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A Response to Myszka, Yearby & Davids

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“It is difficult to understand the universe if you only study one planet”.: A Response to  
Myszka, Yearby & Davids

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## **ABSTRACT**

A recent paper in this journal presented ideas and statements from the legendary martial artist Bruce Lee and tried to demonstrate how his ideas “align with contemporary theorizing in movement skill acquisition”; specifically, with the Ecological Dynamics approach. In this paper, we offer a critical consideration of their arguments, suggesting that there are other considerations, both complementary and contradictory, from older philosophy and well established practice, that challenge the uni-theoretical perspective they presented. In doing this, we aim to stimulate debate and encourage a wider, more nuanced view for scholarship and practice.

## INTRODUCTION

In a recent discursive paper, Myszka et al. (2023) explored how key ideas and concepts of Bruce Lee (hereafter BL) might have aligned with current theorising in movement skill acquisition. In doing this, the authors proposed that BL's philosophy anticipated, or even conformed specifically to, principles of the ecological dynamics framework. The authors used this framework alone as a basis to (re)interpret his actions and intent.

These ideas are interesting and, in some instances, there may well be alignment between ecological dynamics and BL. Importantly, however, as applied researchers of skill acquisition in real-world settings (pracademics), we think it is important to explore these claims through a pragmatic, critical lens. Indeed, applied settings are often dynamic and complex, typically requiring the integration of diverse bodies of knowledge and practice for a range of reasons and purposes. As such, the adoption of more balanced views (see Collins et al., 2022) through an integration of multiple theoretical perspectives, can offer more useful knowledge, explanation and application to suit these circumstances. In short, it depends on context, condition, level and challenge as to which theories offer the most parsimonious explanations and, importantly in the present context, most appropriate advice for practitioners. In light of this, we are concerned where papers promote a uni-theoretical perspective, even when this is presented as an alternative but without critical reflection on complementarity against essential delimitation. This seems particularly important when claims are made against an iconic performer whose statements which, due simply to history, reflect none of the current debate. In short, the authors have offered post hoc rationalisations without behavioural triangulation or even original interview data.

Such concerns are also important to discuss as open and critical debate represents an essential component of academic study. As noted by Jones et al. (2022), there is need for

more commentaries in sport that highlight diverse positions and stimulate meaningful and constructive dialogue for scholars and practitioners. With that in mind, we hope that the current paper makes such a contribution to this critical debate, if not for those authors, then at least for practitioners seeking to deeply consider the underpinning rationale of their practice.

The commentary that follows raises a number of concerns regarding misinterpretation, overly global generalisations and potential inaccuracies with the broader world of martial arts that are apparent within the Myszka et al. (2023) paper, hereafter abbreviated to 'BW' from their main title, *Being Water*. We raise these as active researchers in skill acquisition but also, in the case of the first author, as a lifelong student of matters martial, both the arts and as a professional soldier. This dual approach looks back to older history when martial arts had some 'rather serious consequences...that is, death!'. In doing so, we contrast the cited works of BL, an undoubtedly talented and deep thinker, with those of others, most particularly Musashi Miyamoto, sword saint, master of strategy and tactics, philosopher, artist and much cited author (e.g., *A Book of Five Rings*, 1645). We present our commentary in three sections: (1) antecedents, (2) misconceptions and (3) (alternative) implications for practice.

### **Part 1: Antecedents**

There is no doubt that high-level performers in martial arts (and we include combat in this categorisation) execute many actions on autopilot. It would be odd to imagine BL thinking through how to kick in the middle of a bout or for a soldier to try to remember a stoppage drill when his weapon fails in an assault. Both these actions have long been learnt, practised under pressure and automated, so pressure proofing them for use as a sole action or as part of a higher order, more complex tactic (Carson & Collins, 2016). In all martial situations of which we are aware, these basic techniques are taught, drilled, then pressure tested to offer the performer with effective tools that can be adapted to meet the current

challenge. What BW describes as more passive learning environments are essential precursors to building a vocabulary that can be drawn upon when needed. Indeed, such foundations will enable performers' creativity and originality for expanding their solution sets.

This is surely the basis of BL's experiences in his early (and traditional) training as well as the majority of combat training systems around the world. Only then are performers equipped to 'sensitively connect to dynamic information, make decisions in direct and online fashions, and flexibly adjust their actions, coordinating an integrated movement solution that' can match the specific demands of the to-be-solved problem (Myszka et al., 2023, p. 7). This seems to us to be characterised by BL's statement 'I fear not the man who has practiced ten thousand kicks once. But I fear the man who has practiced one kick ten thousand times' (Lee, 2020, p. 104), even though the authors in BW (based on conjecture) modify this to fit their own philosophy. In short, repetition *with* repetition is an essential precursor to subsequent, more fluid and open movement (Carson & Collins, 2020). Discovery learning is not a great option when learning skills for execution under pressure, such as emergency drills in freefall (see also Mayer, 2004).

In summary, the need for varied practice has been enshrined in the martial arts for hundreds of years; well before BL or BW. As such, when Myszka et al. (2023) stated that an ecological approach:

would encourage coaches and sports practitioners to (a) seek out pertinent ideas from other disciplines; (b) put them to the test in their sphere of practice; (c) assess their integration and functionality in understanding skilled movement coordination; and (d) determine whether and how these ideas may have a place within one's professional practice.

We hear the Musashi quote ‘you must understand that there is more than one path to the top of the mountain’. This being the way he, and many martial artists before or since have trained; seeking out challenges from others to refine their skills. Interestingly, this approach is enshrined in the ‘training camps’ that follow most major judo tournaments, where judoka from different nations can practise against each other. This is not solely an ecological approach but rather, is common practice.

## **Part 2: Misconceptions**

Reflecting the ideas presented above, we suggest a need to more carefully examine several key tenets of the ecological approach; we start with the idea of repetition without repetition (Bernstein, 1967). We would agree that:

too tightly adhering to idealized models of skill execution or a technical model for a movement skill could potentially rob athletes of their authenticity by overly fixing and freezing DoF across the dimensional levels of the human movement system (i.e. perceptual, cognitive, and motor)” (Myszka et al., 2023, p.12).

Importantly, however, we are not sure that this is in any way a characterisation of many martial arts. Consider the need for more or less consistency across a range of techniques. There are relatively few alternatives to sorting a stoppage on a weapon or the basic principles of a front kick. In both cases, mechanical principles dictate a stylised process which needs to be embedded. Of course, schools will vary as to the ways in which basics are taught; whether a punch starts from beneath the armpit or from the hip for example. Importantly, however, *all* will follow sound mechanical principles in where to drive from (i.e., rear foot, then hip then punch). As another iconic figure stated, “you cannae change the laws of physics!”. As movements and techniques become more complex however, there is an inherent and essential need to recognise that practice (when well designed) will drive the

performer towards their own, increasingly optimum variant. This state is guided by the informed teacher but is based on a progression from inherent principles. Fundamental study of motor learning and control from a variability perspective has shown different movements components across the entire skill to co-vary depending on their level of contribution toward achieving task success (Latash et al., 2010). Specifically, with learning (and during performance), movement synergies are formed between more important components that remain more consistent and less important components that are ‘freed up’ to enable the adaptive application of effective technique (Hamacher & Zech, 2018).

Variation in training is extremely supportive of this and is the basis of martial arts randori or free practice where practised techniques are honed in the fire of open combat. To quote Musashi, ‘you should not have a favourite weapon. To become over-familiar with one weapon is as much a fault as not knowing it sufficiently well’. So, if we may copy BW in cheekily adjusting a saying, what is needed is ‘repetition with *some* repetition (especially early on)’.

Another misconception common in the ecological approach is denying/questioning (depends on which author is consulted) the importance that the martial arts, indeed sports in general, place upon mental representations through approaches such as mental practice. We would contend that perception-action coupling (Stone et al., 2015) is but one of several components that must be catered for in martial arts. Indeed, and echoing our earlier point on how more basic elements are operating ‘automatically’, BL highlighted the parallel need for tactical thinking: “during the time of actual fighting, one does not think of how to fight but rather, of the weakness or strength of the opponent, of possible openings and opportunities” (Lee, 1975, p. 189). We contend that this thinking is often taking place through consideration of internal representations (see Schack & Frank, 2021). For Musashi, such thinking was essential both prior to and within the fight. In his most famous duel, Musashi was scheduled



to fight another famous swordsman, Kojiro Sasaki, on the island of Ganryujima at 08.00. Characteristically, Musashi had carefully rehearsed both the strategy and tactics of the duel. He arrived 3 hours late, thereby allowing for a fast get away as the tide turned and for the sun to be in a position which he could use it to his advantage; plus, the added bonus of outraging his opponent. On arrival, he moved to place the sun at his back, then fatally wounded Kojiro whose strike was made against an opponent backed by bright sunlight. It is instructive to see this same thinking-through style employed by Muhammed Ali in his ‘rumble in the jungle’ with George Foremen. In the film ‘When we were kings’ (Gast, 1996), Ali can be seen pondering how to win in the first break, then deploying the tactic of ‘rope a dope’ for the next few rounds through use of external reaction to his opponent *and* an internal plan. We find it hard to think of sports settings where some internal plan, developed and operating to prime the direction of perception is *not* operating (see Bobrownicki et al., 2022).

The misconception is also apparent in BW, when considering the role of forms or kata. This style of practice develops fluidity of technique by linking moves together in combat appropriate routines, albeit stylised. As such, they match the boxing idea of developing combinations in anticipation of particular opponents. In all these cases, performers are encouraged to ‘see’ the opponent in their mind’s eye. As such, this style of practice offers performers with a vocabulary library of integrated combinations, preparing them for application in real fights.

As a final example, BW presents several misconceptions on the use of various training aids in the martial arts. BL will have made significant use of a dummy known as the ‘wooden man’ as a technical aid in his early training. The karate equivalent, the makiwara (a sprung board for striking), is an even less ‘representative’ practice. Both however are used for body conditioning (in the latter case, conditioning the knuckles and punching action) rather than as skill practice. Use of pads, bags and other such aids reflect a similar agenda. It seems

as foolish to criticise these ideas as it would be to suggest that athletes should not use gym training! Albeit that in both cases, good conditioning coaches will ensure a good fit between the exercise and the target skillset and the environment.

### **Part 3: Implications for practice**

It is always surprising to us when advice is offered as original that has existed for hundreds of years. Consider for example this statement from BW (p.13).

Some practical ways in which a practitioner may be able to channel more water-like adaptability within the performance of athletes, under the inhibiting, uncomfortable constraints of heightened complexity, pressure, anxiety, and fatigue, could include (a) requiring athletes to train or practice in less optimal environmental conditions such as wind, rain, snow, cold, or heat; (b) allowing the athlete adequate room to make more mistakes in practice; and (c) presenting highly difficult problems to athletes, such as facing more skillful opponents in highly dynamic scenarios that contain an abundance of information to detect to adequately coordinate movement solutions

To be clear, we are in no way challenging this advice; just the idea that it is a sole contribution of ecological dynamics. We would suggest that, from study and personal experience, this has been a feature of martial environments for several centuries!

### **Conclusion**

In concluding, we should stress our complementary rather than contrary view to the ideas expressed in BW. Indeed, we hope that our paper has shown an even older basis for several of the ideas they see as supportive of 'skill adaptation' (Araújo & Davids, 2011); ideas which we would largely endorse. We would suggest, however, that the most parsimonious explanations, and consequent implications, are best drawn from a wider

theoretical base, thus offering a more nuanced and perhaps accurate perspective. Our point is perhaps best made by our title...another quote from Musashi: “It is difficult to understand the universe if you only study one planet”. Can we encourage a wider view of issues such as skill acquisition as a way to true wisdom?

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