
               -->*marks AR-->
```

In scanning the environment, Buf formulates four different offers of objects that are available near his position, three of which include only the naming of the item (lines 1, 3, 13) and one that also includes the combination of deictic and existential described in [8]. While there is no embodied uptake in each of these instances, as Ste and Cav keep collecting items from a different spot, Buf is oriented to cooperate with his teammates to make sure that all three of them walk out of the area with a good enough inventory to go on in the game. In other words, his actions are aimed at providing assistance in order to recoup the equipment that was lost during the fight, thus displaying an orientation to the local contingencies of the match, as well as to a procedural reasoning that displays competence in knowing how to support the team after a successful rebooting. Relatedly, marking practices to offer items that are located near Buf's current position in the game world not only visually enhances the team's perception, but allows to organize the selection of weaponry in a coordinated way.

Lastly, the most eroded version of the gestalt includes instances in which the marking is not coupled to any verbal formulation, but performed silently by one of the players, leading to the gathering of the object, as in extract [11], which begins with Pun asking about the schedule of the official Fortnite professional championship (FNCS, line 1), while Nic and Daw are looting a different area.

[11] [FortEng G4 – Silent Marking]

```
01 PUN:    §ef en si es let me see when§# because+#
   daw     §opens chest                  §marks big pot-->
   nic                                          +turns twds marker
   fig                                  #Fig 1 (D)#Fig 2 (N)
02 NIC:    I [can hold that ]
03 PUN:      [The final's on] +Halloween right from what I've read
   nic                       +moves twds marker-->
04 DAW:    °Yep°
05 PUN:    °Okay°
06         (.)+#
   nic     -->+picks up big pot
   fig         #Fig 3 (Nic)
07 PUN:    Yeah.
```

Fig 1 (Daw)

Fig 2(Nic)

Fig 3 (Nic)

In the meantime, Daw opens a chest and finds a shield item (usually called 'big pot') which he silently marks (Fig.1) and then continues farming materials in the nearby area. Just after the marker has appeared on screen, Nic reorients the position of his camera and character to aim at the marker (Fig 2) and verbally responds to the marking with a positive uptake ('I can hold that'). Pun continues with a different interactional trajectory and asks for confirmation about the date (line 4), while Nic moves towards the marked pot and is finally able to collect it (Fig. 3). Nic's embodied behavior displays an interpretation of Daw's silent marking as an offer of the object which, being marked, is also "up for grabs" and leads to Nic's self-selection as the beneficiary of the pot. Therefore, the marker again maintains its core mechanic features of highlighting and bridging potential spatial gaps, but it is also practically understood as a multimodal game move that is exploited to organize cooperative gameplay.

In sum, in this section we have seen that the object offers can be performed by mobilizing complex multimodal gestalt that include both talk and in-game activity. In the extended form, the practice can include explicit reference to benefactive components (i.e. benefactor and beneficiary, reference to the service etc.), naming and description of the offered object, use of existential verbs and indexical formulations. However, the multiple layers that constitute the practice can gradually be eroded as the practice becomes part of gamers' expert knowledge-how of the game procedures, and be employed by reducing the constituents to the minimal version which relies on the marker alone to accomplish the action.

6.3.3 Unmarked Objects

In order to unpack the function of marking practices related to objects, I also worked comparatively by looking at instances in which turns designed similarly to those used in conjunction with markers were uttered without environmentally coupling the object to its visually enhanced graphic representation. In this section I will present a few extracts to outline first of all how objects may be

topicalized and located in space without being categorized as collectibles (extract [12]) and how the absence of markers can make the delivery and ascription of offers more burdensome to the players (extracts [13] and [14]).

In extract [12], Nic, Pun and Daw are looting a military base called 'IO spot' from which they had been attacked by an opposing team. After defeating the team, Pun and Daw moved to that spot to resurrect Nic, who is now collecting items and materials in the area. When he notices a launchpad, a utility item that can be positioned on the ground to jump up in the air and re-deploy the glider to travel long distance in the air, he verbalizes the object in a way similar to the one discussed in [1]:

[12] [FortEng G2 – Existential + Naming, No Marker]

```
01 NIC: --> Oh there's a [launchpad they missed!]=
02 DAW:                  [we can go Slurp Truck ]
03 NIC:     =let's* [go::]
                    *picks up launchpad
04 PUN:              [yeah] Slurp Truck
05 DAW:     Yeah I think we can go slurp truck maybe
06 NIC:     Okay.
```

In line 1, the object is formulated with a change of state token that signals the unexpected noticing and by designing his turn including an existential ('there's') and the name of the item ('launchpad'), followed by a description that hints at the fact that the opponents had not looted the entire location. However, no marker is added to the naming of the object. In this way, the launchpad is not localized nor shown on the co-players' screen, and in fact Nic celebrates the finding ('let's go') while collecting the object for himself. Notice that the celebratory comment is latched to the overlapping talk in line 1, and is not in response to Daw's proposal to go to Slurp Truck (a different location), which is only agreed upon in line 6 ('Okay'). Despite having turn design components that are similar to those used in offers, with the lack of marking and localization of the item Nic is not doing offering, but rather 'informing' and 'commenting' on the moment-by-moment recollection of his inventory. Both Pun and Daw do not treat the naming of the pad as involving them as beneficiaries in any direct way, but go on with their activities while planning the next move. In other words, the absence of marker here is produced and interpreted as doing a different action than making the item available.

The second case that points to the relevance of marking in accomplishing collaborative distribution of game objects concerns a sequence that comes a few second after the end of [10] above. Buf has activated a series of markers on multiple items. Among these, he also marked a big pot (line 3, extract [10]) whose marker disappeared a few moments later because it was replaced by a new object. Ste and Cav did not collect the item as soon as it was marked, but are now looking for it. In the sequence, the action of marking is topicalized by the participants and its absence complicates the localization and gathering of the pot:

[13] [FortIta G3 – Ephemeral Marker]

```
01 CAV:     lo shieldone tiratelo:: Ste
02          (0.4)
03 STE: ->  dov'è?
04          (0.8)
05 CAV: ->  ah non c'è- ce l'ha Buf l'aveva [pingato]
06 BUF: ->                                  [no: l'a]vevo pingato era là
07      ->  in casa dall'ascensore [tipo  ]
08 CAV:                            [va beh] me lo [vado a tirare io]
09 STE:                                           [  eh:  vattelo  ]
10          a tirar te dai
   ((26 lines omitted))
37 CAV: ->  certo hai detto ascensore (.) pompa blu [(preciso)]
38 BUF: ->                                          [ è dall' ] ascensore
39          (1.0)
40 BUF: ->  era: primo [ piano ]
41 CAV:                [(sì ma)] ah allora
42 BUF: ->  primo piano
43          (1.4)
44 STE:     l'hai trovata sta pozza te?
45          (1.0)
46 CAV:     e::h °la sto cercando°
47          (2.1)
48 BUF: ->  te entri dal basso e fai la rampa [di scale è subito lì ]
49 CAV:                                       [eh sì sì l'ho trovata]
```

Due to the ephemerality of the marking action, the location of the pot becomes a practical problem that requires interactional work to solve it. First of all, when Ste asks about the location, signaling his lack of visual access to the object or the marker, Cav makes this absence explicit (‘ah non c’è’, line 5), selects Buf as the one entitled to have it and then repairs and reformulates his utterance by retrospectively refer to the marking action (‘l’aveva pingato’), in overlap with Buf who negates having it, while aligning with the reference to the previously enacted marker, followed by an attempt to provide a locational description (‘in casa dall’ascensore tipo’). The first part of the sequence thus shows again that markers are demonstrably oriented to by players as meaning-making constituents of their gaming activity. After several lines, Cav reaches back to the house with the elevator indicated by Buf. However, instead of finding a big pot, he finds a blue pump there and complains to Buf about the imprecision of the indication. Buf initially repeats the relational position to a fixed point, but this time he specifies that the object was on the first floor. Cav continues his search for the object until Buf provides instructional directives on how to move (line 48) eventually helping Cav locate the pot. The amount of descriptive work and time needed to detect the object is a clear indication of the import of markers as collaborative tools for playing the game. When used to make offers, markers are coupled in the here-and-now of the interaction with the current location of the benefactor, thus anchoring it to a precise spot. When they are retracted, their ephemerality causes the loss of spatial indications, making it more complicated for parties to achieve shared referencing.

Similarly, even in cases of explicitly formulated offers, unmarked objects can entail limitations to the assessment of the service offered, which is then resolved in conversation. In the following extract, Nic offers a grey pump to Pun without using the marker:

[14] [FortEng G4 – Unmarked Offer]

```
01 NIC:     I got a pump for you Pun if you need
02 PUN:     I just got a grey one I d- is it [grey?]
03 NIC:                                      [okay ] yeah it's grey
04 PUN:     Okay okay thanks.
05 NIC:     Yup!
```

Nic's utterance in line 1 is formulated by including several benefactive components such as the identification of benefactor ('I') and beneficiary ('for you Pun') and the inclusion of participant's needs for the nominated action in the form of an if-conditional clause (Clayman & Heritage, 2014). In addition, Pun names the object that is being offered, a pump shotgun. However, he does not include any reference to the rarity or color of the item, and the absence of that use of marker, which would have made the color visible as part of its graphic representation, opens up a problem for Pun in assessing whether the object is needed or not. This is displayed by his response, in which he accounts for the fact that he already holds a grey pump, the weakest and most common in the game, and asks a polar question which includes a candidate answer, i.e. the supposition that Nic's offered pump is grey as well. Nic projects that there will be no uptake of the offer ('okay') and confirms Pun's inference about the color, followed by an explicit appreciation which brings the sequence to a close. The unmarked offer in this case did not provide Pun with sufficient information to assess whether the offer entailed an actual benefit. This again stresses the multi-faceted functions that markers carry out as multimodal resources: not only do they locate and enhance vision, but they also offer factual information about the object that is being categorized, via the semiotic trace that appears on others' screen. To conclude, the last three examples suggest that markers as constituents of the gaming practice of offering objects play a key role both for ascribing the action of marking in the first place and, because of the core features of the resource, for providing relevant information about the location and the qualities of what is offered.

6.3.4 Benefactives and Marked Offers

A final point that I would like to touch upon has to do with the notion of benefactives and the interactional distribution and negotiation of costs and benefits for both benefactors and beneficiaries. A defining characteristic of the type of offers presented thus far is that, in terms of benefactive status, they go beyond the proposed distinction between proximal and distal delivery of the service, as this is in fact delivered instantaneously, in the act of marking itself. By mobilizing this resource, the

offering party is already oriented to assisting and cooperating with the teammates by making the object available, locating it and enhancing the co-players' view. It is then a matter of the benefactor to decide whether to take advantage of the service or not, based on an endogenous assessment of the current state of the game, which cannot be determined a priori or generalized. Consider the following example, where Daw offers a healing object to Nic, who is missing several life points in the middle of a fight:

[15] [FortEng G2 – Marked medkit]

```
01 DAW:      Does anyone have any shield?
02 NIC:      [No none]
03 PUN:      [U:hm no]
04 NIC: ->   §I'm whited too+
   daw  ->   §-->marks medkit
   nic  ->                  +turns twds marker
05 DAW: ->   I dropped you a med.
06 NIC:      +Thank you.
             +picks up medkit
```

After a request for shield that could not be satisfied by both Nic and Pun, Daw notes that Nic's life points are very low, and subsequently leaves and marks a "medkit" on the field. He does so just before Nic verbalizes his health status indicating both lack of shield and lack of life points ('I'm whited too'). Nic attends to the object by turning the camera towards the marked object and Daw then verbalizes his action retrospectively, anticipating Nic's collection of the item. In benefactive terms, the service is delivered by Daw precisely by making the object available to Nic simply with the marker, and the verbalization only treats the service in a retrospective way. Benefactors thus exploit the willingness and ability to assist teammates by marking and offering objects in the game world, but the delivery of the service is immediate, if not in exceptional situations.

From the benefactor perspective, on the other hand, once the object has been made available it is up to them to assess whether the benefit/cost ratio, or "felicific calculus", as Clayman and Heritage (2014) put it, makes it worth opting for acceptance or else. This usually depends on their competence and knowledge of the qualities of items and weapons, along with assessments based on preference and dexterity for each weapon. As we have seen in [14], for instance, having the same objects can lead to the immediate rejection of the offer. Indeed, the very format of rejections is an interesting point to observe. Rejections are in fact not treated as dispreferred and can be delivered in a straightforward way (or not be delivered at all, as we have seen in [10]). Consider the following two extracts:

[16] [FortEng G3 – Rejected Offer 1]

```
01 PUN:      chug splash^
                        ^marks chugs
02 NIC:      I got two but I probably won't come over.
```

[17] [FortEng G2 – Rejected Offer 2]

```
01 PUN:     I got a green AR for somebody
02 NIC:     Got one °thank you°
```

In [16], Nic displays an orientation to the cost/benefit ratio in terms of spatial and temporal distance. The object marked by Pun is too distant from Nic's current position and it would thus take too much time to get there, also considering that chugs are quite commonly found in chests everywhere on the map. In [17], instead, the possession of the same item leads to the immediate discarding of the offer.

Time and distance are indeed two important factors in determining how to play the game, given the incumbency of the shot clock that forces players to converge to specific points on the map, while traveling at times very long distances. The relative distance from the marked objects to the potential beneficiary in fact can also become a criterion that helps determine who is going to collect the item. In [18] Buf is fishing with a harpoon, while Cav is looting a beach not too far and Ste is farther ahead of them towards the safe zone:

[18] [FortIta G5 – SPAS]

```
01 BUF:    O*(h):h spasso ragazzi ^§venite a prenderlo
   buf      *marks purple SPAS
   ste                           ^turns twds marker
   cav                            §turns twds marker
02 CAV:    Eh eh§ eh se- (.) se volo <se vo:lo>!
                §runs twds SPAS
03 STE:    Dio bo ti va bene che son lontanissimo.
```

The sequence starts with Buf fishing a purple SPAS (Special Purpose Automatic Shotgun), one of most effective and rarest weapons in the game, only available as epic (purple) and legendary (orange) levels of rarity. Buf already had a SPAS from the early stages of the game, and thus offers the newfound one to his teammates, putting it up for grabs. Just after the marker is activated, both Cav and Ste simultaneously orient the camera towards the marker to assess its position and distance. Cav starts celebrating and announcing his intention to run to collect it ('se volo se vo:lo'), since he is much closer to the spot than Ste. This is also topicalized by Ste, who relinquishes the object without competing, because of the excessive distance from the spot ('ti va bene che son lontanissimo', line 3).

Still, the rarity and fire power of a weapon can be one of the factors that lead to the extension of the offer beyond the act of marking it. A few moments after the end of the last sequence, Buf fishes an orange SPAS, the upgraded version of his and Cav's previously found weapons:

[19] [FortIta G5 – Orange SPAS]

```
01 BUF:    ah beh *SPAS oro (.) no va beh *Ste (niente)
                  *marks orange SPAS------*drops harpoon, picks up SPAS
02         (.)
03 STE:    o:h riuscite a portarlo?
```

```
04          (0.3)
05 BUF:     sì:: [te lo porto i:o (.) l'ho  ] già-
06 CAV:          [si però mi serve un a erre]
```

In order to announce the finding, Buf quickly puts the marker on the orange SPAS (the Italian team called the orange category of items as if it was 'gold', even if the category is in fact orange), addressing Ste, the only one who does not have a Spas. Buf then collects the SPAS for himself, but instead of swapping it with the weaker version that he already has, he drops the harpoon and keeps both the purple and the orange shotgun. In the meantime, Ste reacts to the marking by inferring that, if Buf is going to keep the orange one for him, the purple one will be available, and formulates a request to bring the extra SPAS towards him. Buf agrees to do so and signals that in fact he was already going to do so, as shown by the temporal unfolding of the in-game actions. In other words, in this circumstances Buf's provision of the service was implicitly foreseen even before the verbalization of the request. Buf's assessment of the cost/benefit ratio included the benefits that the entire team could get if Ste could have his preferred weapon as well.

In conclusion, in this section we have seen that the use of markers coupled with objects, notwithstanding the format, is treated by the players as a way of offering a benefit (in terms of inventory) to one of the teammates by locating and categorizing objects as available, collectible, and open to negotiation. This has consequences for how gamers exploit and employ their knowledge-how and routinary habit of the practice to collaborate with and assist one another in the course of gameplay.

Chapter 7 – Language at Play:
Discursive Practices and Expertise in Gaming Interactions

Before moving to the conclusions, I would like to briefly touch upon one last characteristic of gaming interactions that is relevant to understand how expertise and knowledge are actualized and oriented to in practice by gamers themselves: the use of language. As discussed above (cf. 2.3.2), language and discursive practices represent a key locus to investigate the displays of knowledge and expertise. As argued by Drew (1991), Goodwin (1994) and Kitzinger and Mandelbaum (2013) among others, the use of specialized lexical items, or professional coding schemes, is one of the ways in which participants are able to interactionally construct expert identities and negotiate what is inside or outside their territories of factual and procedural knowledge, in order to achieve shared referencing and intelligibility. In the case of gaming, previous linguistic research has pointed out that players' language can be described as continuously moving along a spectrum that ranges from general popular slang to highly specialized technical language that varies from game to game (Ensslin, 2012). An interactionist approach can thus show how (new) specialized words and meanings are mobilized, recognized and negotiated as part of gamers' expert skillset, in the moment-by-moment realization of interaction.

In this chapter I will try to give the reader the flavor of some exquisitely linguistic features of gamers' interactions as a way of connecting those to the display and negotiation of expertise. I will start by focusing on occasions in which specialized lexical items to refer to different features of the game are missing or being searched by the participants, and concentrate on the practice of using vague terminology in combination with explicit descriptions to achieve intersubjectivity (6.1). Then, I will consider cases in which the co-construction, negotiation and orientation to a shared linguistic common ground is made relevant in the conversation, by presenting cases that concern places, actions and objects within the game-mechanics (6.2). In the third and final part of the chapter I will delve into the use of English loans in the Italian dataset, to provide an overview of the most frequent cases, how they are produced and utilized as instance of specialized, expert vernacular (6.3).

7.1 Vagueness and Mutual Understanding

The first linguistic aspect under discussion concerns cases in which one or more participants display lack of knowledge of specific terminological items to refer to the on-going activity or to one of the

elements that are available in the current ecological configuration of the interaction. In relation to this, players usually rely on vague, imprecise formulations which are then expanded by including descriptions or explanations in order to secure the recognition of the items referred to in talk. This happens both in cases when the speaker positions as K-, and thus openly displays lack of knowledge of the topic, and when the players know about the functioning of the element but struggle to name it.

Starting with the cases of downgraded epistemic position, vague formulations can include a description of the visually sensible features of the object, as in the following examples:

[1] [FortIta G5 – Più con la farmacia]

```
01 CAV: ->  E::: invece il più con la farmacia cos'è?
02          (.)
03 CAV: ->  La croce:,
04 STE:     U:n distributore, guarda cosa dà,
05 CAV:     E::h pozioni scudo piccole.
```

[2] [FortIta G5 – Punto esclamativo viola]

```
01 CAV: ->  Il punto esclamativo viola cos'è?
02 BUF:     Manufatto [sarà]
03 STE:               [a:h ] son dei manufatti
```

In both cases, Cav displays his lack of knowledge of both the functioning and the naming of the items, two objects that have appeared on his bird's-eye view map on the top right of the interface. In order to be able to make reference to the objects, however, Cav uses explicit descriptive formulations relying on non-game specific lexical items. In [1], he refers to the symbol of a chemist's (a plus), which is later reformulated as a cross ('croce', line 3); in [2], he uses a reference to the punctuation mark that appeared on his map, specifying the color as well. The solutions are still effective to achieve mutual understanding, as Buf and Cav are able to provide the correct naming of the items based on Cav's description ('distributore', 'manufatto'). Alternatively, another vague formulation that players can use includes the uttering of indefinite words such as 'thing' (or 'cosa' in Italian), accompanied by a description of the intended referent:

[3] [FortIta G5 – Coso Viola]

```
01 CAV: ->  Cos'è questo coso viola?
02 BUF:     Sarà sempre il solito manufatto,
03 CAV:     L'ho preso.
04 BUF:     Eh (.) se ti dice manufatto era quello lì.
```

[4] [FortEng G4 – Confetti Things]

```
01 PUN: ->  Guys what are these little like confetti things that pop out
02          of chests do they he- like help me in any way like?
03 NIC:     No:h just for you battle pa(h)ss to upgrade
```

[5] [FortEng G2 – Zombie Thing]

```
01 PUN: ->  What is this zombie thing dude u::h?
```

In such situations, the vagueness of the referent and the problem of finding the correct name is made even more overt on the interactional surface. In [3], Cav uses the word ‘coso’ (‘thing’) along with a color description (‘viola’) when encountering the object that was represented on the map with an exclamation mark, whereas in [4] and [5] Pun attempts to achieve referencing by using the word ‘thing’. In the first case, he makes a simile to compare the colored tear-shaped points coming out of loot chests (cf. ch. 5) to confetti, while also adding a functional description of the object as ‘popping out of chests’. In [6], instead, Pun relies on a tentative description (‘zombie thing’) to mention the so-called “Sideways Anomalies” side-event. During these events, a dome covered part of the game space and a series of monstrous creatures started to appear under it, until the final boss was defeated, or players decided to escape. Hence, Pun here is able to clarify the reference by implicitly characterizing the creatures as zombies, even though these were not officially called in that way (cf. 5.3.3). Notwithstanding the vague reference, however, the descriptive work carried out by the speakers in the extracts discussed thus far successfully led to mutual understanding between the parties and to a reply from the teammates that provided the required information.

Vague or imprecise formulations, however, can also appear when the subject matter belongs to the speaker’s territory of information, thus framing the issue mainly as a linguistic problem, rather than as an informational one. Consider the following two extracts, one for each dataset:

[6] [FortIta G3 – La Canchera]

```
01 BUF:     io: vorrei farmi lo Spasso (.) se: trovassi,
02          (1.2)
03 BUF: ->  la canchera qua (.) forse l'ho trovata
04 STE:     °sì°
```

[7] [FortEng G1 – This Little Bounce Thing]

```
01 NIC:     by the way guys when we take a shadow stone
02      ->  and we hit this little bounce thing you go
03          so:: high and [so: far we can go to Boney ]
04 PUN:                   [I’ve seen that I saw a clip]
05 NIC:     Yeah we can go to Boney so it’s really good.
06 DAW:     I saw someone on Twitter it was someone in the solo cash cup
07          like hit a launchpad with that and you can just like stay in
08          the air like (.) forever
09 NIC:     [[Yeah]]
```

In [6], Buf announces his intention to upgrade his shotgun to a Spas (‘vorrei farmi lo spasso’), the strongest weapon in the game. To do so, he is searching for an Upgrade Bench (‘postazione di potenziamento’ in the Italian version), a sort of crafting table that players can use to improve the level

of rarity of their weapons in exchange for materials. These items are located in fixed points of the map and are surrounded by a glowing halo to highlight their presence in the game world. Here Buf is struggling to locate the bench in the area he is currently moving, and also to verbalize and name the utility object. After the announcement, he increments his turn with an if-conditional clause that problematizes the action of 'finding' ('se trovassi'). This is initially interrupted before the naming of the syntactic object for 1.2 seconds, which is then provided with an unspecified word ('canchera'), an informal, dialect word that can be used to refer to things that do not work as planned, in a generic way. Buf finally succeeds in finding the object and Ste briefly acknowledges the outcome of the search, displaying that he was able to follow and understand Buf's commentary. In this case, the vague formulation of the object did not prevent Ste from understanding the referent of Buf's actions, because Buf's announcements of his intentions provided the necessary ground to grasp the intended procedure, i.e. that the only way to 'farsi lo spasso' was by exploiting the upgrade mechanic of that precise spot. Knowledge-how in this case supplies the necessary common ground to make sure that the indexical nature of an extremely vague naming is still available and understandable to other co-participants.

Shared knowledge of the current topic of the conversation also facilitates mutual understanding in extract [7]. Nic here is describing a procedure that can allow the team to move very fast in the game, which is activated by consuming 'shadow stones', items that turn the avatar into a flying ghost, and jumping on any bouncer or launchpad. In line 02 however Nic formulates the name of the bouncer he is standing close to in a vaguer way ('little bounce thing'), describing the size and locomotive property of the object. Pun and Daw recognize the mechanic as they both claim to have seen a video of it (and also have access to Nic's position since they are all close at this stage). Interestingly though, while confirming Nic's account of the combination, Daw also provides a possible technical synonym ('launchpad', line 6) in his description of the procedure. Again, wording imprecision does not halt the interaction, as is the case in a later sequence about the shadow stone mechanics:

[8] [FortEng G5 – Shadow *]

```
01 NIC:     Oh let's just rotate in uhm I'mna grab- woah guys guys we go
02      ->  over on that end over there and we grab a shadow bomb
03      ->  thingymabobber and then we hit that (.) bounce,
04          (.)
05 NIC:     The one that's right there ((marks point in space))
06 PUN:     Okay.
07 NIC: ->  So grab a shadow stone somewhere around here, there's not
08          very many.
09 PUN:     There's a bunch right here.
10 NIC:     You might have to grab one from over there.
11 PUN:     Okay I'll grab [one of these.  ]
```

```
12 NIC:                    [I'm gonna wait,] I'm gonna wait yep.
13          You need brick I can farm.
14 DAW:     [[Nah I'm maxed]]
15 PUN:     [[No:h I'm good]] thank you. I just need metal.
16 NIC: ->  Okay there's one extra shadow cube here and then someone's
17          gonna have to get one from another spot.
```

Here Nic proposes to try to perform the game move that he described in [7]. As he verbalizes the steps of the procedure, he names the consumable object that allows players to enter the shadow-state by talking about a 'shadow bomb thingymabobber' (line 3), thus adding a general, indefinite word which is typically used as a substitute for unknown words. Again, all throughout the extract Nic varies the way in which he refers to the item, by using also the option 'shadow stone' (the official name) and 'shadow cube' (describing the shape of the object). In other words, by maintaining the word 'shadow' in each of the three versions, Nic secures the reference to a procedure that was already debated and known to all three participants, regardless of the word 'shadow' collocates with, which can either be the precise official version, or a generic unspecified term. Despite the variance and vagueness of some forms, in fact, Nic is successfully able to instruct Pun on what to look for in order to complete the activity. In sum, the way participants manage vague and imprecise formulations suggests that there is an orientation to provide descriptive or procedural details to complement situations in which using a technical word may not be necessary to achieve mutual understanding. When uttered as K-, vague formulations serve as questions about the topic or object, whereas when uttered as K+, they are usually located in sequential positions in which participants seem to be aware that the practice or referent item under discussion is already part of the participants' shared common ground. On other occasions, however, vagueness can lead to a local negotiation of jargon between the parties, to develop an agreed upon way of referring to certain specific aspects of the game, which makes knowledge and usage of technical words key to the organization of gameplaying.

7.2 Co-Construction of Jargon

In defining gamer jargon, Ensslin (2012) has pointed out that this is characterized by multiple nuances and degrees of specialization that concur to form what can be referred to as "the language of gaming". Among its multifaceted features, the two poles are represented by highly specialized technical terminology used by programmers and developers (e.g. "texture mapping", "ray tracing", "anti-aliasing" etc.), along with highly accessible game advertising or media discourse (e.g. avatar, third person, etc.). For Ensslin, *ludolects*, or gamer jargon stands as the meeting point between the two poles, and in turn includes expressions coming from general gaming, genre and game-specific terminology (2012, pp. 64-69).

In addition to Ensslin's point, studying gamers' language from an interactional perspective also allows to shed light on how jargon and terminology are the result of a local negotiation between the parties, who co-construct new meanings and expressions through practice in the moment-by-moment unfolding of the interaction. Indeed, as it will be shown in this section, in addition to general gaming or game-genre terminology, and to the official specialized language of the game, it is also possible that teams situationally construct and agree upon the deployment of specific lexical items to signal endogenous features of the activity they are accomplishing collaboratively. In other words, gamers' jargon can also include team-specific terminology that is shared by the same team, but potentially not by every other team that is involved in the same game. In this section, I will concentrate on the interactional mobilization of jargon in Fortnite, considering both cases of game-specific and team-specific jargon. In particular, I will touch upon instances of co-construction of jargon in relation to places (6.2.1), in-game actions (6.2.2) and objects (6.2.3).

7.2.1 Naming Locations

Places and locations in the game represent an important element for the organization of gameplay and a perspicuous one to investigate how gamers display and negotiate how to name areas of the map as part of their expertise and specialized language. As it was shown in several of the extracts discussed in the rest of the dissertation, locations on the island are central to the definition of how to start the game, monitor the scene, plan a team strategy etc. and we have already encountered several references to place names in the previous chapters. Some of these are pre-determined and part of the in-game toponymy that is shared between all gamers of Fortnite. For instance, places like 'Holly Hedges', 'Believer Beach' (or 'Sabbie' and 'Doom' in the Italian data) are labeled directly on the game map and thus offer readymade lexical material that gamers can exploit to achieve shared referencing and mutual understanding. Some locations have an official name that appears on screen when players enter the area ('landmarks'), while other locations, instead, are not officially named ('unnamed locations') and may be subject to a local negotiation and agreement on how to call them. Consider for instance the following sequence, in which Pun, Daw and Nic are deciding how to loot the areas in their vicinity:

[9] [FortEng G3 – Unnamed Locations]

```
01 PUN: ->  You guys want me to go::: H house?
02 DAW: ->  Yeah I'll go John Wick I guess. Actually I might just go
03      ->  I might just go to: you can do Castle and I'll loot
04      ->  the IO place
05 NIC:     Yeah I think that'd be better so Pun you're gonna be a little
06          bit split so just be careful.
07 PUN:     Okay
```

```
08 NIC: ->  You can go John Wick after and then down to the beach
09 DAW:     Yeah it's good
```

Pun asks indications on where to go, proposing a spot that is acknowledged positively by Daw, who then negotiates his looting area with Nic until an agreement is reached (lines 5-6). With the exception of 'Castle', which refers to a landmark spot, the several locations mentioned in the extract are examples of "unnamed locations" ('H House', 'IO Place',' John Wick') which are named by the participants in interaction as a way of accomplishing shared collaborative referencing. In fact, H House is used to refer to an H-shaped mansion located near Holly Hedges. IO Place indicates a military base controlled by the IO armed forces, a coalition of non-playable characters that were added to the game to provide extra loot. John Wick refers to John Wick's house, a location that entered the game after a marketing collaboration for the launch of a movie from the homonymous series. Moreover, even if 'Castle' designates a landmark, i.e. a place with an official name, Daw has opted to use a different name shared by the team ('Castle'), instead of the official one ('Fort Crumpet').

All four names thus rely on known-in-common information about the game ecology to locally construct new terminology that is shared (and arguably sedimented) by all participants. The formation of these words relies on descriptive information such as the shape (H house), the building (Castle) or the "owner" (IO faction, John Wick, with the latter being a shortened version of John Wick's House) of the location, and are treated unproblematically by all participants, who display to be able to orient to those locations as part of their expertise.

An orientation to the co-construction of shared jargon of new locations can also be seen in the following sequence, where Pun is asking about the name of Nic's 'insane' spot that has been discussed several times in chapters 5 and 6:

[10] [FortEng G5 – No Name]

```
01 PUN:     Trying to see if I see people in front of me but I don'-
02      ->  what are we gonna call this (.) this spot right here?
03      ->  There's no name.
04 DAW:     [Uhm]
05 NIC:     [O:h] U:hm
06 PUN:     [[Can call it]]
07 NIC: ->  [[Slipstream ]] area or (.) slipstream? I don't know.
08 PUN:     Yeah.
09 DAW: ->  I forget what it's called. It's called like (.) Sideways (.)
10          Saucer or something.
11 NIC:     M:h:
12 DAW:     I forget what it's called.
13 PUN:     Alright.
14 DAW: ->  It's called like Broken Disc I don't know.
15          It's [like]
16 PUN: ->       [We- ] we can call it No Name.
17 NIC:     Hehe
18 DAW:     Ye(h)ah.
```

In line 2 Pun explicitly topicalizes the choice of a shared name to talk about the spot, accounting for it in terms of lack of official indications on the map. The spot actually had an official name as a landmark, Shattered Saucer, but Pun missed it during the first visit to the area. Regardless of this, the extract revolves around the problem of finding a proper name for the spot. In line 7 Nic proposes two options, based again on the environmental features of the area ('Slipstream Area', 'Slipstream', a reference to the air conduits with which players can move there), which Pun seems to agree with. Daw's answer instead displays his awareness of the original name, while claiming not to remember it. He subsequently tries to provide different versions, remarking his state of uncertainty ('Sideways Saucer', 'Broken Disc', 'I don't know', lines 9-10, 12, 14). The word search is ended by Pun who ironically proposes to call the place 'No Name', thus stressing the endogenous sequential accruing of background knowledge between the team as a criterion in determining the naming of the location. In other words, this sequence shows how matters of how to name things can be topicalized and negotiated to construct specialized terminology *in situ*, and how gamers orient to what they know about the place and what has become established as shared information in interaction to agree on specialized terminology that constitutes their linguistic expertise of the game.

7.2.2 Naming Actions

As far as actions are concerned, there are two main processes with which gamers can co-construct jargon: the use of creative collocational patterns (cf. Partington, 1998), and the creation of neologisms via functional shift, mainly verbing or denominalization (Ensslin, 2012).

Starting from the former, gamers attribute specialized meanings to existing general words by creating new collocational patterns that are highly specialized and connected to game mechanics. Related to this, during my Ph.D, I co-tutored a dissertation on the comparison between specialized game expressions and general counterparts to account for the former as possible creative or deviant forms (Cavazzuti, 2023). In the Fortnite dataset, for example, gamers use the verb "to pop" in combination with healing and shield items (e.g. "I need to pop a medkit", "pop minis" etc.), especially during fights, in animated situations of high pressure. While interactional linguistic studies have pointed out that "pop" as a verb conveys the brevity of the action performed (cf. Clayman & Heritage, 2014), therefore offering a pragmatic explanation to understand the word choice, a comparison with occurrences of the same verb in the Corpus of Contemporary American English (COCA) revealed that pop, when used as a verb, frequently collocates with words referring to drugs, medications and treatments (e.g. pills, tablets), thus allowing to establish a connection between general uses, as in the COCA, and specialized ones, as in Fortnite, in terms of assimilable lexico-semantic classes.

Moving to functional shifts and the formation of technical verbs to designate in-game procedure and mechanics, there are several examples of this practice which leads to the co-construction of shared language knowledge between the participants. For example, the verb "to third party" is used to designate an offensive strategy in which a team intervenes in a fight between other two teams, taking advantage of the fact that the others are fighting and will likely be caught off guard (cf. extract [13] below). Other examples of this discursive practice include denominal verbs like "to dibs", "to tarp" and "to three two one" which come to identify specific gaming procedures that are shared by the participants, and interactionally mobilized, as shown in the following three extracts. The first case has already been discussed in chapter 6. Daw has just offered a green shotgun, placing a marker over it. Pun attended to this move by expressing appreciative evaluation of the item and by turning his camera and avatar towards it. While doing so, here he tries to place his own marker over the object but fails to do so, and accounts for the attempt in terms of "dibsing":

[11][FortEng G1 – Dibsing]

```
04 NIC:     Ni::ce!
05 PUN:     Uh:m
06          (0.1)+(0.5)
   pun           +marks twds pump-->
07 PUN:     Oh I tried dibsing it (.) heh.
08          (.)
09 NIC:     O:(h)h way b(h)ack.
10 PUN:     It's- it's an Apex thing.
11 NIC:     $Ye[ah.  ]
```

The expression 'dibsing' as a verb is formed from the plural noun 'dibs', typically used in structures like 'call/get/have dibs on something', as a way of claiming authority and priority over objects or activities. In the gaming context, the original meaning is maintained, as Pun uses the word to refer to his attempt to claim the weapon offered by Pun, but it also comes to designate the practice of adding a marker in response to a marked object to signal the intention to pick it up. This practice, however, is not part of the mechanics of Fortnite but comes from a different online cooperative game ('Apex'), which Pun explicitly refers to as soon as he realizes he cannot actually 'dibs' the object. Still, the sequential analysis of the extract shows that the expression is part of players' shared jargon. After Pun's verbalization of 'dibsing' (line 7), Nic's reaction ('oh way back'), uttered in a cheerful voice, displays his awareness of the practice as belonging to their past experience of gameplaying together, as also confirmed by the acknowledgment the follows Pun's explanation of the origin of the practice. Consequently, Nic understands that by 'dibsing' the item, Pun's intended action was in fact to claim it, and accepts to leave the green pump to his teammate. Regardless of the appropriateness of the mechanic in se, Pun and Nic are able to mutually understand the action as belonging to their shared knowledge of the gaming language.

Orientations to gamers jargon also become relevant when gamers arrange the strategy for their future course of action. In [12], Nic, Pun and Daw are discussing a game mechanic called ‘tarping’, from the noun ‘tarp’ (referring to sailcloth and other material used to cover and protect things). In Fortnite, this is used both as a verb and as a noun to refer to the building mechanics of the game which allow players to erect structures with wood, brick and metal materials to defend themselves during fights:

[12] [FortEng G4 – Tarping]

```
01 NIC: ->  Oh yeah and in end game guys uhm when we’re tarping let’s
02      ->  make sure we use full tarps (.) no li:ke half tarping
03          especially in trios cause I feel that’s always u:h recipe
04          for disaster.
05          (0.6)
06 PUN: ->  Oh yeah full tar- yeah [yeah oka’]
07 NIC:                            [Ye::ah   ]
08 PUN:     I think you wan’ only like- you only: if you’re like
09          on far edge you know and you know you’re alone you could try
10          but-
11 NIC:     Yea::h [it’s just always a risk right? Yeah]
12 PUN:            [  or  if  you  got  to  save  mats ]
13 DAW:     It’s situational [It’s like-]
14 PUN:                      [Mhm hmh   ]
15 NIC:                      [I jus-    ] I just think back to when we
16          were pla:ying if I think it >was last FNCS or whatever<
17      ->  and like every time we half tarped I feel like I just got
18          bopped and like someone would sneak in our builds e:very time
19          (.)
20 NIC:     [[    I don’t know    ]]
21 PUN: ->  [[Were you in the back]] of the tarp?
22 NIC:     U::h no not e:ven I feel like I was checking it’s just a lot
23          of people always wanna break in you know they [see the ramp]=
24 PUN:                                                   [yeah yeah   ]
25 NIC: ->> =they just jump on and three two one an’ like in a second.
26 PUN:     Right right
27 NIC:     Yeah.
```

Nic introduces the topic as gamers are approaching end game, the final part of a match when remaining teams usually converge on a very small part of the map and are forced by the game to fight one another. Nic here foresees tarping as an activity that his team will be involved in (‘when we’re tarping’) and introduces a distinction between half and full tarping, depending on the type and number of construction that players are going to utilize to protect themselves. Plainly put, when players tarp, they build walls all around them which take the form of a tunnel that is used to move safely through the fighting area and protect themselves from other players’ shots. Full tarping includes building full boxes with extra protective ramps and cones outside each box of the tunnel, to prevent enemies from entering the box, whereas in half-tarping, players do not include extra builds, in order to save materials. In lines 1-4, Nic proposes to use full tarps for the fight. The specialized term is recognized and shared by all three participants who contribute to the discussion by displaying awareness of the

different implications associated to the technique. Pun for instance mentions two possible reasons for half-tarping (‘if you’re like on far edge’ l. 9, or ‘if you want to save mats’ l. 12), while Nic stresses the unsafety of half tarped, mentioning previous experience in which he was not able to defend himself using that technique (lines 15-17). The discussion and negotiation of the practice thus relies on the contingent employment of jargon that is co-constructed within the activity of gameplaying for practical purposes as an indexical, accountable resource that constitutes gamers expertise.

Extract [12] offers another example of jargon related to gaming practices. In line 25 (double-arrowed) in fact Nic uses the expression “three two one” as a verb to describe a way to initiate a coordinated offensive move to fight opponents. This expression clearly refers to a backward counting that gamers make to coordinate the beginning of the shooting phase, whenever they notice an uncovered enemy and here it comes to constitute a denominal verb that provides a useful resource to cooperate in performing game actions, as in the case of the following example:

[13] [FortEng G4 – To Three Two One]

```
01 PUN:      whole team [whole team    ]
02 DAW:                 [kid right here] too yeah yeah
03 PUN:      yeah both whole going to third party let them fight
04 DAW:      yeah we should let them fight and then like,
05 PUN: ->   g- go behind them and try to three two one (.) three two one
06           one of these guys
07 DAW:      we could like spray from afar too and just
08           [play] to buff kills
09 PUN:      [yeah]
10 NIC:      yea::h
           ((21 lines omitted))
31 NIC:      Uhm we can aim for this guy
32 DAW:      yeah yeah [wait we]
33 NIC: ->             [three, ]
34 NIC: ->   yeah yeah th[ree two one now!]
35 DAW: ->               [three two one go]#((Fig. 1 N+P+D))
36 NIC:      thirty-one thirty-one cracked (.) hit him twice
```

After noticing a team ahead of them, Pun initiates a sequence where he and Daw provide commentary on a battle fight that is going on near them, and decide not to act since one of the teams is going "to third party" the others, i.e. to intrude in the fight and start a raid (line 3). Daw and Pun subsequently define the strategy for the attack collaboratively, Daw proposes to wait (line 4) and Pun intervenes and in a way completes Daw's turn by suggesting to then 'three two one' one of the opponents (lines 5-6), which Daw seems to agree upon, if this is done without direct involvement in the mix of the fight area ('we could like spray from afar', line 7) but as a way of scoring more kills to make points for the rankings ('play to buff kills'), a plan that is accepted by both Pun and Nic. The first part of the sequence already offers several examples of technical jargon that is used as common background between the participants (e.g. third party, buff kills), but focusing on the use of "to three two one", we can see that a few moments later, after the players have circumscribed the area and come closer to the fight, Nic identifies a potential target to attack. Daw agrees with the choice and while Nic starts counting Daw verbalizes a coordinative move to wait and set for the counting together. Nic then stops the count, resets and the two perform the action simultaneously (lines 34-35) and start shooting the enemy in the exact same moment, landing multiple hits, as shown in fig. 1. The extract thus exemplifies how the formation of jargon via functional shift can work as a shared piece of procedural information that is co-constructed by specializing the local, embodied practices that gamers use to achieve collaborative gameplay. In other words, the action of counting 'three two one' becomes itself a routinized gaming practice that in turn is referred to and known as the verb 'to three two one'. The discursive practices discussed in this subsection therefore encapsulate both linguistic and procedural knowledge and are oriented to, and actualized, as shared to all three members.

7.2.3 Naming Objects

A final aspect related to the interactional co-construction and orientation to jargon has to do with practices to name objects from the game world. This topic was implicitly touched upon in 6.3, when the different ways of naming weapons and items were discussed in relation to the formulation of offers and their benefactive features. Here instead I would like to discuss a single extract taken from the Italian dataset, to focus mainly on two aspects: the emergence of creative neologisms in interaction that can be used to name objects in new, personalized ways that differ from both the official and untranslated versions of the objects, and how these discursive practices favor the accomplishment of gaming activities by displaying an orientation and understanding of the procedural implications that named and recognized objects can carry.

In the extract, Ste, Buf and Cav are looting an area called Stark Industries, where several AI-controlled robots are guarding the buildings. The robots can be shot, downed and hacked, and when

this is done, they will join the team to provide support in fights. While scanning a building with two robot guards, Cav notes the presence of the 'chug splashes' item inside, and marks it to make it available to both Ste and Buf (line 2):

[14] [FortIta G4 – Chug Jughini]

```
01 BUF:     fai un po' laggare eh Ste
02 CAV: ->  oh c'è u:n- ci son dei chug *jughini lì
                                       *marks chugs-->
03          (2.8) £ (0.8) + (2.3) +*# (4.2) £* # (1.1)
   ste            £shoots bot              £hacks bot-->
   buf                    +enters>+picks up chugs and goes twds stairs
   cav                         -->*         *goes twds Buf-->
   fig                        #fig 1 (Buf)#fig 2 (Ste)
```

Fig 1 (Buf)

Fig 2 (Ste)

```
04 CAV:     andiam da Buf [che ci tiriamo] i chug jughini*
05 BUF:                   [venite da me  ]
   cav                                          -->*
06 STE:     [[venite qua da me che sto hackerando]]
07 BUF:     [[ tieni  qua  tiratelo Cav-  e::h   ]]
08          vieni da me: Ste vieni da noi.
09          (0.3)£(0.7)
   ste        -->£goes twds group-->
10 BUF:     Ste?
11 STE:     arrivo arrivo
12          (1.1)£^(1.7)
   ste        -->£
   buf             ^uses chugs
```

In terms of jargon and language expertise, what is interesting to note here is Cav's naming of the object in line 2 by using the expression 'chug jughini' (pronounced 'ciag giaghini' in Italian). First of all, Cav is not using the official Italian name of the object, 'Curabbomba' (as can be seen on Buf's screen in fig 1), but opts for loanwords from English that are morphologically adapted to Italian by adding a diminutive suffix ('-ini') (see 7.3 below). However, the English source word in itself partially deviates from the official name of the object, i.e. 'chug splashes', insofar as it features the word 'jug' instead of 'splashes', as a reference to an item that was available in previous versions of the game, the 'chug jug'. In fact, the 'chug jug' was a barrel-like object that players could consume to fill up their life and shield points. Similarly, 'chug splashes' are throwable objects that add life and shield points, which are graphically represented as smaller versions of the 'chug jug', in the form a

pack of six cans. Consequently, the official name given by the developers maintains a partial reference to the previous object in the verb 'chug', while emphasizing a functional description of the object, i.e. that 'chug splashes' splash when used. The official Italian translation also maintains a reference to the explosion of health points. The gamers, instead, mobilize a socially shared alternative version that reminds to the older item. In a way, it takes the original chug jug as part of the gamers' common ground and exploits it to refer to a new compact version.

Moving to the interactional analysis of the sequence, the recognition of 'chug jughini' as a meaningful word for all three players is displayed by the way they react to the localization of the item. Ste initially shoots down the robots, allowing Buf to enter the building and pick up the object. As shown in Fig 2, Buf positions below the stairs (purple circle), while Cav reconvenes with him (pink rectangle). Cav then incites Ste to join them and frames the upcoming activity as a collaborative one to be performed by the whole team ('ci tiriamo i chug jughini' line 4). By doing so, Cav orients to the procedural characteristics of the object, which can benefit not only the player who launches it, but also other teammates, if they are close at the moment of the activation. The importance of gathering is also displayed by Buf and Ste's reciprocal requests to change position (lines 6-7), and by the fact that Buf and Cav wait for Ste before launching the object.

In sum, in this sequence we have seen an example of how gamers can negotiate and co-construct new meanings that are socially shared by the group and not necessarily reliant upon the in-game lexical resources. The local production and recognition of jargon is then exploited interactionally to organize cooperative gameplay by orienting to the procedural knowledge associated to the object which is part of players' common ground and competence of 'doing being a gamer'.

7.3 English Loans in Italian Data

The case of 'chug jughini' also exemplifies a recurrent phenomenon in the Italian dataset: the use of English words and loans during gameplaying in Italian. Research on the language of gaming has pointed out the centrality of English for online gaming jargon from different perspectives and creative uses of English loanwords have been attested mainly in studies on written communication between gamers online, both in terms of English as Lingua Franca (Iaia, 2016) and from a lexicological perspective (e.g. Francalanci, 2018). Moreover, in recent years the notion of translanguaging (Li, 2018) has started to be applied to interactions between gamers to account for the multilingual practices that gamers create by pushing the boundaries between named languages and language varieties (Li, 2018, p. 23) as part of a process of knowledge construction that is tied to the social, situated dimension of these practices. While the integration between the aforementioned concepts and an interactionist approach is beyond the scope of the present section and dissertation, outlining some

of the linguistic practices mobilized in the Italian dataset can give a taste of potential future lines of inquiry and methodological hybridization on the topic.

The Italian data featured several of the phenomena identified by studies on written interactions between gamers, such as the formation of neologisms by exploiting adaptation of words, mostly verbs referring to game activities (e.g. droppare, fightare, fullare, hittare, jumpare, lootare, pushare, ressare, shottare, try-hardare) and nouns referring to objects (chug-jughini, shieldino, shieldone), as well as the presence of non-adapted loans, usually referring to in-game features or mechanics (e.g. full, safe), which come to constitute expert linguistic competence just as in the English examples described in 7.2. Consider for example the following instances of the word "full", both used as adjective and as verb, in the Italian dataset, retrieved from the ELAN annotations. One of the advantages of transcribing with ELAN, in fact, is that it has a concordancing feature allowing for the extraction of words or parts of words. It is thus possible to collect every occurrence of a stretch of characters across multiple ELAN files, which are displayed together with the previous and subsequent annotations:

[15] [FortIta – Occurrences of full*]

Before	Annotation	After
io sto tenendo un flopper e una: salterina	[no:] ((hiccup)) pietra son **full**	vai Cava!
tirati lo scudone dopo	e: i chug jughini ce li tiriamo? ar- arriviamo **full** coi chug jughini tanto dop-	tanto dopo non lo (riesco a tenere)
dai piglia [quella]	sì voi due **full**atevi	[e::h mi] sa che dobbiamo farla della
[eheheh]	io son **full** legno e quasi pietra	o:h Cava scendi pesi troppo
c'ho tre scudoni, (.) speta [n'atom] devo trovar degli scudini	allora Cava tirati uno scudone così mi tiro gli scudini e dopo ci **full**iamo	ah lo so
che bello non avere un a erre::	perché mi rubi la legna se te sei **full** eh? (.) eh	te li fai e taci

From these occurrences, we can notice two main uses of the loanword "full" in the Italian data. The first is as predicate adjective following a copula (e.g. 'son full', 'sei full'). In this case, full is not altered from its original form and is used to refer to maxed out resources, as suggested by the collocations with wood ('legna') and brick ('pietra'). When used as a verb, instead, full is adapted to the morphosyntactic formation of Italian verbs ('fullatevi', 'ci fulliamo') and refers to the practice of maxing out life and shield points with healing items. The knowledge of jargon coming from the English language is thus shared by the participants as part of the discursive practices and expertise, and constitutes again a resource that can be locally mobilized to achieve mutual understanding when playing together.

However, the use of English loanwords does not automatically exclude or substitute Italian counterparts. As it can be seen from the annotations in [15], for instance, 'scudino' and 'scudone' co-exist with 'shieldino' and 'shieldone', thus leaving room for multiple forms that can be used to name things. With regards to verbs, instead, it was possible to identify two cases where the Italian general and the English adapted specialized words co-existed, namely 'saltare'/'jumpare' and 'spingere'/'pushare'. In the following extracts we will consider sequences featuring both selections

in order to comparatively analyze potential differences in use at the level of turn design. Extracts [16a] and [16b] feature two instances of conversation where ‘saltare’ and ‘jumpare’ are used:

[16a] [FortIta G3 – Saltare]

```
01 STE:      stan fightando eh. cosa volete fare?
02 BUF:      eh vai vai andiamo in cima [e vediamo di farceli se riusciamo]
03 CAV:                                 [io non c'ho mica (???)]
04           (2.0)
05 STE:      oh! (.) ne ho visto uno è là
06           (2.3)
07 BUF:      sì e uno è lì
08           (0.9)
09 CAV: ->   saltano e stanno andando a fightare a sinistra
```

[16b] [FortIta G3 – Jumpare]

```
01 STE:      son sul tetto l'altro
02           (0.6)
03 STE:      oh c'è gente da Cav!
04           (0.8)
05 BUF:      ah sì
06 CAV: ->   son andato via ho jumpato.
```

In [16a], the team is cooperating in locating enemies on the battlefield. When Cav detects a group of enemies in line 6, he provides an online commentary of their action, using the Italian general word “saltare” to refer to the opponents’ movement in space. As shown in fig 1 below, the action of jumping in this case refers to the basic moving control that players can activate by pressing a key (or button on the joypad, in this case). In other words, from the perspective of the avatar, the jumping action is a standard move that does not include any specific game mechanic, it has limited range and does not need any in-game specific item to be activated. This action is referred to in Italian as ‘saltare’. In [16b] instead Cav is engaged in a fight against the enemies and is outnumbered, as also noted by Ste from afar. In this case, Cav uses a launchpad to jump away from the battlefield and escape the dangerous situation (fig. 2).

Fig 1 (Simple jumping)

Fig 2 (Advanced jumping)

In [16b] then the action performed is not a simple basic jumping mechanic, but an item-related specific move that requires competence in its effective enactment. In this case the team refers to the action as “jumpare”. The use of different lexical choices seems to suggest a different degree of specialization underlining the ways in which players utilize and orient to co-constructed jargon. Plainly put, the English loanword ‘jump(are)’ in Italian seems to be used to refer to specific advanced jumping mechanics that send the avatar up in the air in ways that go beyond the basic jump movement, which in turn is referred to with the non-specialized Italian verb ‘saltare’. In terms of Ensslin’s (2012) spectrum of different levels of specialization of gaming language, it seems that the use of the Italian version comes to designate general, highly accessible referents, whereas the English loanword is oriented to as part of gamers’ ludolect and expert knowledge.

This seems to be the case also for the contrastive analysis of instances of ‘spingere’ and ‘pushare’ as potentially alternative lexical choices:

[17a] [FortIta – G5 Spingere]

```
01 STE:     c'arriva con la [benzina?]
02 BUF: ->                  [ se  io ] resto (lungo) dobbiam spingere
03      ->  eh [dobbiam spingere]=
04 STE:        [  E:h  infatti  ]
05 BUF:     =sto carro adesso (.) ah no c'abbiam la benza c'abbiam la
06          benza là (.) forse ci arriviamo
07          (5.3)
08 STE:     oh o::h
09 CAV: ->  no schiaccia la frizione schiaccia la frizione così spingo
10 STE:     eh ahahahah
```

[17b] [FortIta – G4 Pushare]

```
01 CAV:     bianco!
02 BUF:     dai venite venite [veni-]
03 STE: ->                    [pushi]amo? Vai vai vai
04 BUF:     sì sì sì sì
```

In 17[a] Ste, Buf and Cav are driving a car to reach the zone quickly, but the car is running out of gasoline and may stop before getting to targeted location. This problem is topicalized by Ste in line 1 with a question addressed to Buf, who is driving and thus able to see the gas gauge indicators on the HUD. When Buf informs about the low amount of gasoline, he ironically jokes about it suggesting that they could physically push (‘spingere’) the car to the next gas station located on the map, as they would do in real-life, before noticing a station nearby. Five seconds later, just before reaching the station the car halts, as vocalized by Ste (line 08) and Buf gets off the car. Cav complains about the move by going back to the previous joke and asks Buf to hold down the clutch so that he can push (‘spingo’ line 9) the car forward. Despite the ironic nature of the exchange, the use of the general

Italian word is once again related to a physical, literal meaning of the word ‘spingere’, in terms of applying force to something to make it move.

In [17b] instead the adapted loanword ‘pushiamo’ is used in a highly specialized way. Buf, Cav and Ste are fighting an enemy and Cav informs his teammates that he has just hit the enemy, who has no more shield and is losing life points (‘bianco’). Upon hearing this information, Buf instructs the team to come closer (‘venite’) just before Ste asked whether they should ‘push’ (‘pushiamo’), followed by a display of agreement with Buf’s call (‘vai vai vai’). In this case ‘pushare’ is thus used in a highly specialized way to indicate the initiation of an offensive maneuver against the opponents. These two examples suggest that gamers orient to the level of specificity and technicality of the gaming action they are referring to in choosing between the mobilization of a specialized technical word and a general alternative. Linguistic expertise thus includes both the ability to recognize, construct and utilize jargon in interaction as a known-in-common set of discursive practice and the ability to do so in the appropriate contextual, sequential environment.

Despite the limited number of extracts discussed here, an interactional approach to study the different ways in which alternative lexical constructions, and gaming practices more in general, are sequentially organized in interaction can provide further insights not only to unpack gaming expertise as a whole, but also to understand how specialized language is developed, shared and understood in naturally occurring encounters.

Conclusion

The purpose of the present study was to investigate how expertise, knowledge and skills are negotiated in interaction by peer participants involved in the activity of playing a cooperative online video game called Fortnite. Framed within the field of ethnomethodology and conversation analysis, the study set out to provide both a conversational and a praxeological account of the methodic, practical, endogenous work that gamers do when playing a video game together as a social encounter, and of how this work reflexively accounts for the displays, negotiations and mobilization of different sets of competencies that contribute to the local organization of gaming.

Taking a view of expertise that conceptualizes it as an interactional accomplishment which relies on both talk and practical actions, the study aimed at investigating how rights and responsibilities related to both informational and procedural knowledge are interactionally made relevant, negotiated and contested in the moment-by-moment unfolding of gaming activities, how gamers rely on complex multimodal practices to play together, which exploit the digital, technology-mediated ecological configuration of their activity, and how language, specialized gaming language in particular, contributes to the accomplishment of skilled gameplaying as a domain of expertise. The three analytic chapters of the dissertation thus aimed to touch upon each of the previous three questions, in order to provide a thorough account of expertise as an interactional, (virtually) embodied and linguistic accomplishment.

The first analytic chapter (chapter 5) took Ryle's (1945) distinction between knowing-that and knowing-how as the starting point to investigate expertise in video gaming as an interactional domain. In the light of the recent trends in EMCA that focus on the notion of expertise in training and workplace settings, the goal was to consider how, in a context where no epistemic asymmetry was pre-determined or attributable to roles, different qualities of knowledge can be strictly related in the organization of the activities.

Even though the chapter started by singling out instances of gamers' explicit and implicit orientations to both knowledge-that (i.e. information and facts about the game) and knowledge-how (i.e. procedures, controls, game mechanics and sensorial perception), the distinction has then been blurred to unpack how these orientations simultaneously affect the ways in which in-game activities are cooperatively performed in situ. Indeed, this has been done precisely because procedural and factual knowledge are often so interwoven and mutually relevant that it becomes difficult to analytically impose a clear-cut distinction between the two. We have seen for example that both

factual and procedural knowledge are mobilized when discussing the gameplay mechanics and practices, in a sense offering an in-depth account of how gamers reflexively conceive their activity in the midst of gameplay. In other words, the social nature of cooperative gameplaying can lead to the topicalization of knowledge-that and knowledge-how, turning them into accountable practical phenomena.

Relatedly, an interesting aspect that emerged from the data is the fact that, even among peer players, the monitoring of what others do or do not know constantly takes place, especially when epistemic asymmetries become explicitly available on the interactional surface. In the data, these asymmetries were accounted for in terms of different recentness in access to game-related knowledge. Participants' orientation to "fresh knowledge" led to explicit epistemic positionings while collaboratively working towards balancing the "epistemic see-saw" (cf. ch. 1). On the one hand, players that lacked fresh informational and practical acquaintance with the game's newest additions and updates tended to downgrade their epistemic positions, defer choices and attribute rights and responsibilities to their co-players. On the other, more knowledgeable parties monitored the co-parties' epistemic and expert status in order to provide contextually relevant details to explain, account and guide them in the execution of unfamiliar gaming moves.

What is more, these asymmetries also emerged in the context of decision-making, which is a recurrent interactional activity during a Fortnite match, due to the unpredictability of the game. In fact, players constantly have to arrange plans and decide the next move in a collaborative way, by considering the local contingencies that the game poses in every moment of the activity. Epistemic and expert status in such situations thus also carry deontic implications. Since in the game there is no predetermination of team leadership, establishing who has the rights to determine the future course of action becomes an interactional affair that is managed through talk and action and re-determined on every occasion. This can also become a locus of contested epistemic attributions, as parties may foreground different concurrent procedural aspects to support a candidate decision.

Nevertheless, epistemic asymmetries in terms of lack of fresh knowledge do not automatically imply that these asymmetries are maintained all throughout the interaction, as shown by instances of orientations to procedures and professional sensing. In these instances, the tacit, efficient accomplishment of game moves and activities hinted at the fact that all members shared a set of epistemic and praxeological competencies that was reflected in the cooperative realization of game moves. The ability to meaningfully recognize what vision and hearing may imply adds another level to the multi-layered nature of expertise. In this sense, the analysis revealed that being an expert gamer also entails being capable of sensing the game world in a professional way, understanding the implications of seeing and hearing, and being able to collaboratively accomplish perception with the

rest of the team. Plainly put, gamers' orientations to expertise also include the ability to see, to know, and to know how to see, bringing the analysis towards a more praxeological account of expert gaming interaction.

The second analytic chapter (chapter 6) focused precisely on the realization and recognizability of gaming practices as multimodal gestalts, also in relation to the video-mediated nature of online gaming. Because of their online distant configuration, gamers in fact do not have access to one another's domain of scrutiny during gameplay and have to manage the fractured ecology they move in by exploiting the affordances of the game interface and mechanics in order to effectively and smoothly achieve referencing when collaborating online. The chapter therefore aimed to describe online collaborative gaming practice as a gestalt, first by describing their organization and then by considering the multiple ways in which these become part of routinized praxeological expertise.

The chapter focused on the use of 'markers', i.e. a video-manipulation mechanic that allows to highlight elements of the game world on teammates' screens. The analysis indicated that the deployment of markers, usually coupled with verbal spatial reference, favors the establishment of a shared focus of attention, while reducing the risk of ambiguity and time needed to point to the surrounding space. Marking, in this sense, works as a visual enhancement mechanic, offering orientation cues that highlight elements that may be outside co-players' domains of scrutiny and lead to a re-orientation of their participation framework. Such a resource, however, was found to be used beyond its purely deictic function.

Relatedly, the rest of the chapter described how markers can become part of larger multimodal gestalts, in conjunction with talk, to produce different gaming actions like offering objects and proposing landing spots, based on their sequential position. In other words, the analysis pointed out that marking different elements in different moments of the game comes to be understood and responded to by other gamers as performing complex gaming moves. Both in the case of offers and in the case of proposals, marking practices were described as routinized and laminable, ranging from extended formats featuring both talk and marking actions, to the most eroded formats in which marking alone was silently treated by participants as a specific recognizable move. In terms of expertise, the recognizability and routinization of marking practices in holistic terms offers insights into how competent performance can be produced and exploited by taking advantage of the affordances of game itself. The mastery, dexterity and ability in recognizing and replicating such practices thus provides a praxeological account of what gamers orient to when playing together online.

In the third analytic chapter (chapter 7) instead I delved into the analysis of gamers' discursive practices in both English and Italian datasets. The chapter tried to single out linguistic aspects that

point to the fact that gamers rely on jargon as part of their common ground of expert knowledge. The analysis first showed that problems of vagueness or lack of words can be dealt with in interaction by means of descriptive formulations which do not prevent mutual understanding, but at the same time lead to the delivery of a word to refer to a specific item, especially when the word search is initiated from a downgraded epistemic position. This suggested that gamers' jargon can become topicalized, co-constructed and shared among participants in the course of interaction, as part of collaborative practices of linguistic socialization between members of the same team. The analysis of the mobilization of specialized language in interaction then provided a description of how teams of players come to constitute a personal in-group way of referring to places, actions and objects, while carrying both factual and procedural information. For instance, the analysis of denominal verbs in English as specialized formulations allowed to evidence how these lexical choices are treated as known-in-common by the participants both in terms of content and in terms of implications for the game moves, thus leading to an arrangement of the gaming activities. As far as the Italian data are concerned, the use of adapted English loanword brough to similar considerations, highlighting the technical nature of English loans vis-à-vis general Italian words, as a way of referring to complex gaming mechanics that constitute gaming expertise.

More in general, the study also offers considerations in relation to the theoretical and methodological issues introduced in first three chapters. First of all, as pointed out in chapter 1, the notion of epistemics is a highly debated one between radical and scientific approaches to ethnomethodology and conversation analysis, questioning the usefulness of epistemic consideration in understanding how interaction is organized. In the case at hand, the explicit orientations, constant updates but also the silent methodical actualization and response to avatar-embodied practices seems to point to an accountable nature of knowledge and expertise that warrants the legitimacy of studying expertise (and knowledge more in general) in practice, especially when negotiated between peers.

The second point worth mentioning has to do with the relationship between the broader conceptualization of epistemics and that of expertise. In the present study it has been argued that both factual and procedural knowledge are consistently oriented to when performing gaming actions, and mutually informative. If we consider one of the examples presented earlier, the decision to leave a sportscar to use a truck because quicker on the grass (cf. [7] in chapter 5), we can see that knowing facts, knowing the implications of facts, and knowing how to be able to apply that knowledge to the contingency of naturally occurring occasions, suggests a reciprocal elaboration of the two domains. In other words, the study of expertise does not necessarily preclude epistemics, nor vice versa, at least in activities that include both verbal and embodied actions, whereas considering both domains as concurrent can lead to a more refined definition of the qualities of knowledge that eschews

categorizations such as informationism and cognitivism, when considering how members' methods are reflexively performed in interaction.

The third and final point concerns the role of technology in digital interactions, both as a subject and as a method of inquiry. Starting from the former, the present study has furthered our understanding of how communication is organized when mediated by multiple technological constraints, i.e. those imposed by the gaming platform, the online configuration and the game itself. The physical inaccessibility and the fractured ecologies that complex game spaces set up for gamers do not preclude in any way collaboration and teamwork. Instead, they provide the wherewithal for gamers to develop new mediated practices that take advantage of the affordances of the medium, while coping with its constraints (Housley, 2021). 'Marking' best exemplifies this point, as gamers take an in-built resource of the technology as the starting point to favor the achievement of intersubjectivity and cooperation by exploiting the game interface. Studying its local, interactional accomplishment as multimodal packages can shed light on how participants exploit such resources to accomplish their tasks. In the case of gaming, as Reeves et al. put it, gamers do "employ whatever interactional resources are available to get the job done, that is, to play the game" (2017, p. 336) and the present study has tried to contribute to the EMCA research on video gameplaying by considering gaming practices as a gestalt, and as a multi-perspective activity.

From a methodological perspective, in order to cope with the online distant configuration of the players, the decision to include multi-perspective recordings allowed a more detailed understanding of the practical work that gamers do. Most of the tacit actions and reactions concerning marking, sensing and game procedures have benefitted immensely from having access to multiple data, especially in cases where the reactions and movements are made accountable not only to the analyst, but especially to the co-players. In this sense, the choice of focusing on marking offered solid grounds to claim that markers are orientable-to by the participants, because of their automatic appearance on everybody's screen. At the same time, a lot of the interactional work that gamers do while playing still relies on verbal communication via the vocal chat system, in particular when gamers are engaged in different activities and in separate parts of the map. From this perspective, I relied both on a conversation-focused and on a multimodal-focused investigation, depending on the relevance of the resources as made manifest by the participants.

Admittedly, there is no guarantee that all the practices described in the present study are shared across different gaming groups of players, or different games. While regarding the former though, the analysis of two different datasets coming from both professional and amateur players evidenced that there are consistencies between the groups in the ways practices are actualized, this is less likely to be the case when thinking of different online games. The endogenous nature of gaming sessions

suggests caution for generalizations, as also shown by the formation of extremely local discursive practices that are shared by members of a team, but also leave room for variation and personalization, as discussed in chapter 7.

Relatedly, in terms of future research, the last analytic chapter has already provided abundant food for thought for future directions in the study of the language of gaming, in relation to specialized languages, translanguaging and potential methodological hybridizations. Besides this, there are other issues worth considering, which have also emerged in this final section. One concerns the study of the negotiation of expertise between peers from an interactional perspective, in line with Arminen et al. (2021) line of inquiry of expertise as interactional domain. As stated earlier, the interrelation of factual and procedural knowledge can provide fruitful insights in assessing how expert participants organize their activities in institutional as well as leisure activities.

The second point concerns technology-mediated digital interactions: the methods with which members exploit the limitations and affordances of digital tools in the negotiation of mutual understanding and in performing social actions online become particularly relevant in the aftermath of the Covid pandemic, which has consequently led to the increase of public and private online services. At the same time, the study of gamers' practices can shed light on the development of digital competence and may be of interest for game developers and IT programmers more in general to provide users with more affordable tools. In this respect, video games certainly provide a perspicuous setting that offers a crystal-clear view of the potentialities of future studies in this tradition. Hopefully, there will be time for a New Game+.

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Appendix 1 - Transcription Symbols

Data were transcribed according to the following conventions (Jefferson, 2004):

WORD	high volume
°word°	low volume
word	emphasis
>word<	accelerated articulation
<word>	slowed down articulation
wo::rd	sound voiced in a prolonged way
wor-	utterance interrupted
wo(h)rd	word uttered while laughing
ahah/eheh	laughter
hh	exhalation
.hh	inspiration
.	descending intonation
,	ascending-descending intonation
!	descending-ascending intonation
?	ascending intonation
[word]	overlapping
[[	turns started simultaneously
=	latching
(.)	short pause, < 0.5 seconds
(0.x)	pause in tenths of a second
(x.x)	pause in seconds and tenths of a second
(word)	dubious transcription
(x syl.)	expressions the transcriber was unable to understand
((comment))	transcriber's comments

Appendix 2 – Multimodal Transcription Symbols

Multimodal annotations were included following Mondada's (2019) transcription conventions (see also https://www.lorenzamondada.net/multimodal-transcription):

* *	Descriptions of embodied actions are delimited between
+ +	two identical symbols (one symbol per participant and per type of action)
^ ^	that are synchronized with correspondent stretches of talk or time indications.
*--->	The action described continues across subsequent lines
---->*	until the same symbol is reached.
>>	The action described begins before the excerpt's beginning.
--->>	The action described continues after the excerpt's end.
*	The action described is instantaneous.
ste	Participant doing the embodied action is identified in small caps in the margin. When absent, the annotation refers to the current speaker.
fig	The exact moment at which a screen shot has been taken
#	is indicated with a sign (#) showing its position within the turn/a time measure.