'No elephants today!' Recurrent experiences of failure while learning a movement practice

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ABSTRACT

"The move feels odd and – accompanied by a loud thud – both of my feet crash on the floor.... Jokingly, we say that maybe we are elephants" (fieldnote, handstand class, 28 March 2019).

Drawing on ethnographic data, and integrating theoretical concepts from the sociology of practice and cognitive science, we argue that learning and performing movement practices involves cyclical experiences of success and regression. This is unsurprising to most people who have tried to learn a new movement practice but is widely ignored in many concepts of practice and skill learning which emphasise improvement and mastery over recurrent experiences of regress. Focusing closely on handstands classes as they actually happened, we examine the roles of exercises, objects and other people within the socio-material learning context in enabling novices to work with failure, rather than fearing it. Our study reveals the non-linearity of learning a movement practice and the understudied benefits of two novices engaging in learning together.

Keywords: Sociological practice theory, movement control, skill, ethnography, learning, practical reflexivity, failure.

CHAPTER

Meredith [teacher] announces that we're about to finish the warm-up.[1] *I'm tired already and checking the time. 45 minutes to go. Meredith tells us to pair up with a partner to move through*

the circuit of exercises. Kath and I start at a station where we are meant to lift into an L-shaped handstand while using a pile of thick soft mats to support our feet. This is tough for me today. Meredith and Kath both tell me that I'm not handstanding straight and I'm hollowing my back. My arms and shoulders start burning and I feel frustration rising in me. Last week, this exercise felt much easier, and in general, I enjoyed class much more. Today I just wish to go home; my body feels heavy and immobile. [...] We proceed to the next station where we're supposed to cartwheel from a vault box to dissolve our handstands. Kath encourages me to give it a try first. The move feels odd and – accompanied by a loud thud – both of my feet crash on the floor. I look at Kath who's smiling but looking sceptical. I feel embarrassed about my collapse and I'm happy that I have her here to share that experience. She helps the learning process by making me calm with her composure. Jokingly, we say that maybe we are elephants.

Kristina Brümmer, fieldnote, handstand class, 28 March 2019.

Kristina lands the cartwheel out of handstand move.

Kath: 'No elephants today!'

Kristina: 'No elephants!'

I try to cartwheel out on my less dominant side.

Kath: 'A small elephant! I have an elephant on this side, but not the other side.'

Kristina: 'Mine's on this side!'

Kath Bicknell, fieldnote, handstand class, 11 April 2019.

Introduction

These fieldnotes come from an exploratory ethnographic study. In 2019, the authors of this chapter, Kristina and Kath, undertook weekly 'Handstands Foundation' classes at a movement school in Sydney, Australia, for six weeks. Our motivation to join the class was academic and personal alike. Experienced in other movement and gymnastic practices, both of us were eager to try a new work-out together in our free time. But as it was a two-month research stay that brought Kristina to Sydney, we also intended to render our handstanding experiences productive for theoretical reflections on the learning of movement practices. We picked the class due to its agreeable timeslot and location and without much knowledge about its organisation. The class was open to learners of every level of proficiency and bookings could be made on a casual basis. The classes aimed to teach, as the school's website put it, 'foundations to achieve a strict handstand.' The basic version of the strict form we learnt required us to align all body parts in a straight posture: wrists, shoulders, pelvis, and feet must form a continuous line for the body to be able to stand upside down for a certain amount of time. Exercises included training drills to strengthen and condition our wrists, shoulders, core, overall bodily awareness, and our sense of balance and alignment.

In this chapter, we do not tell the story of how we successfully learned a 'strict handstand'.[2] After six weeks of classes and occasional practise between them, we were both able to hold an unsupported handstand for a few seconds, but only sometimes. We found cyclical experiences of success and regression to abound in learning. This is unsurprising to most people who have tried to learn a new movement practice. By contrast, academic studies of skill learning and concepts of practices tend to emphasise ability, improvement and mastery (Bicknell 2021, Boll and Lambrix 2019). Elaborating on the 'elephant episode' sketched in the fieldnotes above empirically and theoretically, we focus on how two novices, ourselves,

experienced and dealt with fluctuation and failure when learning a movement practice. Limiting our analysis to data from this initial fieldwork, our aim is to highlight the beneficial roles of objects, learning exercises and other people in the learning context – the ecology of skill – in encouraging novices to work with failure, rather than fearing it.

Integrating sociology of practice and cognitive theory

Our theoretical approach is informed by two different yet compatible perspectives: approaches from the sociology of practice and cognitive science that share an interest in studying human activities (including learning) as embodied performances. Drawing on sociological practice theories, we conceive of a strict handstand as a particular cultural practice. By 'practices' we mean, following Schatzki (2002: 72), historically evolving, recognisable forms of activities or 'bodily doings' characterised by certain demands and requirements as well as specific socio-material arrangements which provide the context for their performance. The exact forms of practices can be more or less rigidly defined. While many everyday practices allow for a certain variability of performance, others (such as sports practices) are strictly codified, defining precisely which bodily doings count as functionally and aesthetically adequate realisations. From a practice sociological perspective, learning a handstand in a movement school is a process of learners incorporating the idealised form of the practice in a specific socio-material context arranged for this exact purpose.

Due to an increased interest in mechanisms of social order and reproduction, there is a dominant tendency in sociological practice theory to view practices as routine activities. According to Bourdieu's approach, practices proceed smoothly via practitioners' embodied practical knowledge or 'practical sense' (Bourdieu 1990: 103) and are carried by 'able' bodies

that learn to adhere to a practice's requirements and demands through habitualisation (ibid., see also Reckwitz 2002). In his late work, the *Pascalian Meditations* (2000), however, Bourdieu relativises the equation of practices and routines by talking about moments of failure. Using the example of a tennis player performing a stroke gone wrong, he writes:

> [...] habitus has its 'blips', critical moments when it misfires or is out of phase: the relationship of immediate adaptation is suspended, in an instant of hesitation into which there may slip a form of reflection which has nothing in common with that of the scholastic thinker and which through the sketched movements of the body [...] remains turned toward practice and not towards the agent who performs it (Bourdieu 2000: 162).

Bourdieu describes 'practical reflexivity' as a form of movement control operating in moments of failure. He introduces it not as a cognitive rationality or conscious thought, but as an ability embedded in practice. This allows practitioners to monitor, critically evaluate, and correct their own doings drawing on embodied knowledge of the practice performed as well as a kinaesthetic 'feel' for and awareness of what went wrong.

The concept of practical reflexivity seems instructive for gaining a better understanding of the elephant episode portrayed at the beginning of this chapter. But as Bourdieu only mentions practical reflexivity once, the concept remains vague. We now present ideas from cognitive theory that enable us to better grasp the forms of reflexivity and movement control that Bourdieu only hints at.

'Hybrid' theories of skill detail the intertwined roles of cognition and motor action during skilled movement and are a rapidly-growing area of interest in cognitive science (see Pacherie and Mylopolous 2020 for a recent overview). Alongside experientially-informed

accounts of skilled movement (Sutton and Bicknell 2020), hybrid skill theorists provide evidence against influential models of skilled action that have long emphasised a lack of cognition in expert movement practices (e.g. Anderson 1982, Fitts and Posner 1967). Christensen et al. (2016), for example, describe the productive roles of cognition in experts' experiences of movement practices, which include adapting to novel or challenging circumstances. These authors claim their 'Mesh' theory of skill, 'develops further a theoretical explanation for the persistence of cognitive control in advanced skill, and characterises a transformation in cognitive control to more efficient forms that involve substantial non-linguistic structure' (p. 63). Cognitive control, in this view, incorporates embodied, situated awareness via a range of multimodal sources, and the ability to use such awareness to guide movement. One example of strategies for movement control used by advanced practitioners are techniques Sutton (2007) describes as instructional nudges, cues, or compressed practical talk. These may be substantially reduced forms of longer utterances that guide movement, or distinctly non-verbal; sights, sounds, sensations, touches (Bicknell 2011, Brümmer and Alkemeyer 2017, McIlwain and Sutton 2014).

Initially motivated by debunking the notion that cognition is largely absent in expert experiences of doing, hybrid skill theorists have focused on advanced experiences of skill. We suggest that to better understand how movement control *transforms* into efficient forms in experts, further attention is needed on how these processes develop in the first place. After all, the early stages of learning are characterised by novel and challenging circumstances. The development of abilities for dealing with such circumstances are often crystallised in moments of failure, regression, near-misses and surprise success.

Combining concepts from sociology of practice and cognitive science provides a fuller picture of learning a movement practice than either approach alone. The detail and emphasis

on the roles of cognition in adapting skilled movement to suit unique challenges and contexts provide a theoretical foundation for exploring strategies that help not only experts but also novices deal with, or respond to, the unstable moments, or blips, in practices which Bourdieu alludes to but does not develop. Integrating Bourdieu and Mesh, we understand movement control as an embodied, multimodal ability of practitioners to monitor, (critically) evaluate, and guide their own bodily doings. Careful consideration of the socio-material contexts in which the learning of a movement practice is situated, meanwhile, can promote a clearer understanding of how movement control is developed and scaffolded.

A collaborative ethnographic study of f(l)ailing at handstands

Our analysis of how novices experience and deal with failure feeds from empirical data we gathered in a 'short-term' ethnographic study (Pink and Morgan 2013) in which we investigated the learning and performing of a movement practice in its 'natural habitat': a movement school. By focusing on learning as it actually happened, our study provides a much-needed counterpoint to abstract theoretical studies or modified, experimental task environments. These are dominant approaches used to study skill learning in cognitive, exercise, and sport science as well as the philosophy and psychology of skill. Compared with other ethnographic studies on sport and movement learning, and ethnographic approaches emphasising longer-term immersion in the learning context (e.g., Wacquant 2004, Downey, Dalidowicz and Mason 2015), the six weeks of our participation in class is a short time span. Given our interest in the very early stages of learning, the short-term approach was appropriate. We augmented this approach through two ethnographers working collaboratively to gather data, a process that enabled us to combine and compare observations and perspectives. Our exploratory study does not cover the entire process of learners becoming able to perform a 'correct' handstand but

instead examines events within this timeframe to highlight the roles of fluctuation and failure in the very early stages of learning.

In the first three weeks of class, we engaged in open, unfocused participatory observations. We each sat down immediately after class to note our impressions and perceptions in independent fieldnotes. We chatted occasionally about what had happened in class, but we only began to jointly analyse our writing in week four. We exchanged our fieldnotes and identified some common themes. We both wrote repeatedly about moments of success and failure: of progress and regress, and the cyclical feeling of being 'in control' of our bodies sometimes, while our bodies felt obstinate at others. We therefore focussed on the roles of failure in supporting success in the remaining classes and developed the 'elephant episode' for this chapter as it provided an excellent example for further exploring the relationship between failure and success.

Empirical analysis

In the following sections, we analyse the events that informed the fieldnotes at the beginning of this chapter. Inspired by practice sociologies, we first look at the socio-material arrangements of the exercises in which classes were organised and our learning was situated. Next, we describe the spontaneous development of 'being/having an elephant' as a diagnosis of failure in the first situation and as a cue for landing lightly in the second, before examining the rich facets of this short expression as a multimodal form of movement control. Lastly, we discuss why it is crucial and fruitful for concepts of (learning) movement practices to take into account moments of failure, regress, and bodily obstinacy and suggest conceiving of learning as a non-linear process.

Socio-material arrangements of the handstands classes

The handstand classes involved two teachers, Meredith and Josh, as well as approximately 12 learners. Classes were structured according to a recurring pattern: for the first 15 minutes, everybody gathered for a warm-up to prepare for the following 45 minutes of exercise. The exercises designed for incorporating the 'strict' form we were learning took place at different stations involving diverse artefacts as supporting structures: floor mats, thick soft gym mats, handstanding chairs, vault boxes, walls. They provided a means for helping us develop the several physiological components and systemic adaptations that are needed to support an effective handstand (Downey 2012), bit by bit. The teachers usually gave a short introduction to each exercise: while Josh performed them, Meredith provided a verbal explanation and used Josh's body as an object of demonstration, pointing to certain parts that the learners should pay special attention to while executing the respective exercises: push through the tips of the fingers and the palms to avoid collapsing into the wrists, knit together between the bottom of the rib cage and the top of the pelvis to avoid arching the lower back. This procedure echoes Goodwin's (1994) observations about the role of experts educating the attention of those as-yet-unfamiliar with the subtleties of a practice. Using the term 'professional vision' to describe the basis as well as the goal of such a process, Goodwin highlights the phenomenological salience the procedure promotes regarding what a learner may observe in the learning environment. Through increased awareness of fingertips and palms, and of abdominals and backs, among other muscles, regions and joints, each exercise in the handstand class educated our attention to kinaesthetic sensations and shapes according to the demands of the aimed-at practice.

Within the handstands classes, arrangements of artefacts further educated our attention and isolated specific body parts and muscle groups. They reduced the complexity of handstanding and guided our awareness accordingly. In one exercise, for example, we lay on

top of two thick mats on our bellies, placing our hands on the floor and practising the positioning of hands, arms, shoulders, and 'knitted' torsos while relieved from controlling our lower bodies. In another exercise, a special chair-shaped object with a hole in the seat area provided support for our inverted upper bodies from the shoulders. This allowed us to focus on finding the right position for our torsos, pelvises, legs, and feet and to experience the sensation of handstanding without the typically-required strength from the arms. In another exercise, the wall provided support: we had to walk our feet up as high as possible until we could ideally detach the feet to stand freely, thus developing awareness of the positioning of, and muscle activation around, our hands, wrists, shoulders and torsos without having to support the full weight of our bodies or be able to maintain balance on our own. We went through the circuit of exercises in pairs. While one engaged in performing the exercise, the other was meant to observe closely, give feedback on the accuracy of the movements, help bring the body into the expected posture, and provide additional support. Meredith and Josh joined the pairs to supervise this mutual process by supporting the 'performer' through verbal cues and physical manipulations and by helping the 'student-teacher' scan the other's body to identify problems and find suitable instructions.

Understanding the first appearance of elephants in the room in order to understand the second

One of the benefits of an ethnographic method is the ability to trace connections between observations 'at a time' and 'over time'. The second elephant moment sketched at the outset happened in the sixth week of attending class at a station designed for learning to dissolve a handstand by cartwheeling away from the leg support provided by a vault. When we tried a similar exercise two weeks earlier, Kristina's feet had made a loud thud as they hit the ground.

We laughed at the thud and said that maybe we were elephants. We both identified the thud as showing a lack of control before the landing.

The elephant moments signified a turning point in learning: we started identifying problems with our technique in the absence of the instructors pointing them out first. 'Individuals continually endeavour to improve their own performance and often draw on multiple role models of expertise,' write Downey et al. (2015: 194). In the elephant moments, role models for a desirable landing included the smooth, elegant control of the instructors during their demonstration of the task, as well as some other class participants as they practised the exercise around us. Additional role models came from past experiences of alternative movement practices. The elephant experience contrasted with Kristina's memorised feel of lightness evoked by similar gymnastic movements she had accomplished with ease as a teenager. Kath was reminded of being taught by a physiotherapist to 'land silently' when jumping to absorb the impact of hitting the ground.

Drawing on multiple images and experiences, the second elephant moment shows how we were able to draw on our elephant diagnosis to guide how we approached the next attempt. Metaphorically, 'being' an elephant one week encouraged us to try to not be an elephant when landing the cartwheel move in later weeks. In the second fieldnote, we were practising the handstand-to-cartwheel move, alternating between left- and right-sided dismounts. Our aim was to land silently as a way of guiding a more elegant, controlled technique. As we joked about it, two weeks after the original diagnostic moment – 'No elephants!', 'I have an elephant on this side!', 'Mine is on this side!' – the elephants shifted from something we 'were' to something (helpful) we 'had' and could potentially shed. The exchange was one part compliment, one part acknowledgement of work still to go.

The multimodal scaffolding of movement control in the early stages of skill learning

The elephant episode exemplifies the presence and the development of learners' ability to monitor, evaluate, and guide their own performance. We previously discussed the role of cues and instructional nudges in guiding complex movement sequences in experts as an example of a non-linguistic, or linguistically compressed, form of movement control. Our shared experience of the elephant episode provides insight into the modalities and constitution of such control in a novice context. There is a *bodily feel*, or kinaesthetic awareness, of heaviness at the moment of the feet hitting the floor. There is an *auditory cue* from the heavy landing at this exact moment. The cue is shared between the learners in a spontaneously, *verbally uttered metaphor* of being an elephant. This metaphor and the imagery it provoked (later: 'having' an elephant on one side, but not the other) contains an *affective element.* It is humorous, and as Kristina's fieldnote shows, it adds a sense of enjoyment to the (frustrating) experience of failure. In the first elephant occurrence, the metaphor articulated a gap identified by the two learners between the actual bodily performance and the requirements of the practice through the sound, sight (for the observer) and kinaesthetic 'feel' of landing (experienced directly for the performer and empathetically or intercorporeally (Brümmer and Alkemeyer 2017) for the observer). As such, it defined a moment of a shared, multimodal, practical reflexivity in Bourdieu's sense, with the two novices critically acknowledging that something went wrong. In the second occurrence, the metaphor functioned not only as an instance of reflecting or evaluating a movement gone wrong but as a feed-forward mechanism. The elephant playfully transitioned from something we were to something we could presumably get rid of. Trying not to be, or have, an elephant assisted us with the implementation of the movement far more effectively and holistically than paying explicit attention to each individual component of the movement. This observation aligns with studies that demonstrate that learning through analogies ('like a…' – or 'not like' an

elephant in this case) and metaphors is a useful technique for novices in other domains as well (Brümmer 2015, Capio et al. 2020). A key feature of our case is the spontaneous, idiosyncratic development of the analogy between the two learners, rather than the analogy coming from a coach or another expert practitioner.

The socio-material arrangements of the handstands classes encouraged the development of movement control from the first lesson. It was shaped by the teachers' verbal instructions, commented demonstrations, their verbal cues and touches, and the different learning stations which discriminated certain aspects of the to-be-learned practice as well as distinct aspects of the learners' bodies and attention. It was shaped by having learners work together in pairs, teaching them to closely observe their partner's body-in-action, and having them identify problems and find instructions and feedback. It was further developed in arrangements of objects and exercises which isolated key aspects of the aimed-at handstand practice and supported learners to selectively focus their attention on selected aspects of the practice only. Our findings suggest that while movement control may transform to more efficient, non-linguistic forms with experience, as suggested by Christensen et al. (2016), some of these features of movement control may be found at very early stages of learning as well; forming early rather than (only) *trans*forming later. This indicates that it would be productive to track the development, fine-tuning and adaptation of multimodal forms of movement control over much longer timescales in a range of practitioners and practices. We suspect that multimodal strategies for movement control developed in early stages of learning foster a reliance on, and trust in, similarly efficient forms of control for scaffolding movement at all levels of skill – particularly in challenging or high-stakes situations, for error correction, and in future stages of development.

Non-linearity of learning and obstinate bodies

The elephant episode poses a challenge to any theory that conceptualises learning as a linear process of improvement. Experiences of failure and bodily obstinacy were not only abundant in our learning but an anticipation of failure – and the regularity of failure – was built into the classes. The cartwheeling exercise did more than enable learners to dissolve a handstand elegantly. It fostered the skills needed to land safely if we did a handstand without support and started to wobble sideways. The cartwheel move trained learners in a technique to prevent injury or uncontrolled collapse if something went wrong and accounted for the likelihood of problems at unexpected times. The exercise played a crucial role in helping us develop abilities to deal with the possibility of failure, as well as the fear of failure. Again, this affective element is important, as fear or worry can lead to tension, stress and an inhibited movement, all of which can obstruct performance (Bicknell 2010, Brümmer 2015).

The first elephant moment occurred a week after a rather successful session and further points to the importance of recognising regression as part of the learning process. When the elephant first appeared, both of us were extremely tired. Kristina's body felt immobile and somewhat heavier than usual. She experienced her body as not obeying her will and not performing movements accomplished with much more ease the week before. On the week of the second elephant moment, it was Kath who was struggling more – her body felt 'locked up', her proprioceptive awareness was much poorer than normal. There are many (unremarkable) factors that can lead to dips, blips and regression: fatigue, stress, old and new injuries, or a lack of focus, among others. Regression and imperfection are inevitable. Ongoing success requires an ability to work with failure rather than against it.

We take these observations to suggest understanding movement learning as a dynamic and unstable process. Moments of failure and regress not only abound but must be prepared for through the development of particular skillsets (in this case, techniques to dissolve a

'wobbly' handstand alongside abilities to monitor and attend to one's own body and ways of moving). Bodies cannot be manipulated and 'used' at will. Instead, physical states such as pain, injury, or fatigue can obstinately get in the way of drilling and moving the body according to certain pre-set standards, demands, and requirements. This supports and extends Bicknell's (2021) argument that an important component of skilled performance and movement control is being able to monitor, adjust, and adapt to fluctuations in physiological and psychological capacities; that maintaining an awareness of the vulnerability of our bodies in precarious circumstances is essential for staying safe. Our findings also put pressure on those sociological theories of practice which claim that practices are carried and performed by 'hyper-able' (and adequately socialised) bodies, without often taking into consideration, however, that these bodies are living bodies with physical weaknesses and vulnerabilities (see also Brümmer, Alkemeyer and Mitchell in press).

Conclusion

We have analysed how two novices experienced and dealt with failure and fluctuation during the learning of a movement practice. Drawing on ethnographic data, and integrating theoretical concepts from sociology and cognitive theory, we argued that learning and performing movement practices is infused with awareness, (practical) reflexivity, and working with failure, not against it. Expanding claims by Christensen et al (2016), we argued that efficient, non-linguistic forms of movement control are not only features of expert performances, but evident in novices' doings. By focusing closely on handstands classes as they actually happened, we demonstrated how this form of control may be actualised, scaffolded, and distributed across the different human and material elements present in the learning context. We found movement control not only important for increasing skilfulness at performing a practice (or increasing

with such skilfulness), but also as something developing through and motivated by failure. Movement control, however, does not guarantee skilled performance in any instance of learning. Our data indicate that learning is characterised by ups and downs, by progress and regress; it is a process in which inabilities and obstinacies may get in the way of the purposeful, practice-specific formation and use of bodies.

In addition, we illustrated the importance of collaboration between two novices for learning and, thus, the role of learning companions. Engaging in the handstands classes together as novices fundamentally helped our learning: modelling, supporting, and observing each others' bodies enabled us to grasp the details of the aimed-at practice better; seeing the other perform the practice and being corrected by the instructors helped us attend to our own bodies in new ways; sharing negative experiences, talking about failure, articulating disappointed expectations, or joking about them provided a way for us deal with these experiences and to muster the continuous motivation required for learning the complex practice. These observations challenge top-down conceptions of movement learning, which emphasise the roles of experts in training novices. Our study provides an instructive starting point for further investigating how learning and performing practices might also profit from collaboration between equally inexperienced companions – and, in some cases, their imagined, long-trunked sidekicks.[3]

Notes

[1] Teachers' names have been changed for anonymity.

[2] We use the term 'handstand' because this is what the class was called. Some practitioners prefer the term 'hand balancing' (Damkjaer 2018) or 'hand controlling' (Handstand & Fitness

Coaching 2020). Gymnastic, acrobatic, and capoeira handstands, among others, have different aesthetic and functional requirements which necessitate different forms of awareness and control (Downey 2012).

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