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"Our flight suits are not just plain blue": The co-production of coordination and bodies in a military air display squadron

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Abstract

While prior investigations of organizational coordination have mainly focused on cognitive processes, this article brings the physical and symbolic body more centrally into the phenomenon. Mobilizing the 'strong' practice programme, we explore how organizational coordination practice and bodies co-produce each other. Our study is an empirical qualitative analysis of Patrouille de France, a military air display squadron. By successively zooming in and out from pilots' doings and sayings, we reveal three body-related threads (training, sensitizing and distinguishing) by which organizational coordination and bodies co-produce each other. We especially point to technical and physical capital, proprioception, kinaesthesia, embodied awareness of co-presence and the symbolic (re)presentation of bodies as embodied aspects of the actors' habitus structured by and for coordination. Our findings have implications for our understanding of organizational coordination by showing that there is more to bodies in coordination than just embodied cognition or communication. They also further coordination literature by emphasizing that coordination practice includes organizationally structured bodywork aimed at enhancing bodies; bodywork that is not limited to learning the practice but crucial to maintaining actors in that practice.

Keywords

body, bodywork, coordination, co-presence, co-production, military, practice, zooming in and out

Introduction

> [The leader] checks his bearings, concentrates. . . and goes for it. [. . .]. At that moment, the pilots withdraw into themselves, most of them with their eyes closed, their bodies in the

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> same posture they will later adopt in their aircraft, their heads turned towards the leader. [. . .] The "music", this mental representation of the pending flight, may now begin. [. . .]. Hands come alive, one on imaginary throttle levers, the other gently adjusting the trim. Gazes and heads move in unison, tracing the figures [. . .]. The leader's voice takes the other seven pilots in its wake.
>
> Béthoux & Lert, 2018, p. 112

Seminal studies on coordination have largely focused on the design of organizations and work (e.g. March & Simon, 1958; Mintzberg, 1978; Thompson, 1967; Van de Ven, Delbecq, & Koenig, 1976); however, scholars have recently begun addressing coordination practice as it occurs (e.g. Bechky, 2006; Bouty & Drucker-Godard, 2019; Faraj & Xiao, 2006; Wolbers, Boersma, & Groenewegen, 2018). This paradigm change has allowed for a better assessment of how the actors themselves link their interdependent knowledge and actions in situ while they are engaged in ongoing activities. Nevertheless, both approaches have essentially viewed coordination as a matter of information and knowledge sharing and have been broadly committed to mind–body dualism. In other words, while there has been a shift towards understanding coordination as a situated practice, actors have consistently been conceived of as active minds engaged in a merely cerebral activity, and the question remained of how actors 'know' what to do to coordinate.

Meanwhile, a growing number of studies in both organization and other fields of the social sciences have turned to the body and bodily activities in the analysis of social phenomena. In organization studies, such attention to the body is mostly nascent, although it is of central significance to practice-based approaches (Sandberg & Tsoukas, 2011). Some scholars have indeed stressed that the body should be acknowledged more centrally in analyses of work and organizations (Dale, 2001; Hassard, Holliday, & Willmott, 2000; Reckwitz, 2002; Slutskaya & De Cock, 2008), knowing (Gärtner, 2013; Gherardi, 2006; Yakhlef, 2010) and coordination (Hindmarsh & Pilnick, 2007; Sergeeva, Faraj, & Huysman, 2020). With respect to the latter, some authors have pointed out the need for research that fully acknowledges the import of the 'body as a central "site[s]" for organizing work' (Hindmarsh & Pilnick, 2007, p. 1414), and called for an 'embodiment perspective on coordination' (Sergeeva et al., 2020, p. 1249). Indeed, to develop a legitimate corpus of knowledge on coordination like any other social and organizational phenomenon, it is essential to consider actors in their entirety (Bourdieu, 1990, 2000; Crossley, 2001; Slutskaya & De Cock, 2008; Wacquant, 2004, 2015), not just as brains atop container bodies (Dale, 2001; Hassard et al., 2000; Wolkowitz, 2006).

This article investigates actors' bodies in organizational coordination practice. It utilizes the 'strong' practice programme according to which practices are socially acquired and historically shaped ways of acting, and 'fundamental to the production, reproduction and transformation of social and organizational matters' (Nicolini, 2013, p. 14). Bodies are considered as central in such a conception of practice. Not only are they the loci of action and participation in practice, but also the carriers of practice and structured by practice. This article therefore examines bodies as constitutive of organizational coordination practice, that is, not only what the body does for coordination but also what coordination does to bodies. This raises the following research question: How do organizational coordination practice and bodies co-produce each other?

We conducted an 11-month empirical study of the organization 'Patrouille de France' (PAF), the military air display squadron of the French Air and Space Force. The PAF pilots perform a fluid and elegant air ballet composed of a synchronized combination of highly technical figures in flight formation. This aerobatic demonstration requires both perfect coordination between pilots to ensure safety and total engagement of the body as the flight is physically demanding (complex aerial manoeuvres, positive and negative acceleration, atypical body torsions, etc.). By successively 'zooming in and out' on various aspects of coordination, we 'trailed' (Nicolini, 2009) the engagement of the pilots' bodies in space and time and analysed their interconnectedness in this organizational practice. We found

that, as a practice, organizational coordination engages with bodies in three ways: training, sensitizing and distinguishing. Our contribution is twofold. First, we add to the organizational coordination literature by revealing that there is more to coordination practice than learning and rehearsal: it includes non-technical though essential facets. More specifically, we show that technical and physical capital, proprioception, kinaesthesia, felt co-presence and the symbolic (re)presentation are crucial to coordination and are fully incorporated in bodies. Organizational coordination structures bodies and bodies are structured for coordination. Second, we contribute by showing that such embodied incorporation involves organizational bodywork, which enhances bodies in a logic of cultivation, as opposed to normalization in a logic of constraint.

The next section lays out the theoretical underpinnings of our study and is followed by a description of our methods and research settings. Then we present our empirical findings and discuss the study's contributions.

Literature Review: Coordination Practice and Bodyless Actors

In this study, organizational coordination is understood as a 'temporally unfolding and contextualized process of input regulation and interaction articulation to realize a collective performance' (Faraj & Xiao, 2006, p. 1157). In other words, orchestrating activities in the field as work progresses is the essence of organizational coordination (e.g. Bechky, 2006; Bouty et al., 2012). Ever since the advent of coordination studies, scholars have described numerous ways in which coordination is enabled or accomplished. Reviews of this prolific literature (e.g. Claggett & Karahanna, 2018; Okhuysen & Bechky, 2009) ordinarily describe these as either formal or informal (March & Simon, 1958; Thompson, 1967). Apart from this classic characterization, previous literature on organizational coordination also generally subscribes to mind–body dualism. On this basis, prior studies have usefully detailed arrangements focused on information and knowledge exchange. On the other hand, actors have not been considered in their entirety because the focus on information has led scholars to treat bodies as relatively transparent containers of brains (Dale, 2001, p. 20). However, recent contributions in organization studies and in other fields of the social sciences show that taking bodies into account leads to enhanced understanding of social and organizational practices.

Of course, formal coordination mechanisms such as plans, rules and the chain of command rest on information sharing (e.g. Fayol, 1916; March & Simon, 1958; Mintzberg, 1978; Thompson, 1967; Van de Ven et al., 1976). So does coordination enabled by formal knowledge repositories such as discovery matrixes (Kellogg, Orlikowski, & Yates, 2006), location maps (Okhuysen & Bechky, 2009), treatment protocols (Faraj & Xiao, 2006) and experience feedback (Godé & Lebraty, 2015; Potosky, Godé, & Lebraty, 2021). Yet informal modes of coordination are centred on knowledge and information sharing too. 'Gang plank' (Fayol, 1916), mutual adjustment and relational coordination (Gittell, 2002), essentially consist of informal problem-solving communication. Past literature has also asserted the importance of various forms of shared knowledge of the task or the team (e.g. Cannon-Bowers & Salas, 2001; King & de Rond, 2011; Rico, Sanchez-Manzanares, Gil, & Gibson, 2008) or of the social structure (e.g. Bechky, 2006; Bouty & Drucker-Godard, 2019) for coordination. As a consequence of this emphasis, coordination actors have recently been portrayed as attentive, competent and socially embedded, but also mostly as actors whose bodies play an informational role at best. Coordination practice studies often account for actors' expertise and social position by virtue of their titles and professions: police officers (Bechky & Okhuysen, 2011), scientists (Bruns, 2013), crews (Bechky, 2006; Bouty & Drucker-Godard, 2019), military pilots (Godé & Lebraty, 2015) and medical staff (Faraj & Xiao, 2006; Sergeeva et al., 2020). In parallel, as summarized in Table 1, when studies refer to actors' bodies, they do so in passing and essentially point to an informational role.

Table 1. References to body in coordination-as-practice literature.

Author(s) and year	Research question	Theoretical background	Methods and empirical context	Actors in play	Reference(s) to body
Hindmarsh & Pilnick (2007)	How do organizational members make sense of and orient the embodied conduct of others in ordering and organizing work and collaboration?	Phenomenological approach	Ethnomethodology Health care	Anaesthetists, and patients	*Direct* Non-verbal communication medium Embodied knowledge
Bruns (2013)	How does coordination occur in collaboration across multiple expert domains?	Cross-functional teams Practice-based approach	Ethnographic study R&D	Scientists	*Indirect* Non-verbal communication medium
Harrison & Rouse (2014)	How do creative groups coordinate for creative work?	Coordination and group creativity Practice-based approach	Inductive, qualitative Dance	Choreographers, and dancers	*Indirect* Non-verbal communication and knowledge work medium
Godé & Lebraty (2015)	How does experience feedback influence coordination within teams?	Extreme situations Practice-based approach	Case study Army	Aerobatic pilots	*Indirect* Non-verbal communication medium
Bouty & Drucker-Godard (2019)	What does the managerial practice of coordination consist of?	Managerial work Practice-based approach	Case study Sports competition	Race sailing crew	*Indirect* Non-verbal communication medium
Sergeeva, Faraj, & Huysman (2020)	How does the body matter in coordination that is reconfigured following a change in technological mediation?	Technology Practice-based approach	Case study Health care	Surgeons, and operating-room staff	*Direct* Non-verbal communication medium
Stephens (2021)	How do action group members continuously perform local adaptations with limited disruption to their collective performance?	Improvisation Implicit coordination	Case study Arts	Amateur choir	*Direct* Non-verbal communication medium

References to bodily aspects in coordination-as-practice literature are indirect and scarce. They often pertain to vision as a sense through which actors exchange information and communicate nonverbally by directing each other's attention or registering movements and positions (e.g. Bouty & Drucker-Godard, 2019; Harrison & Rouse, 2014; Sergeeva et al., 2020). Interestingly, only two coordination studies that we know of have made the body more central to their investigation. The first is Hindmarsh and Pilnick's (2007) study, which concluded that body movements, attitudes and positions are highly eloquent and meaningful for skilled actors. The second study, by Sergeeva and colleagues (2020), details how the introduction of a robot for non-invasive surgery eventually transformed ways of sharing information and representations that are essential for coordination. However, and despite their promising insights, such studies are scarce and the bodily aspect in organizational coordination practice remains largely unexplored. In this regard, studies of coordination are in fact no exception to a more general shortcoming deplored by several authors in the broader organizational literature (Dale, 2001; Gärtner, 2013; Hassard et al., 2000; Slutskaya & De Cock, 2008): that actors' bodies are an 'absent presence' (Shilling, 1993, p. 9).

Yet recent studies of learning and knowing in management and other areas of the social sciences clearly suggest that taking bodies into account will be beneficial in developing a better understanding of social and organizational practices. Research on organizational knowing (e.g. Gärtner, 2013; Gherardi, 2006; Gherardi, Meriläinen, Strati, & Valtonen, 2013; Nicolini, Gherardi, & Yanow, 2003; Yakhlef, 2010) has indeed revealed that the relationship between knowledge and the body is as intimate in organizations as it is in other settings: knowledge of tools and expert gestures is embodied, as are sensing skills (e.g. Godfrey, Lilley, & Brewis, 2012; Viteritti, 2013; Willems, 2018). In other social sciences, studies have also unequivocally established the constitutive importance of the body to practice.

First, they have shown that learning of cultural (Gvion, 2015; O'Connor, 2007), sporting (Müller, 2018; Potter, 2008; Spencer, 2009; Wacquant, 2004), health (Prentice, 2007) or military (Godfrey et al., 2012; Lande, 2007) practices involves bodywork, that is an 'intensive and finely regulated manipulation of the organism' (Wacquant, 1995, p. 73) aiming at educating participants and transforming them into practitioners. Second, scholars have also investigated body pedagogics (Shilling, 2017) as the means by which such bodywork is performed. They emphasized that the (re) configuring of bodies is a purposeful and long (Potter, 2008; Spencer, 2009) repetitive process played out both during specific training sessions that turn bodies 'into material' to 'forge' them (Müller, 2018, p. 877) and also 'diffusely through [. . .] hundreds of islands of instruction, spread out across time and people' (Lande, 2007, p. 106). Third, these studies revealed that bodywork is not only a matter of learning a technique (Toner, 2017, p. 6), but also of embodied incorporation of such other dimensions as callusing and resistance to pain (Spencer, 2009), self-care (Wacquant, 2004), sense of movement (Potter, 2008), postures and cultural self-presentation (Gvion, 2015), perceptual schemes (Toner, 2017; Wacquant, 2004), as well as symbols and relative power positions (Crossley, 2005; Prentice, 2007). Altogether, prior studies in other social science areas have shown that bodies are technically, physiologically, sensorily and symbolically prepared and educated to practice. In this light, it seems difficult to reason about organizational practices as if they were exceptions.

However, the above-mentioned studies largely focus on a learning process: becoming a practitioner. They do not attend to practitioners' bodies beyond these transformative moments. In addition, while some of these studies do address organizational practices, such as those on glass blowing (O'Connor, 2007), health and science (Prentice, 2007; Viteritti, 2013), train dispatchers (Willems, 2018) or the army (Godfrey et al., 2012; Lande, 2007), they unfortunately do not make this organizational dimension explicit nor acknowledge its significance (Hassard et al., 2000). To enrich our understanding of organizational coordination practice by taking into account its bodily dimension

we therefore need to go beyond simply considering individual bodily cognition and learning and must address the social-organizational embodied, that is, incorporated into practitioners' bodies.

To this end, we embrace the 'strong' practice programme (Nicolini, 2013) and acknowledge that continuous production and re-production is necessary to sustain apparently durable social and organizational phenomena. Accordingly, phenomena such as 'cooking, consuming, [. . .] strategizing' (Nicolini & Monteiro, 2017, p. 110) and coordinating exist because they are incessantly produced and re-produced by material activities, i.e. by the doings and sayings of actors (Schatzki, 2001). In turn, these practices shape the actors' predispositions and responses. Practices are therefore more than just what people do. They are socially acquired and historically shaped ways of doing things, which both fashion and are sustained by local accomplishments. It is important to stress at this juncture that this relational understanding of practice conceives of individual actions as neither fully deliberate nor completely determined by underlying structures: acting is as much in opposition to the 'mechanical necessity of things without history as it is to the reflexive freedom of subjects without inertia' (Bourdieu, 1990, p. 56). To do and say things in situ, actors are guided by practice, but must also adapt to cope with unique circumstances. Such a conception of practice accords central importance to bodies not merely as instruments of specific action (Nicolini, 2013, p. 3), but also as carriers of the social: habituated, socially educated and disciplined bodies structured by practices (Bourdieu, 1990, 2000).

Research Setting and Methods

We conducted an in-depth empirical study of the Patrouille de France (PAF), a French military air display squadron involved in a 'risky context', with a 'near-constant exposure to potentially extreme events' (Hällgren, Rouleau, & de Rond, 2018, p. 117; Bouty et al., 2012). It allowed us to closely investigate coordination practice with 'real people engaging in real practices under really challenging circumstances' (Rouleau et al., 2020, p. 4).

Research setting: the Patrouille de France

The Patrouille de France (PAF) is one of the world's oldest military air display squadrons, with roots going as far back as the 1930s. The PAF pilots conduct air shows, performing skilled aerobatic manoeuvres that are based on a combination of highly technical and difficult aerial figures, requiring agility and giving an overall impression of fluidity. They always fly in formation and most of the figures are carried out collectively, which is particularly pertinent for our study. Pilots fly in close proximity to each other (even during inverted manoeuvres), at speeds of up to 800 km/h for approximately 25 minutes. Consequently, perfect coordination between pilots is a prerequisite for the overall aesthetic of the show and the safety of pilots and audience members.

Since the PAF is an elite military unit, its objectives are precisely set, and the means to achieve them are equally closely regulated. The annual schedule of the PAF is divided into two seasons. The show season consists of approximately 70 exhibitions in different locations over spring and summer, while the training season, which spans autumn and winter, comprises approximately 120 flights (about two flights per day, five days per week).

Despite the squadron's small size (eight regular pilots, as represented in Figure 1, and one substitute pilot), a high rate of pilot turnover is strictly organized.

Each autumn, three new pilots are included in the squadron (to fly "scavenger" i.e. in slot position behind the leader, and the two inner positions), while three senior pilots (former solos and the leader) leave. Furthermore, pilots annually rotate positions in the formation: the former scavenger becomes the leader, inners become outers and outers become solos. Pilots never fly any position

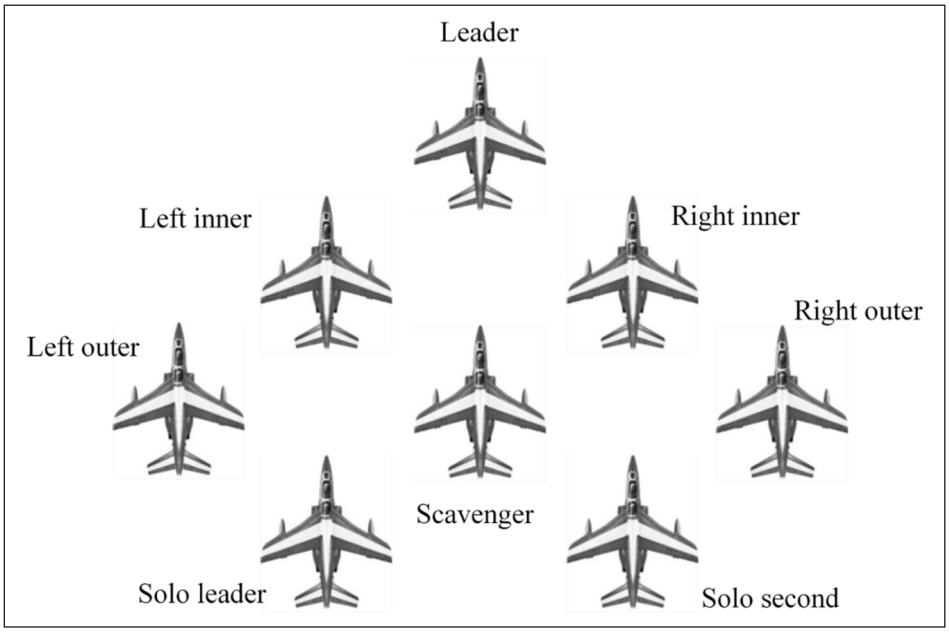

Figure 1. PAF pilot positions in the formation.

other than the one they have been assigned for the year. Briefly then, a pilot flies a particular position for a year, changes each year, and exits the squadron after two to four years of service. For our study, the turnover of pilots makes organizational features more salient. The choreography is entirely revisited each year too. Although some of the figures are classic, the sequence always involves difficulties (altitude, speed, acceleration rate, etc.) that are new to the pilots. Hence, the PAF is a very intense experience even for seasoned fighter pilots.

Data collection

We collected data over a period of 11 months. Our dataset consists of information from in-depth individual interviews, direct observations, and secondary material. The latter includes video footage, archival documents and radio broadcasts (see Table 2).

In total, we interviewed seven PAF pilots, including two who had just exited the squadron. This allowed us to take into consideration different degrees of seniority and experience within the squadron. On average, the interviews lasted one hour each. They were recorded then transcribed. We also conducted multiple direct observations; these include the physical setting (comprehensive visit to the buildings, mess hall and offices), pre-take-off briefings (three full sessions) and several (10) aerobatic exhibitions. We were not allowed to record videos during direct observations, but we took detailed notes.

Last, we enriched the dataset with secondary material in the form of archival documents (two books by former PAF leaders, newspaper articles, historical archives and over three hours of radio broadcasts) and video footage (over eight hours) of briefing sessions, training flights and PAF daily life. Videos of training flights include footage from different angles: from the audience's perspective (seven videos) and the cockpit perspective (pilot's point of view, five videos). The briefing videos include official (15) and personal (by a pilot, one session) recordings of briefing sessions.

Table 2. Collected data.

Interviews Type of interviewees	**Direct observations** (Total number; total duration of observation)	**Secondary material**	
		Video footage (Total number; total duration of observation)	**Archival documents** (Total number of documents)
Interview 1 Leader	Physical setting visits to the PAF buildings and airbase (1; 3 hrs)	Briefing sessions: The 'music' (15; 41'27)	Books (2)
Interview 2 Scavenger	Briefing sessions: The 'music' (3; 1.25 hrs)	Training flights from an external perspective (7; 1.03 hrs)	Articles (30)
Interview 3 Left outer	Aerobatic exhibitions (10; 3 hrs)	Training flights from a cockpit perspective (5; 11'05)	Historical archives including one PAF exhibition video from 1965 (4)
Interview 4 Solo leader		The 'music' and the exhibition from external and cockpit perspectives (personal) (1; 40')	Radio broadcast (2; 3.42 hrs)
Interview 5 Substitute pilot		Video documentaries* (2; 3.01 hrs)	
Interview 6 Left outer		The PAF squadron daily life (4; 2.42 hrs)	
Interview 7 Solo leader			

*Cerieix, I. (2012). *En Vol avec les As de l'Armée de l'Air*. Video documentary, FranceTV Prod: Paris. Robin, O. & Magnan, E. (2013). *Patrouille de France, le Film*. Airborne Films: Paris.

We also used public video footage (2.59 hours) and two full-length (3.01 hours) video documentaries, showing several aspects of the squadron's everyday life on the ground and in the air. Some of the videos contained PAF pilot interviews (nine in total) that we transcribed in full. Video data captured the engagement of the pilots' bodies in coordination practice, providing a way to repeatedly observe bodies in motion, gestures and rhythmic details of coordination (Heath, Hindmarsh, & Luff, 2010; Steigenberger & Lübcke, 2021).

Data analysis

We iteratively moved from data collection to data analysis until theoretical saturation was achieved (Glaser & Strauss, 1967). Our analytical process comprised two main cycles. We first built a preliminary understanding of how organizational coordination practice and bodies co-produce each other. For this purpose, consistent with the 'strong' practice programme, we used a zooming in and out analytical approach (Nicolini, 2009), as shown in Figure 2.

Over a complete cycle of the squadron's activity, we first 'zoomed in' on the level at which coordination is enacted and observed the real-time doings and sayings of pilots during the aerobatic show. We utilized a combination of data from interviews and video footage (aerobatic exhibitions shot from the ground and from inside the cockpit). Second, we 'zoomed out' from the cockpit perspective to trail the connection between other work and activities. Our data (interviews and video footage in particular) revealed the role played by briefing sessions. We then zoomed in on these. We focused on recording the pilots' doings (gestures and body movements) and sayings (words, tone and rhythm), during their 'bodily choreography' (Nicolini, 2013, p. 223). Interviews

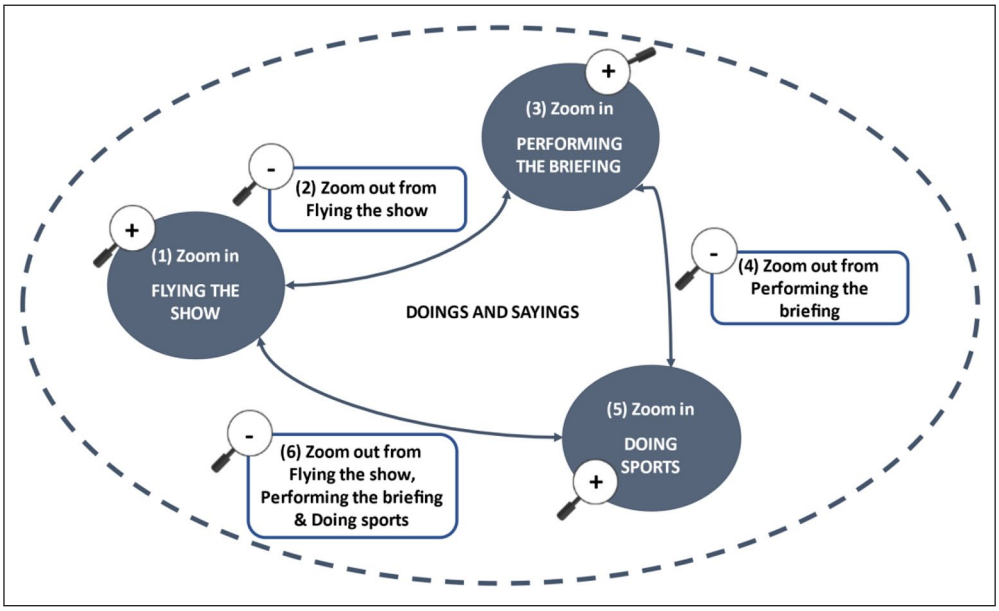

Figure 2. The zooming in and out analytical process.

were pivotal in helping us to see interconnections and interactions more clearly. They also helped us in moving to stage four, that is, zooming out from the briefings and identifying another key activity, namely 'doing sports'. The fifth stage involved zooming in on that. The last stage consisted in integrating the analytical elements obtained from successive zooming in and out. During this first analytical cycle, we used open coding to develop initial data assemblages of recurring bodily doings and sayings in the local accomplishment of organizational coordination practice.

Subsequently, we engaged in a second coding cycle, going back and forth between our empirical understanding and theoretical lenses (Bjerregaard & Klitmøller, 2016). We used axial coding to refine initial data assemblages, explore their interrelatedness and combine them into six different comprehensive themes (teaching, disciplining, cultivating individual bodies, habituating bodies to co-presence, selecting and imprinting bodies). We then, as Table 3 shows, moved to a higher level of abstraction, questioning how these intermediary findings could be captured into overarching conceptual relationships, and our analysis revealed three body-related threads of organizational coordination practice: training, sensitizing and distinguishing.[1]

Results

At the PAF, coordination is ultimately a matter of flawless fluidity within a reduced space, of smoothness and grace on top of technical mastery. When the PAF flies in formation, the true challenge is to give 'the impression that [the eight pilots] are in one-and-the-same aircraft' (P2), even during inverted manoeuvres (aircraft flying upside down), and to perform a completely synchronized air ballet wherein individual aerobatics contribute to the unified collective outcome: 'In flight, individual performance gives way to the shared result: the PAF air show' (P7). However, each pilot is alone in their cockpit while flying their aircraft at a very high speed and with reduced manoeuvrability. Under these demanding circumstances, they must maintain their position in the

Table 3. Data analysis results.

Body-related threads of organizational coordination practice	Comprehensive themes	Initial data assemblages (examples)
Training bodies *Enhancing bodies engaged in coordination*	**Teaching bodies** *Teaching flying techniques and the air show programme to pilots' bodies*	• Highly formal schedule during winter training sessions • Rehearsal of specific command gestures and flying techniques • Collective rehearsal sessions and informal debriefings
	Disciplining bodies *Strengthening and shaping pilots' bodies' physical condition*	• Intense physical and physiological challenges • Individual and collective sport sessions • Appropriate equipment and resources
Sensitizing bodies *Nurturing individual and collective bodies' sensitivity in coordination*	**Cultivating individual bodies** *Cultivating pilots' representation of their own bodies, gestures and sensations*	• Series of hand and finger gestures during the 'music' • Sense of touch in hands and fingers • Body movements (kinaesthesia) and positions (proprioception) in space
	Habituating bodies to co-presence *Habituating to collective awareness of the other pilots*	• The music as a collective and shared bodily experience • The leader's unique voice and tones • Sense of others moving around
Distinguishing bodies *Symbolically structuring bodies*	**Selecting bodies** *Choosing bodies*	• A full day at the PAF (the music, sport sessions, flights) • Endurance, reaction to sensations, physical strength of the candidates' bodies • A recruitment process to serve the PAF purpose
	Imprinting bodies *Visibly differentiating pilots' bodies from others*	• PAF pilots' symbolic and distinctive features • Clear blue flight suit, emblematic badges, the history and prestige of the PAF • The PAF helmet, symbolic organizational role

formation and carry out the planned aerobatic figures in coordination with the other pilots. This means that pilots seek to manoeuvre their aircraft with the least possible jolts despite unusual attitudes and structural stress. In addition, given pilot turnover in the squadron, organizational considerations are crucial, as one pilot noted: 'It's all about the PAF, not the pilots. We're just passing through, and we're working to keep the PAF going' (P4). In what follows, we describe the three body-related threads of organizational coordination practice – training, sensitizing and distinguishing bodies – that we have trailed through space and time in our analysis and highlight their importance and interconnectedness.

Training bodies

The training of bodies refers to enhancing bodies engaged in coordination. This is primarily accomplished in two ways: *teaching* techniques to pilots' bodies and *disciplining* them for intensive flight.

Teaching in this context pertains to the ways in which flying techniques and the air show programme are taught to pilots' bodies. Despite their 1,500 hours of prior flying experience and patrol leader rank, both new recruits and current pilots need to learn how aircraft are flown at the PAF, the unusual aerobatic figures performed, their specific sequence for the year's programme, and the unique intended aesthetic effect of the show. As one pilot summed up: 'you don't naturally fly upside down 30 meters above the ground' (PV4). Under these circumstances, the pilots become apprentices again. One of them explained that:

> When we were in fighter squadrons, we used to [. . .] adapt our position to that of the leader because we could see him. The leader didn't have to speak. Here, we can't do that [. . .]. At the PAF, you shift from flying with visuals to flying on voice. (PV6)

The whole body must be trained to integrate such technical requirements and constraints. Consequently, the winter season is extremely vital, as another pilot mentioned: 'We build our [. . .] technical capital in a few months' (PV4). Our analysis indicates that teaching follows a progressive and highly formal schedule, designed so the pilots are ready to perform the show in early spring. They start by flying in groups of four aircraft, first with the previous leader and then with the new leader. They then progress to flying in close proximity to one another and in formation. In January, they start practising inverted flying twice a day. As one pilot remarked, 'flying upside down next to the nearby aircraft is very special and unusual. These are gestures we need to work hard on, again and again. They require rigorous training, in flight and on the ground' (P5).

Each figure in the predesigned flying programme corresponds to specific command gestures (gas, trim, air brake, etc.) which, due to sustained repetition, become almost mechanical. On the ground, collective rehearsal sessions serve this purpose, especially during the autumn and winter seasons. Several pilots confirmed that they rehearsed gestures on the ground to build muscle memory of the programme: 'Little by little, the body language becomes part of you' (P6). In parallel, after a flight, some informal debriefing moments also involve gestures and body movements. We observed, and the video confirmed, that pilots continue working on their gestures and sensations in their offices (the pilots' office configuration matches their flight formation: inners with their respective outers on each side of the corridor, then solos, then the leader and scavenger together). With their hands and bodies, they mimic technical gestures and positions of aircraft (DO and VO). Subsequently, over a period of time, body movements, hand and finger gestures, and sensations – along with memorizing around 20 aerial figures and their unique sequence for the year – are embodied, that is, incorporated in pilots' bodies by virtue of repetition. One pilot mentioned, 'our goal is to do the same thing over and over again, in order to achieve the perfect movement [. . .] that we will be able perform even faster' (P7).

In addition to teaching techniques, the training of bodies also entails disciplining them, which involves strengthening and shaping their physical condition so that they can withstand the operational context. One pilot explained, 'our job strains us. . . We suffer from constant load factors [g-forces[2]] and we fly much more often than in any other squadron' (P6). Indeed, a pilot's body must be prepared to face intense physical challenges like countless hours of flight, high acceleration rates (they withstand g-forces of up to +7/-3 several times and for several minutes during an air show) and atypical torsions. In particular, the heart rate increases rapidly in response to g-forces as the heart tries to pump blood to the brain; a body that is not trained to withstand such physiological strain may sustain partial loss of vision or unconsciousness, which may lead to a plane crash. Many PAF pilots we interviewed (corroborated by DO and VO) emphasized the importance of daily workouts to improve the body's strength and endurance. Such sessions are formally scheduled at the PAF with appropriate equipment and resources. A dedicated coach builds specific training programmes, adapted to the extreme conditions of the flights (VO). As one pilot explained, 'we

start by exercising in the morning, just before flying. It is a muscular warm-up session, for example, some CrossFit to strengthen the lower back. About 25 minutes with a trainer' (PV6). We observed that the nine pilots meet at the PAF gym every morning. They do strength and resistance workouts using fitness balls, dumbbells, weight machines, resistance bands, etc. Pilots specifically work on increasing the flexibility of their wrist joints to reduce hand and finger cramps while using the control stick during flight (PV4). They also strengthen their abdominals, backs and necks, which are most affected by g-force (see Figure 3).

Figure 3. The morning workout.

Together, five pilots are carrying out core-strength exercises using a large fitness ball. Three of them do planks: lying on the ball, with their feet suspended and hands on the floor, they contract their abdominal muscles. Another rolls the ball towards his buttocks with his feet, engaging the muscles along the back of his thighs. Lying on his stomach, head up, the last one uses a gymnastic stick to strengthen his neck and improve his balance. The physical effort is intense, faces and muscles are tensed, and breathing becomes deep and erratic. The coach supervises the exercise movements, requiring 15 repetitions of each core-strength exercise. Such physical training stimulates the core muscles and strengthens the back. This improves resistance to accelerations and trains the pilots' bodies to incorporate balance and core stability. 'We are able to get through downward and upward accelerations because we work on our body every day' (P4), a pilot told us.

Collective sports sessions such as football and water polo are scheduled at the end of the working day (around 5:30 pm). They are 'physically demanding' (P3) and provide additional occasions for strengthening bodies, even though these activities are perceived as opportunities for relaxation after a tense and stressful day (DO). Nonetheless, these sessions are just as planned and organized as those in the mornings. Through this daily regimen, disciplining the pilots' bodies is managed in three dimensions: time (dedicated timeslots), space (dedicated rooms and equipment) and content (supervised by professional coaches). During individual and collective sport sessions, pilots are trained side by side every day to strengthen their bodies, preparing them to fly together in coordination.

In sum, our analysis shows that *training* is a component of organizational coordination practice in which practice and the body co-produce each other. It includes *teaching* the techniques, along with *disciplining* the body to cope with intensive flying during the aerobatic show.

Sensitizing bodies

Sensitizing bodies is about nurturing individual and collective bodies' sensitivity in coordination. This is mainly achieved by *cultivating individual bodies* and *habituating bodies to co-presence*. This appeared significant when we zoomed in on bodies during a particular type of session, known as 'the music': a special 25-minute high-concentration session is conducted on the ground at the end of each briefing meeting, just before pilots board their aircraft and take off. During the so-called 'music' – despite its label, pilots neither listen to music nor sing – they perform their pending flight on the ground. In the briefing room, they are dressed in their flight suits and sit on their chairs as if in their respective cockpits. Keeping their hands on their imaginary throttle, they reproduce the exact same gestures, say the same things, and move their bodies the way they will during the flight: 'the music is both a verbal and a bodily choreography, a preshow before it turns into an aerial show' (PV3). Pilots described it as the antechamber of flying and much more than just a rehearsal. Our analysis revealed two facets of the music.

First, the music is about cultivating pilots' representation of their own bodies, gestures and sensations. As Figure 4 illustrates, during the music, the pilots perform a series of parsimonious and rhythmic hand and finger gestures, following the rhythm of the aerobatic manoeuvres of the flight. These gestures reflect a particular way of piloting, what pilots call 'flying with trim': 'I want to say that flying is a bit special at the PAF since we use trim a lot with the Alpha Jet, much more than with other fighter jets' (P6). The trim lever controls small flaps located on top of the wings, which help keep the airplane's attitude stable (during constant climbing or descent, for example) and make it easier for the pilot to maintain altitude and equilibrium. Flying with trim requires being very attentive to sensations and movements of the fingertips. The music plays a key role in habituating the pilot's sense of touch in hands and fingers.

Figure 4. Hand and finger gestures during the 'music'.

To maintain maximum stability, the pilot smoothly adjusts the imaginary trim control with the thumb and forefinger of his left hand (Figure 4.1). As the aircraft reacts, he releases the pressure on the trim flap by a few millimetres between his thumb and forefinger (Figure 4.2). Meanwhile, using his right hand, he mimics the aircraft movement, in descent (Figure 4.1) and stabilized (Figure 4.2). When the pilot releases the coloured smoke trail that the aircraft must leave in its wake, he extends his forefinger while his left hand is still pressing the imaginary trim tab to maintain altitude (Figure 4.3).

Other types of individual gestures and awareness cultivated during the music are whole body movements (kinaesthesia) and positions (proprioception) in space. 'What we do with our body are precisely the movements and gestures we will perform in flight' (P2). Several pilots reiterated in interviews that practising the music is about feeling and habituating the body to attitudes, movements and positions of the flight. They also explained, and we observed, that each of them has his own ways of performing the music to cultivate these dimensions: some keep their eyes open and mostly move their hands and fingers, while others, eyes closed, dynamically engage their entire body. Proprioception and kinaesthesia work together here:

> When I close my eyes, I project my body inside the cockpit; that is: [. . .] I see my right hand on the stick, and my left hand on the throttle. I see all my key visual references [. . .] When I perform a loop [. . .] when I am at the top of the loop, I see myself turning my head and taking my visual bearings. [. . .] I see all the actions I will accomplish with my body in the next few minutes in flight (PV5).

The music session allows each PAF pilot to build a spatial and temporal representation of his own body and to visualize it in action.

Second, sensitizing bodies with the music is also a collective activity, consisting in habituating the body to collective awareness of the other pilots. Indeed, as all the pilots stressed, the music is not just an individual activity, but also a collective and shared bodily experience of coordination. It cultivates awareness and heightened attentiveness to the other pilots moving around: 'eyes closed, we feel the others around us' (AD). Another pilot observed, 'at that moment, sitting on that chair or in the cockpit, it's the same for us: we are already in flight' (P5). Pilots integrate the fine nuances of the leader's unique voice and tones in their body movements. One pilot explained that 'during the music, we grow accustomed to aligning our gestures and body movements with the others and with the leader's voice' (P1). They become increasingly aware of co-presence, i.e. others sitting in the same room, their breathing, their pulse, their finger gestures, their moving around them and with them. There is an embodied interaction between pilots who, listening to the leader's voice, are involved in a structured exchange of multiple body movements (DO) as illustrated by Figure 5.

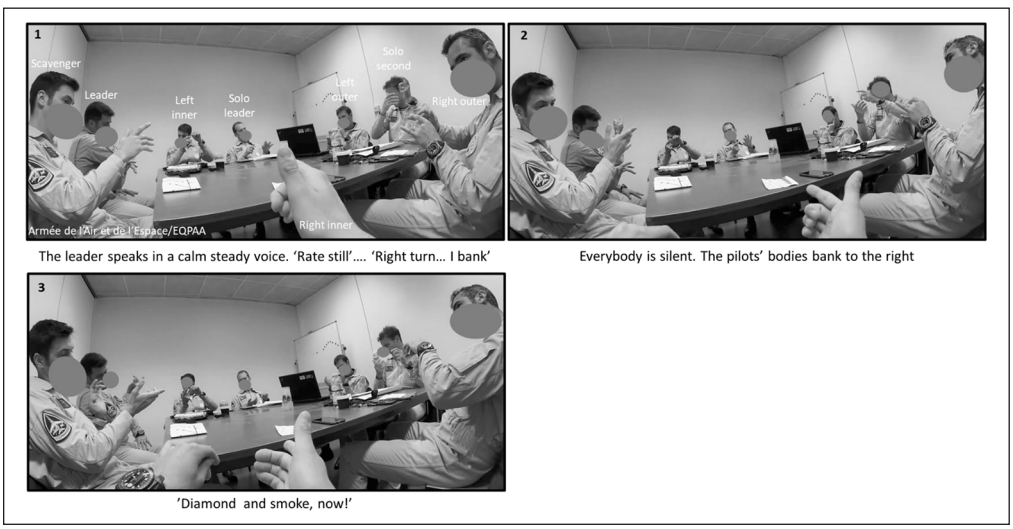

Figure 5. Embodied interaction during the 'music'.

The 'music' has just begun. In the quiet room, the pilots withdraw into themselves. Some of them have their eyes closed (e.g. the leader and left inner, Figure 5.1), others look at their neighbours (e.g. the scavenger and right outer looking at the right inner, Figure 5.1), or stare into space (e.g. the solo leader, Figure 5.1). Fingers tap and arms move. Hands are on the imaginary control levers (e.g. the right inner, Figure 5.1) and the trim flap (e.g. the right outer, Figure 5.1).
The leader speaks in a calm steady voice, as if over the on-board radio: 'Rate still'. . . Silence. 'Right turn. . . I bank'. At this point, bodies lean over a little, shoulders are tilted, heads turn slightly, and fingers move. Silence. The eight bodies move in synchronization, banking together to the right (Figure 5.2). With their right hand they push the stick for the turn, palm up.
At the same time, the right inner, solo second and solo leader (Figure 5.2) point their forefinger toward the front, ready to activate the smoke trail, taking into account the short delay that will occur in flight between the leader's commands and action. Silence. A few seconds later, as the leader says 'Diamond[3] and smoke, now!' (Figure 5.3), the eight pilots lean their bodies even more to the right to perform the figure together.

The music is a unique opportunity to experience the interconnectedness of bodies. The PAF pilots do not react only to sounds (the leader's voice) or visual signals (the others' gestures for those who keep their eyes open). They gradually incorporate the others' movements and presence into their own proprioceptive and kinaesthetic experience. 'Together, we feel like we are in a bubble,' mentioned one of them (P2). When they perform the music, the pilots fly together in the same room and can feel each other. They perceive the others' movements, gestures and voices in their entire body: 'Around me I can feel them moving, I can sense them, I can feel what they are doing. During the music we fly together' (P7). Another pilot insisted: 'We are 100% immersed together in our air show, 100% concentrated on the figures we are going to perform together' (P3).

Performing the music is a total body commitment that goes beyond simply building one's own spatial bodily representation. Because it is performed every day, and systematically prior to flying the show, the music also progressively and subtly habituates the bodies to flying with each other. Therefore, the bodies are intensively engaged in coordination through the music, which *cultivates individual bodies* and *habituates bodies to copresence*.

Distinguishing bodies

Distinguishing bodies refers to organizational ways by which coordination practice symbolically structures bodies. This is mainly achieved in two ways: by *selecting* bodies during the recruitment process and by *imprinting* them.

First, distinguishing bodies in the PAF consists in selecting them, which is particularly evident during the recruitment process. Every year, 10 to 15 candidates are invited to spend a full day with the squadron as the last steps in the long and demanding recruitment process. Unlike other squadrons that are managed by central headquarters, it is the existing pilots who, at the end of this day, select three candidates to join the PAF. We discovered that what matters is not the technical expertise of the candidates, but their embodied predisposition to meet the coordination challenges they will face if they eventually join the PAF (AD). For this reason, candidates spend a full day at the PAF, which starts with the usual sports session (VO). Then they attend the briefing and the music session where they closely observe the bodily choreography (VO). Finally, they fly with the PAF pilots, in the backseats. Another briefing, music session and second flight take place in the afternoon. 'They are terrorized by their first flight!' explained a PAF pilot. 'All their usual references as fighter pilots are challenged: distance to the ground [. . .], vertical descent from an altitude of 600 meters, holding position at 2m from one another under +5 g. . .' (AD).

Figure 6. Badges embroidered on the PAF blue flight suit.

Experiencing these situations, even just for one day, puts the candidates' bodies into the physical and symbolic conditions necessary to perform as a PAF pilot if recruited. One pilot remembered when he was a candidate: 'It was very daunting! I wasn't used to flying that way. Especially under the windy conditions of the day, with severe turbulence. I was pretty shaken!' (P1). As recruiters, current PAF pilots observe the candidates' endurance, their body's reaction to sensations, and whether they can withstand the unusual flight conditions. One PAF pilot observed: 'We scrutinize them. They do sport with us. There is no technical selection. [. . .] our goal is [. . .] to integrate somebody who will properly serve the PAF purpose' (P5). Bodies are selected, chosen by the ones they will fly with.

The second component of distinguishing bodies is imprinting, whereby PAF pilots are visibly differentiated from others. The embodied incorporation of coordination practice is symbolically expressed through various aspects such as PAF pilots' clothing, and way of walking, speaking and behaving. Imprinting simultaneously contributes to socializing the body and makes manifest its socialization; it echoes the practical mastery of coordination, the embodied incorporation of a worldview, of specific dispositions and activities. The body manifests its complete integration into the coordination practice of the PAF. For example, PAF pilots wear a clear blue flight suit, in contrast with the khaki suit worn by all other pilots (DO). And as one pilot also mentioned, 'our flight suits are not just plain blue' (P2): they wear two emblematic badges (Figure 6), embroidered on their left chest and right arm, depicting eight aircraft in the signature 'Diamond' figure on one and the PAF colours on the other.

These symbolic and distinctive features correspond to a way of being and behaving, inherent in coordination among PAF pilots. We also directly witnessed such behaviour during lunch in the mess hall (used by all airbase personnel, including other pilots). Due to staggered flight slots, PAF pilots often come to the mess for lunch about half an hour to an hour late. They come to the mess together, entering the room while the others are eating at their tables. They move across the room to the 'PAF table', which is de facto reserved for them. Their gait is balanced and fluid with their shoulders back and chests forward. Some laugh and talk loudly while others mimic aerobatic figures and replay the coordination with their hand and finger gestures (DO). They do not go unnoticed; everyone turns

Figure 7. The PAF helmet (PAF 2020).

and looks at them respectfully (DO). Their demeanour and the display of their bodies manifest and carry the history, prestige and coordination practice of the squadron.

Another element of imprinting is the official PAF helmet (Figure 7).

Its functional role is to protect the pilot's head and neck. However, the helmet also plays a symbolic organizational role because it denotes a passage from inexperienced pilot – who knows nothing about flying in formation and must (re)learn techniques and figures – to fully-fledged PAF pilot. The PAF helmet is formally bestowed upon the three junior pilots only after they have single-handedly completed their first 'eight-loop' (a very complex figure) in formation. Subsequently, they are truly recognized as PAF pilots at the organizational and social levels. All these organizational arrangements symbolically imprint PAF pilots' bodies as those coordinating during the air show. They are central to socialization, as one pilot mentioned:

> We share rituals we have inherited from our seniors. The day the three junior pilots get their new helmet after achieving the eight-loop, the way the eight helmets are then exhibited in the PAF squadron corridor, arranged in formation [Figure 7], and there are many others! All of them form our esprit de corps (P1).

Therefore, *distinguishing* bodies by *selecting* and *imprinting* them contributes to the embodied incorporation of the PAF's coordination practice makes it manifest. This constitutes the complete integration of pilots into a specific social world, vis-à-vis their peers (other PAF pilots) and in contrast to others (non-PAF pilots).

Discussion

Analyses of varieties of practices in organizational studies (e.g. Gärtner, 2013; Gherardi, 2006; Hassard et al., 2000) and other social sciences (e.g. Crossley, 2001; Wacquant, 1995, 2004, 2015) suggest that taking bodies into account provides additional insights for an enriched view of those practices. Here, we adopt a similar perspective and consider bodies in organizational coordination. Specifically, we approach coordination as an organizational practice and conceive of actors' bodies

both as socially structured by practice and as the locus of participation in it (Bourdieu, 1990, 2000; Wacquant, 2004, 2015). We thereby aim to contribute to advancing knowledge of organizational coordination by acknowledging and then going beyond the embodied aspects of individual and team cognition or communication already mentioned in prior coordination literature (Hindmarsh & Pilnick, 2007; Sergeeva et al., 2020). To this end, we empirically explored how organizational coordination practice and bodies co-produce each other over several months at the military air display squadron Patrouille de France, an organization where the nature of the activity makes the organizational practice of coordination particularly salient. Our analysis of collected data revealed that, as a practice, organizational coordination engages with bodies in three ways: training, sensitizing and distinguishing. We show how organizational coordination practice engages bodies beyond the mere field of action, structuring actors' technical and physical capital, proprioception, kinaesthesia, embodied awareness of co-presence and symbolic (re)presentation. In doing so, we also shed light on a new way in which social structures underpin coordination. Previous studies have highlighted shared role structures, norms and standards as elements that actors know in common (e.g. Bouty & Drucker-Godard, 2019; Wolbers et al., 2018). Beyond these aspects, we show that embodied social structures are also key to coordination.

Training bodies refers to enhancing actors' bodily technical and physical capital through coordination practice, by both teaching them techniques and physically disciplining them. Given the established significance of knowledge and expertise in prior coordination literature (e.g. Faraj & Xiao, 2006), intensive teaching of techniques through repetition is certainly to be expected. However, our study adds to the coordination literature with the notion of enhancing the physical capital of actors by disciplining certain body parts to withstand the challenges of the activity. Although similar to aspects of body training highlighted in sports activities (e.g. Müller, 2018; Spencer, 2009; Wacquant, 2004), such disciplination has so far remained a blind spot in studies of organizational coordination, including those investigating such demanding contexts as trauma centres, military operations, or sports races (Bechky & Okhuysen, 2011; Bouty & Drucker-Godard, 2019; Faraj & Xiao, 2006; Godé & Lebraty, 2015). There is however no clear reason for assuming that, in organizations, bodies will function smoothly and withstand operations without physical disciplining. It would therefore be useful if future studies investigated this facet of coordination and considered the constitution and the maintenance of such physical capital.

Sensitizing bodies is about developing and mobilizing individual proprioception and kinaesthesia, as well as collective embodied awareness of co-presence. We found that cultivating these aspects is the major focus of dedicated high-concentration sessions ('the music'). Proprioception and kinaesthesia are individual abilities that have been examined in studies of physical and sports practices, such as ballet dancing, where developing a sense of felt body movement has been shown to be a vector of socialization (Potter, 2008). Not only do we agree with these studies, but we also suggest that these abilities are not restricted to individual activities; our study indicates that they have significant value in an organizational setting as well. More importantly, we found that one of the features fostered in bodies by and for organizational coordination is the embodied awareness of co-presence: sensitizing bodies through 'the music' orients actors to one another and brings them to incorporate the others' presence in their own individual experience of coordination. Bodies integrate this quasi-presence of others because the actors are socialized to organizational coordination practice. With this result, we add to the organizational coordination literature: previous studies only mention the role of bodies in situations of co-presence where actors can directly register and evaluate the movements and gestures of those around them (e.g. Bouty & Drucker-Godard, 2019; Godé & Lebraty, 2015; Harrison & Rouse, 2014; Hindmarsh & Pilnick, 2007; Sergeeva et al., 2020). In those contexts, bodies are primarily involved in information exchange. Our study, on the other hand, points out a different phenomenon pertaining to organizational coordination for actors

who, during operations, are in relative isolation from one another. We suggest that co-presence can persist even when coordinating actors are not physically together: the actors are 'almost there' alongside one another because co-presence is deeply embodied as part of the organizational coordination practice. Additional studies will be necessary to further investigate this dimension. They could collect data at every moment during operations, which would allow for a more direct description of how quasi-co-presence is manifested, beyond what respondents report. Last, with sensitizing, we make a more general contribution to the existing literature by showing that organizational coordination practice includes non-technical facets. Sensitizing (as opposed to training) does not refer to technical skills that need to be acquired, but to abilities deeply incorporated in the body and that are structured by, for and in practice. In identifying sensitizing, we make a key contribution to the understanding of organizational coordination, opening it up to dimensions that have not been acknowledge until now.

Finally, *distinguishing* is also non-technical and refers to selecting bodies during the recruitment process and to imprinting them. Distinguishing therefore pertains to the symbolic inclusion of bodies in organizational coordination practice. In this, our results concur with social studies of practices (e.g. Bourdieu, 1990, 2000; Gvion, 2015), which suggest that actors 'receive the unspoken social lessons of physical practice' in multiple ways (Prentice, 2007, p. 537). We show that organizational coordination practice, like any other social practice, includes elements that symbolically define actors as practitioners. Being engaged in organizational coordination practice involves the structuration of corporal-cultural capital.

With these results, we contribute to the literature on coordination by directly highlighting the significance of bodies in coordination, beyond their mere participation in the informational process that had hitherto been the main focus. While we naturally do not dispute the importance of knowledge and information exchange in organizational coordination, we propose that there is more to this practice. We suggest that bodies are not just transmitters and receivers of information and, more importantly, that coordination itself is not only a matter of cerebral information and knowledge processing: training, sensitizing and distinguishing extend far beyond learning and rehearsal. They directly engage the bodies' technical and physical capital, proprioception, kinaesthesia, embodied awareness of co-presence and symbolic (re)presentation as integral parts of the organizational coordination practice. In this respect, our results open up new perspectives for the study of coordination by directing attention to what makes actors 'conversant practitioners' (Wacquant, 1995, p. 65) of organizational coordination. They therefore contribute to advancing the practice perspective introduced in the coordination literature over the last decade and confirm its potential. With this in mind, we invite future studies to further explore coordination by fully embracing this social-practice perspective, in particular to go beyond the mere recording of actions in operation (Nicolini, 2013) and yield a deeper understanding of the phenomenon.

Our results do not suggest that the incorporation of coordination practice in bodies is effortless though, nor that it would result from incidental learning. On the contrary, and consistent with prior practice studies, we highlight specific body pedagogics (Shilling, 2017) and work (Crossley, 2005; Mauss, 1979) through which actors are socialized and maintained in practice. However, we bring additional dimensions to it by emphasizing that such bodywork is an integral part of the practice and not just restricted to learning it. Earlier studies (e.g. Müller, 2018; Potter, 2008) have examined bodywork in terms of the transformations it aims to produce and have thus framed it as preparatory to practice. We add to them by showing that bodywork goes further and is a component of the practice itself. On the one hand, it only takes on meaning and value within the practice and is thus part of it. On the other hand, it also persists as standard for accomplished practitioners. It is therefore not reducible to a transitional entry phase. Besides and in our case, being part of an organizational practice, bodywork is structured by the organization in time and space, in content and in the

resources made available for its completion. It is not left to individual initiative, nor is it directly dictated by practice in general. In between these two levels, the organization structures bodywork as a taken-for-granted arrangement that practitioners naturally engage in.

In this respect, our study offers two additional contributions to literature. First, it reveals the importance of the organizational dimension of practice. Although present in the background of previous studies on the bodily aspects of practice, the organizational factor was not specifically considered (Hassard et al., 2000) and the focus was on the individual level. Many studies in the fields of sport, culture, medicine, or the army (e.g. Lande, 2007; Müller, 2018; Prentice, 2007) investigate practices that are undisputedly organizational and linked to hierarchical and organized contexts, though without directly taking this dimension into account. One of the contributions of our study is therefore to explicitly bring this organizational dimension to light and show that organizing and organizational practices do structure bodies. Of course, since the case we studied concerns the French Air and Space Force, and moreover an established squadron with strong rituals, arrangements are even more formalized, rendering them all the more visible. We cannot reasonably assume that they would be as obvious in all other contexts. That they remain partly or fully hidden in other contexts does not mean, however, that they do not exist, perhaps under less visible, but potentially equally significant forms. Further research will therefore be necessary to investigate this avenue.

Second, organizational studies that have recorded the influence of the organization on bodies have often done so through the Foucauldian lens of discipline and normalization (e.g. Godfrey et al., 2012). The kind of practice-oriented bodywork that we highlight here is partly different from the forms of body disciplination mentioned in those studies. While bodywork certainly structures bodies in coordination practice, it does not aim at normalization. Instead, we show that idiosyncrasies are cultivated through training and sensitizing, which enhance and develop bodies instead of limiting and levelling them. Distinguishing, especially through imprinting, emphasizes this enhancement and contrasts it with the normalization of bodies. Other recent studies (e.g. Viteritti, 2013) allude to the development of sensory skills but rarely differentiate this from disciplining bodies. Admittedly, in the case we analysed, expert military pilot bodies are already disciplined and structured. As a matter of fact, this is precisely what enables us to differentiate between types of organizational work on bodies. In our case, training, sensitizing and distinguishing act on already socialized bodies to achieve something more. Therefore, our study suggests that organizational bodywork does not only aim at discipline and conformity; it may also concern the development and display of uniquely sensitive and attentive bodies. Our study only provides initial insights in this respect, however, and further research is necessary to investigate this avenue. Moreover, sensitizing through the 'music' is highly specific to the setting we investigated; in other organizations, it is likely to take other forms. Further research will be necessary to explore this possibility. More broadly, it will be useful if future studies examine and assess bodily dimensions of coordination in other contexts. It would not come as a surprise if these aspects were particularly salient in organizational contexts that involve the body, such as the arts or healthcare. Nonetheless, we would also argue that the variable significance of bodies in different types of organizational contexts and practices would be one of degree only, since all bodies in all organizations are, one way or another, engaged in social-organizational life and, therefore, structured by and for organizational practices.

Conclusion

Notwithstanding its import, previous literature on coordination has tended to focus on knowledge, communication and cerebral activities, thereby neglecting the role of the body. The significance of bodies in practices has, however, been emphasized in the social and organizational science

literature. In this light, considering bodies is necessary to provide a holistic account of organizational coordination practice. Our study revealed that organizational coordination practice is incorporated in bodies through training, sensitizing and distinguishing.

We contribute to the literature on organizational coordination practice by showing that coordination practice structures actors' bodies in multiple ways and by revealing the underlying organizational bodywork. Our study is just an initial step towards the examination of actors' bodies in organizational coordination practice though. Our results call for further investigation, especially since we prioritized the significance of the case over its representativeness, in line with the imperatives of our practice theory-based approach. The incorporation of organizational coordination practice in bodies could also be explored in more detail in other contexts. In addition, future studies could address this question across various expert domains since our study only explores coordination within a single domain. How the social embodied relates to coordinating technical skills and expertise across domains remains an open question.

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Notes

1. We use codes to refer to pilot interviews (P1 to P7), pilot interviews extracted from videos – public, documentaries – and radio broadcasts (PV1 to PV10), direct observations (DO), video observations (VO) and archival documents (AD).
2. G-force (for gravitational force equivalent) is a measure of acceleration. Positive g-forces cause a perception of weight. For example, when pilots endure +7 g, they experience a force equal to seven times their own weight. Conversely, a negative g-force results in a feeling of weightlessness.
3. 'Diamond' refers to a signature aerobatic figure of the PAF.

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