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**Visual Ethnography as a Method for
Contextual Creativity in Europe: The cases
of London and Barcelona.**

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This paper has been written with a methodological interest for how visual tools such as video and analytic software are used to do fieldwork. The empirical work on dance spawns from the Project Dance & Cognition, directed by Prof. David Kirsh from the department of Cognitive Science, University of California, San Diego (UCSD) which began in 2009 as is still ongoing. The work on synchronized swimming is part of a current research Project directed by Prof. Anna Estany and Prof. Carlos Lozares, from the Universitat Autònoma de Barcelona. The publication of this paper as part of the CGES Working Paper is an expansion of the the seminar Knowledge and Communication in the Arts: The Cases of European Cultural Capitals. which took place at St. Petersburg State University in Dec 18, 2013.

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Abstract

Visual ethnography is a method for looking at compared creative settings that are messy, complex and uncertain environments. Creativity in artistic professions is highly contextual and intersubjective. As recent developments from cognitive science and embodied cognition put forward, the production of knowledge extends beyond the individual agent and is embedded in functional, technical and communicative patterns of interaction. I propose as study case our comparative analysis of visual ethnographies on dance and synchronized swimming, in Barcelona and London. By using the tools offered by new technologies such as ELAN (The Language Archive) software, we show that qualitative sociological observation can include analog as well as digital methods. Our longitudinal comparisons between cases, through the entrance process, data gathering, and data analysis shows how researchers are flexible in practice, and methodologically promiscuous. It is through theoretical coding and reflexivity that one can avoid reification in creative contexts.

Keywords: visual ethnography, methods, ELAN, entrance process, creativity, dance

Introduction

This paper is based on two cognitive ethnographies of two creative processes with a high level of expertise, which are similar but not identical: dancing and synchronized swimming. We will show how audiovisual tools have allowed us to measure and understand relevant cognitive and social phenomena in both settings. Part of sociological literature dismisses the use of digital video for observation because considered as a manipulative and simplistic representation of social reality. By comparing two ethnographies of two elite teams, synchronized swimming on the one hand, and a dance company on the other, we explain and justify the use of audiovisual instruments both at the time of data collection and in analysis.

The visual can help us looking into this dimension of knowledge generation. Specifically, in dance and synchronized swimming the key instrument is the body itself. Thus, our research question here is how the bodily dimension is involved in the production of new "knowledge". Bodies are creative tools: participants develop their own strategies and models in order to produce a new step or a new phrase, equivalent to the production of a musical, architectural or pictorial work of art. In order to build the object of study we should be keeping in mind the type of instruments that the researcher uses. The consolidation of the coding scheme and the use of multiple sources of information and analysis preserves the complexity of the analysis required in such messy and uncertain environments.

Visual ethnography allows us to look into the how of when of creativity when people work together. This method makes explicit, as we will show in the following sections, the patterns of interaction, and more specifically, of multimodal communication and technical manipulation that are paramount in any artistic work process.

1. The Method of Visual Ethnography

A tight coupling between a certain theoretical standpoint and a given tool is a fallacy and creates a methodological problem that can be easily avoided. We emphasize this idea on the false debate between methodologies and on the possibility of measuring both narratively and visually (Verd & Lopez, 2008). The first step to discuss the methodology audiovisual and / or digital is to account for the reflexive construction of the object. The sociologist cannot limit herself to hearing from "the inside", dancers, choreographers, technicians and other participants, taking in their speech as the truth about what's happening in the choreographies' kitchens. Indeed, all speech is produced from somewhere: No speech is neutral. Individual words are necessarily shaped by their material conditions, physical and structural, as well as symbolic, constituting the social position of the agent under observation or being interviewed.

As Poincaré (1908) stated in *Science et method*, "Nearly every new sociological thesis proposes a new method which, however, its author is very careful not to apply, so that sociology is the science with the greatest number of methods and the least results" (p.19). Thus, two fallacies that are associated with the confusion between theory and methods must fall apart: the association of objectivity with measuring and statistics and the link of subjectivity with meaning and discourse. As Callejo (2002) and Franzosi (2004) put forward, both surveys and interviews work with the same social data: words. Therefore, following this integrated theoretical perspective, researchers ought to decide on the most adequate method(s) to capture what will come out of this combination of words. Without this theoretical basis, previously constructed from readings, from field observation and conversations with other professionals, scientific or others, the ethnographer can become a spokesperson for a social group, legitimizing a political, ideological or cultural state of things. Scientific activity is necessarily critical and skeptical to the extent of doubting what you read, see and hear, to create a new synthesis of the collected information. To enable this synthesis, which Bourdieu (and Wacquant, 1992) called the construction of the object, it the theoretical leg should be combined with the methodological and the empirical.

Grounded theorists or discourse analysts consider social reality much too complex and too organic to be accounted for with the logic properties of mathematics. For methodologist Roberto Franzosi, for instance, a narrative is the product of non-randomly perceived events. The work by Aaron Cicourel (1974, 2006, 2012), based on structured interviews and strict empirical observation of real professional environments, is an example of a naturalistic inquiry that is based entirely on qualitative methods. Thus, discourse analysis and the like, while qualitative in nature, can still look for sequences or patterns that are formal and countable.

Our theoretical position escapes other academic positions such as phenomenology whose subjectivism is constrained by the relationship between the researcher and her observation scenario. As Albert Michotte (1954) puts forward, movements, objects or choregraphical instructions shapes the dancers' in so far as they have meaning, and this only arises from its functional relations to each other, be their spatial or temporal relations, which take shape in communication and information patterns. "It is futile to study perception "in itself." It must be treated as a "phase of action" in relation to the motor and intellectual activity of the individual. (...) The problem of meaning, therefore, ultimately has priority over that of form."

Moreover, the object of study of both ethnographies is the process of creating and communicating knowledge, a pragmatic process that we believe can be explored and even through observation and interviewing. As Wittgenstein (1953) claims, "Let the use teach you the meaning". The explanation of the creative production process in the studio and the pool gives us sufficient empirical evidence to explain the mechanisms through which not only dancers, but also musicians, actors, designers and architects think in a non-propositional way. In science, as in figure 1, we use schemes, models, and multiple material supports, such as whiteboards, post-its, color labeling and multiple type of markers such as sharpies as tools to make new associations, organize our memory capacity and pinpoint interesting relevant contrasts or differences. Moreover, as Myers (2008) puts forward, the body becomes another tool for thinking and doing in the lab.

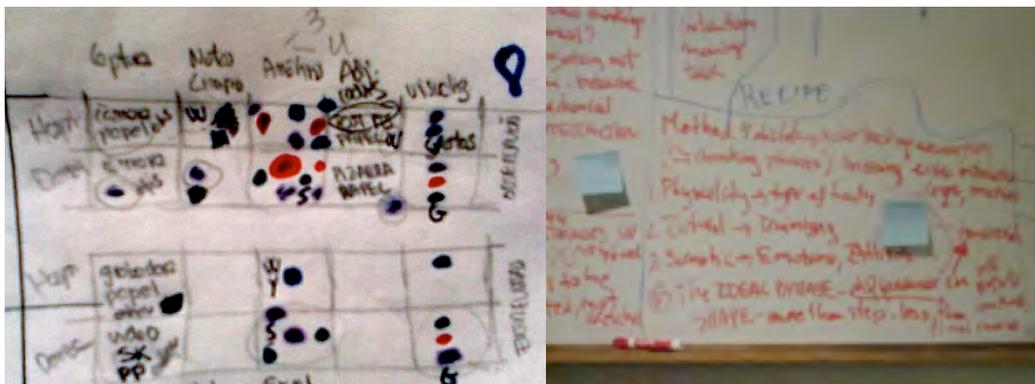


Figure 1. Sketches and whiteboard scribbles for doing research in the lab.

Recent studies from distributed and embodied cognition claim that the unit of analysis cannot be the individual, but must jump to the intersubjective system of agents, tools and the physical and social context (Gibbs, 2006; Alac, 2005, Hollan, Hutchins and Kirsh, 2000). In sociology, this holistic and realistic approach is not new: the added value of these studies is that they explain how reasons and intentions are constructed locally, in interaction, avoiding the black box of folk psychology, and allowing for an integrated explanation of action (Muntanyola, 2014). In the arts we find the cases of musicians (see Noya et al; 2010), dancers (Muntanyola, 2012; Muntanyola & Belli, 2013, Bassetti, 2013) and actors (Noice and Noice 1997).

2. Taking Three Steps in the Field

Once we defined the object of study, we developed a research process in three steps: entering the field, data gathering and data analysis.

2.1. *Entering the Field*

In 2009, a cognitive ethnography of a dance rehearsal began (Kirsh et al, 2009). Directed by David Kirsh, from the University of California, San Diego (UCSD) in collaboration with Wayne McGregor-Random Dance. The research department directed by Scott Delahunta from Random contacted the theater team in UCSD with the idea of having a residency on campus where dance and science would work together. A conversation between Wayne McGregor and David Kirsh triggered the possibility of beginning collaboration between the department of cognitive science and the dance company. We placed five cameras plus a handheld in the dance studio (Figure 2). The first production was *Dyad1909*, a 22-minute piece that premiered in October 2009 at Sadlers Wells in London. The rehearsal took place in two phases, approximately month-long: the first new material creation in January 2009 in San Diego, and a second phase in August and September 2009, in London. In these periods of intensive observation, fifteen students and two researchers took field notes and interviews were conducted daily, always with audiovisual support, and a laptop: the notes were made in Excel to be shared immediately, and interview questions were formulated by one of the researchers, and later distributed among students-interviewers in a PowerPoint document minutes before the interviews (Figure 2). We asked them to describe their experience of the day and to show us the movements and steps they had learned or created. A similar data capturing process has been applied to further rehearsals up until now, namely FAR (2010), UNDANCE (2011) and ATOMOS (2013).



Figure 2. Position of the cameras in the dance studio. London, July 2013.

The cognitive ethnography on synchronized swimming began in 2012. The soloist of the team was an undergrad in Philosophy at the Universitat Autònoma

de Barcelona (UAB) at the time, were Anna Estany, one of the project's directors, taught Philosophy of Science. In conversation, they agreed on the idea that looking into the swimmers and trainer creative process through observation, filming and interviewing would be an interesting way of exploring how athletes think and make decisions. Thus, Anna Estany, together with Carlos Lozares and the author of this paper, both from the sociology department in UAB, contacted the trainer, which was previously informed by the swimmer. Negotiations started with the elite training center were the Olympic team works, the CAR (Centre d'Alt Rendiment, or High Performance Center). Observations took place in the spring of 2012, with 2 cameras, and interviews with the trainer and her aid were provided.

The differences in the entrance process shaped the organization of fieldwork and the analysis of data. In the dance ethnography, the choreographer was only interviewed by the director of the project, while the rest of the researchers and the students interviewed the dancers. Moreover, there was an invisible but active status barrier between these two groups, which made for two parallel ethnographies, that of Wayne-Mcgregor, and that of the dancers. This particular research design is apparent in an exhibit that premièred in London in 2013. In the room dedicated to ethnographical videos, both the choreographer and the main researcher were interviewed, their image on screens and their voice in off narrating while the dancers' videos were projected on a lower surface. The set-up suggests a clear hierarchy between a verbal choreographer and a purely kinetic dancer, which translates in showing the choreographers' interviews but not the dancers'.

In the case of synchronized swimming, contact was made through the best athlete of the team, so both the trainer and the athletes were involved in the observation and interviewing from minute one. There was no hierarchical gap between researchers and everyone interviewed everyone. The results seemed to follow the gender and status gap that permeates knowledge and discourse, amplifying the existing configuration in the field of dance. Both the choreographer and the researcher are males, while the dancers and the rest of the research team are males and females. In a dance rehearsal, the choreographer, as we will present briefly, shows and gestures, but most of all, talks and communicates qualities, intentions and detail. He has the monopoly of discourse: the dancers are not supposed to talk back, discuss decisions verbally or inquire on the meaning of their moves (Muntanyola, 2009). As Ferrand, Imbert, and Marry (1999) point out in describing the academic life of the *normaliennes* at the prestigious *École Normale Supérieure*, students associate verbalization with masculinity and rationality. Both female and male students, while showing good academic results at school, reproduce in their discourse the stereotype that males are better in talking and communicating new ideas, while females are better listening and caring.

Moreover, the need for social recognition and validation of dance as knowledge explains this exhibit which crosses over art and science, inscribed in the

historical need in dance for methods of notation, such as Labanotation, paramount in ballet in the XVIII and XIXth century. As Glon (2007) explains, dance treatises appeared simultaneously to other guilds and professions, such as architects, painters, sculptors, who were all writing theory on their own skills and methods. In synchronized swimming, as we will show further down, or analysis showed how instructions were highly verbal from both sides: there was a lot of verbal negotiation going on between the trainer and the athletes, despite the fact that the process itself was highly embodied and technical, being underwater. From the gender point of view, we are dealing with a female sport, where the trainer, the assistant and the athletes are all female. In the research team, while the head researcher who made the contact is female, the rest are both male and female. While the gender difference might be relevant, we would like to emphasize the different entrance processes as determinant factors rather than looking into separate gender ethos, which could also be a relevant factor but would need further research.

2.2. Data Gathering

Scientists that align with strict behaviorism claim that as scientists we can only study what is out there, namely, what we perceive with our senses: actions, words, gestures, movements, etc. Opponents respond that visual tools are too intrusive and that they might disturb the normality of the rehearsals or trainings also believe that using analytical software restricts sociological imagination. We claim a middle ground here: we believe that scientific observation, including ethnographical observation, is always mediated and never direct (Muntanyola, 2012). We must specify that the cameras were tools already present in the studio and in the swimming pool. Filming sessions were common, and our cameras mixed with those of other scientists or filmmakers, that the dancers spontaneously also look at.

Still, differences in observation contexts shaped the impact or rather, the effects of audiovisual tools used in observation and in the interviews. The dance studio is a professional environment with restricted access, with a high number of intense and simultaneous interactions between the choreographer and the dancers, in a limited space. In the case of synchronized swimming, the camera shaped the environment and its social dynamic in a different way. The technical nature of the process was much more developed in the training swimming pool. The athletes had both underwater and above water cameras, and the trainer used the play and rewind function to immediately show the swimmers what had gone wrong and to instruct and correct the choreography. This dynamic constitutes what Morana Alac (2005) calls an interactive multimodal system, meshed visual, verbal and gestural interactions together with tools and agents. This socio-technical system was the basis for the Olympic trainings that revolves around the screen and the trainer's discourse.

The objective of the researcher is to keep focused. Reification defines our

tendency to overestimate our ability to process information. As Pylyshin (2003) argues, social scientists fall easily into the scholastic fallacy of taking an event-type (The dancer's or the athlete's ideal performance) as an event-observed (the actual rehearsal or training). The use of video to film the dancers and the athletes' behavior, as well as that of the choreographer and the trainer, can create the illusion that all the information we need "is already there", in their professional setting. However, video images, just like the researcher's perception and that of the participants, are always partial and fragmented. One needs to know where to put the camera to capture relevant communication patterns.

A systematic work of audiovisual material requires prior theoretical model not to miss in the video information. A previous coding, first in Excel in dance, and directly in synchronized swimming, was necessary before collecting data from observations and interviews. The codes were constructed theoretically through readings, discussions and informal conversations with participants in the process. Coding design was possible because a theoretical model guided the analysis process. Following a bottom-up model for research (Strauss & Corbin, 1990) does not mean avoiding the construction of the object (figure 3).



Figure 3. Codes to construct the sociological object.

Both case studies included multiple sources of data gathering: analog observation, filming, multiple types of interviews. In the case of dance, interviews were also conducted remotely, via Skype. To obtain recordings of both the interviewees and the interviewer, we used Silverback, a software that captures in high resolution everything that happens on the screen (figure 4). Thus, during the break between observations periods, when the company was on tour, we could interview them in their hotel rooms, and get the gestures and movements that accompany their verbal discourse. In synchronized swimming, we sometimes interviewed the trained over the phone (see Muntanyola & Romero-Balsas (2013) for an account of the specificity of interviewing over the phone).



Figure 4. Interviewing on Quicktime and Skype.

In dance, initial observations of the company, without video, put forward the need to open up the list of possible objects to a wide range of socio-cognitive phenomena. Since this project has been going on for 4 years now, and four rehearsals have been captured (Dyad1909, Far, Undance, Atomos), a natural consequence for it would be creating a video archive. The coding template is long and complex, with 5 conceptual fields -Instructing Sessions, Types of movement, Dancers Strategies, Communication Modalities, Distributed Practices-, which have been defined theoretically with references coming from distributed and embodied cognition and microsociology (Goffmann, 1961, Knorr-Cetina, 1999, Cicourel, 2012). Each concept spawns into five codes that necessarily have an empirical relationship to a phenomenon observed and filmed in the field. The theoretical perspective allows us to classify partnering as a type of interaction that has distributed properties, where decisions are made as a product of an exchange of information and not only as the result of individual intentions. Most importantly, to keep an eye on the empirical side of the creative process, and also to ensure intercoder reliability, that is, that all of those participating in the project, students and researchers alike were actually following and understanding the same coding scheme, we created a bank of sample clips in Quicktime.

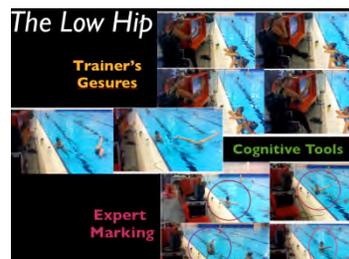


Figure 5. Examples of phenomena in the field, Barcelona, 2013.

In the case of synchronized swimming, both the time span of the project and the amount of human and material resources was constrained. Our research strategy was, on the one hand, to build up fewer but solid codes early in the process, with stronger theoretical implications; and on the other hand, we relied heavily on interviewing. The trainers are well as the athletes proved to be accessible and friendly. Still, we could experience the existence of strong gatekeepers of the elite (Aguar & Schneider, 2012) among the

directors of the training center, which asked us to follow a rigid schedule of access to the swimming pool, which made our observations difficult. We must not forget that the Spanish synchronized team is one of the top Olympic teams, and as such belongs clearly to a given social elite that needs and asks for protection and isolation from society as a whole. Since we could observe and film during one month, we completed the process with extended interviews with the trainers and the athletes. As we see in figure 5, empirical phenomena such as the trainer’s gestures, the swimmers’ cognitive tools or the instances of expert marking (Muntanyola & Kirsh 2010), were theoretically constructed into more complex codes such as multimodal guidance.

DATE OF CODING	CODER NAME	VIDEO NAME	TIME	DESCRIPTION OF ACTIVITY (with dancers codes)	CODES (from the list)	COMMENTS	CODES
				Wednesday July 24th			KEY
			12:22	W tasks them (Highjacking). He instructs in a group and asks questions to the dancers.	Task	(Try to get all the possible instructions if you can hear them).	PHRASE
			12:30	W is watching the dancers after tasking. The dancers are practicing in duets, K-R, S-T, M3-C, D-H, J-?, A-MJ	Task, Practice, ob, DC	There is a dancer I don't know (?). In the task he said he wants the dancers to feel the movement, fall into it, the quality of it, which is what he seems to be looking for in his riffing	INSTRUCTING
			12:32	W is riffing off J, he is slowly moving his arms	Rf, Ob Mod		Ig
			12:34	The dancers are using multiple modalities to create new moves.	Talk, FO, DC	The dancers move and stop regularly to talk	li

Figure 6. Field Notes and key code for the dance project in Excel.

The existence of codes allowed us, in both cases, to obtain more organized fieldnotes. Note takers followed a four-column template, with time, description, interpretation of events, and codes (figure 6). By forcing the separation of a more descriptive, initially more superficial account of what was happening, from the more deep hermeneutic view of the same actions, we obtained a reflexive account of the rehearsal and training. The codes, which were written down following a key, helped speeding up the process of note taking itself, and augmented the organization of data. The sociologist should act reflexively to avoid reification empirical and go beyond mere description. What happens from the beginning of the filming until the final performance might be called retrospective observation, and provides the raw material for research. Sociological objectivity comes from selective perception by a systematic ethnographer, "trained" sociologically. The sense of a situation like a negotiation process must be preserved (Banks 2005). The observer must detect, explain and include a constant process of negotiation among experts, not experts, and her. In order to avoid getting lost in the data, a strong codification scheme is needed. Such codification scheme translates into the type of fieldnotes taken in the field, and in the phenomena that are selected as objects of study. Video gives us an overwhelming amount of data that comes from the social richness and the simultaneity of the observed actions in this kind of professional contexts. Reification in visual sociology often comes for excess and not for lack of information. The question of what should be observed, and what not, shapes the use of digital media. Triangulation, through the complementary use of visual perception, digital video observation and interviews, might be the most effective strategy to capture interactive

communication patterns.

2.3. Data Analysis

The unit of analysis in both cases was the smallest unit of meaningful interaction, namely Activity Recurrent Episodes (ARE), defined as repetitive actions, which are relevant in a learning context, and which are bounded by a change in the content of the interaction (Barab, Yamagata Hay and Lynch, 2001: 66). The ARE of the two groups differ, however, by the artistic nature of dance, as opposed to an eminently competitive and restricted nature of Olympic competitions. Interactions were observed between experts from different domains, within the studio, between the choreographer and the dancers, or between the trainers and the swimmers in the Olympic swimming pool. On both cases we used ELAN (The Language Archive), as the central software (figure 7), while Word, Excel and Quicktime were auxiliary.

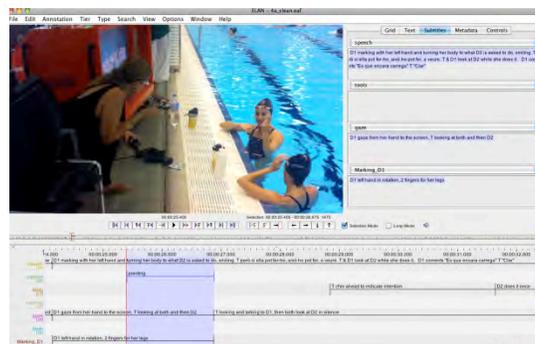


Figure 7. Video Analysis with ELAN in synchronized swimming.

ELAN ® was originally developed by the Max Planck Institute for Psycholinguistics (Brugman & Hussel, 2004) for the analysis of micro-gestures and interactions. In dance, the dominant communication mode was not verbal, which was also present, but the expressive movement of the choreographer and dancers, with gestures and sonifications. Unlike Atlas.ti or InVivo, ELAN favors the simultaneous encoding of various aspects of the process, by including the whole video, without fragmentation. Excel field notes taken during the process helped in the transcription of communicative events. We then selectively exported to Excel the interactions' content in order to statistically account for modality types. In the example in figure 8, we see the results of multimodal patterns of communication within the training process in synchronized swimming: we see how speech and gesture are present in most phases of the activity process, which indicates the highly multimodal, and thus interactive nature of sports training.

0'								
Interactive Phases	Prep	p1	T1	P2	T2	P3	T3a	T3b
Speech	S		S		S		S	S
Tools	T	T			T			T
Duration	1,1	0,3	1,7	0,8	0,3	0,8	0,3	6,1
%	3,98	1,16	6,09	2,89	1,1	2,71	1	21,39

								28'
T3c	P4	T4a		P5	T5a	p6	P7	Coda
		S		S	S			S
		T						T
3,8	1	8,3		0,9	0,8	0,3	0,7	1,2
13,51	3,59	29,17		2,99	2,96	1	2,57	4,05

Figure 8. The training as a workprocesses in synchronized swimming (Excel table).

We show in figure 9 a detailed account of a single ARE has been transcribed in ELAN, and exported to Word, while snapshots have been taken also with ELAN. The objective was to transcribe what is being said, taking into account all the possible modalities. A careful looks shows how verbal instructions combine with gesture, marking and constant manipulation of the video camera. The trainer is correcting D2, one of the members of the duet, who shows a much too low hip in the specific step that we see on the screen. The trainer stops the action, the swimmers swim to the side, looks at the specific snippet that the trainer is showing to them. Then the trainer tells them, marking, a specific correction of S2's hip. Marking is a cognitive strategy common to dancers and athletes, and also musicians and other embodied artists, which allows them to communicate moves without doing the full thing, selecting aspects such as weight, speed, direction or dynamics, which is what is needed in this specific case (Muntanyola & Kirsh, 2010).

Fragment 1: The opening of the ARE (00- 09s.)

01 +T presses the camera button twice searching for the video snippet+

((S1 & S2 by the swimming pool staring at the screen))

S1 grabs her bottle and drinks

T TU TENS LA CAMA del davant YOU HAVE the front LEG

+Upward hand gesture+

Looking at the camera

S1 drinks

més alta, S2. S2, mira. Higher, S2. S2, look.

Gaze towards S2 and back to camera

+T brings the video forward one second+

Ho veus? Do you see it?

+Upward hand gesture+

Looking at S2 and back to camera

Figure 9. Detailed ARE conversation analysis in ELAN and transcribed in Word.

In the specific episode we present here, the trainer corrects S2, one of the members of the duet, which shows a much too low hip in the specific step that we see on the screen. The beginning of the selected ARE, which lasts 205 seconds, is where the trainer (T) stops the action (the swimmers' performance), and the swimmers (S1 & S2) swim to the side, looking at the specific snippet that the trainer is playing. This moment of coming together to look at the performance on the screen, which is manipulated by the trainer, gives us a clear picture of the multimodality of training.

Conclusions

Visual ethnography as a method allows us to look into the everyday productions of dancers and synchronized swimmers in their own setting. By observing and analyzing what artists and performers do in their workplace, we can understand the intersubjective and material nature of creativity as a particular type of social activity.

Professional discourse hides the communicative and material interactions that are part of artistic work. The video-ethnographic observation of ELAN video reveals the specificity of the information carried by each mode, in addition to the complementarities between the different types of interaction. The expert cannot be separated from social actor and thus her performance interacts with both patterns of communication and trust, as to substance her decisions (Goffman, 1961). Such communication relationships based on narrative and technical interactions are linked to patterns of trust in professional environments, recalling technical gossip by Knorr-Cetina (1999). Looking into the heart of artistic decision-making requires entering the ethnographical kitchen. Our units of analysis are the expert interactions (ARE) that take place in the studios, training rooms and sets of artistic work.

Filming made it possible to preserve moments in which dancers/swimmers and choreographer/trainer worked together. While the trainer selects and views the snippet where the correction is made, manipulating the camera as a cognitive tool, the swimmers center their attention on the screen, where they can see the video. In synchronized swimming the camera shapes the environment and its social dynamic. Olympic swimmers see themselves on film, since the camera is part of the work process on a daily basis. The athletes have both underwater and above water cameras, and the trainer uses the play and rewind function to immediately show the swimmers what has gone wrong and to instruct and correct the choreography.

We consider partnering a kind of focused interaction (Goffman, 1961) in a highly embodied setting. We call such interaction instances of distributed attention, where initial verbal instructions and corrections are transformed collaboratively into embodied turn-taking, including marking, the gaze, and body positions (such as the grips or a head angle). The conversational components of interaction in partnering are understood here as a joint product of human communication. Simmel (1908) claims that mutual glances are the first form of reciprocity. We would like to show that this is the case in the dance environments, where reciprocity becomes part of partnering in duets, trios or quartets. Reciprocity in partnering might take the form of listening, a type of linguistic exchange that it is not only verbal, but multimodal. Further work will involve looking into the multimodal patterns of interaction and see if some modalities that are better markers than the visual.

We believe that the material and interactive aspects of the work process are cognitive resources for the artists as creative agents. The analysis of the training sequence from a multimodal perspective allows for the emergence of cognitive products not only through words but also from embodied turn taking. Speech, which the first vehicle for communication, does not happen in isolation but in synchrony with the body, with the trainer's and swimmers' hands and feet, pointing gestures and marking which are material anchors as well. Initial verbalized correction is transformed collaboratively in interaction, through multimodal, embodied, materially located and expertly guided turn taking. These communicative elements become cognitive resources for all the participants in the training process.

As the saying goes, a picture might as well be worth a 1000 words, but there is always the need for a (theoretical) caption. Following the socio-artistic statement of Fred Londonier, from the 60's Marxist movement, images that are taken out of context, that is, with no text, fall captive of dominant thought, namely, neoliberal thought. In science, such claim translates into the need of not taking video and images for granted, but applying reflexive coding schemes to the filmed and pictured evidence.

Visual sociology necessarily needs the use of a plurality of tools, with the video cameras, the ELAN software, but also Word and Excel to structure statistical tables and narrative analysis, as well as Quicktime and Silverback to edit video clips. In sociology, particularly in the ethnographic field, digital tools can help dealing with large volumes of visual information. However, manuals do not tell us how to proceed in the early stages of information gathering and analysis. Our longitudinal comparison between cases shows how researchers are flexible in practice, and methodologically promiscuous. It is through theoretical coding and reflexivity that one can avoid reification in messy environments such as dance and elite swimming.

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