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JAMES VAUGHAN

SIMPLICITY VS. COMPLEXITY: A GUIDE TO TRAINING SESSION DESIGN



PDP LEAD RESEARCHER EXAMINES THE SIMPLICITY VS. COMPLEXITY DEBATE USING ONE OF THE GREAT QUOTES FROM JOHAN CRUYFF AND ASKS IF WE HAVE MISINTERPRETED ITS TRUE MEANING.

“Football is simple, but the hardest thing is to play simple football.”

Consider how this famous quote influences your training session design when the emphasis is placed here:

“Football is simple, but the hardest thing is to play simple football.”

Or here:

“Football is simple, but **the hardest thing is to play simple football.**”

I think this quote may have been wildly misinterpreted, football is a simple game – the rules are easy to understand – but playing football in a skilful, entertaining and creative way is, as Johan said, the ‘hardest thing’: Its complex.

In an unexpected tribute to our games greatest innovator – Johan Cruyff –

I was lucky enough to observe a modern innovator in Sweden late last month, the ex house DJ turned Swedish coach educator [Mark O Sullivan](#).

Before Mark's session we talked about co-adaptability, shared affordances, player effectivities and representative design: complex concepts that I struggle to keep track of at times. At one point I started to call co-adaptability, co-dependency – which in my dyslexic mind kind of made sense. (Unfortunately different terminology is used to describe similar things across many academic disciplines which can confuse things – however in this case it was my mistake).

After talking about one theory vs. another it was time to see the research in action. Mark took me through his session plan, a process that took all of three minutes (not very complex), he pulled out a pocket sized notepad and a pen and explained the session with a few simple diagrams: the session was elegant simplicity that embraced complexity. It actually reminded me of [Mark Uptons Twitter cover photo](#).

Embracing complexity (in the context of a coaching session) is creating an environment rich in varied, dynamic information: changes in time, space, challenge, emotion, agency, constraints, body positions and movement patterns to name a few things.

The quality and quantity of environmental information available to players is crucial to short term performance and long-term development. As coaches, we need to ask many questions, for example:

- Is the session realistic (does it have a representative design)?
- Is the space optimal?
- Are player's movements and body positions realistic?
- Are spaces changing and is the ball moving?

Players use this environmentally stimulated information to guide perception and action. Consider the quality and quantity of information received dribbling towards a static cone compared to a competitive, engaged and emotional human defender. Exposure to quality information coupled with a lot of (high quantity) trial and error develops players' ability to read the game.



Designing a session that incorporates everything above sounds complex, but it isn't. The elegant simplicity of Marks session was recognising that complexity is an innate part of the game. Environmental complexity is something our training sessions must embrace and be open to but not something we necessarily have to design into our sessions. ★₃

Developing skilful, adaptive, creative football players requires complexity – but the goal is not to design complex sessions. Our aim should be to stop stripping the environmental complexity away, stop creating unrealistic, overly simplistic drills. Or basing our session design on oversimplified football problems with no recognition of the diverse range of solutions.

As Joan Vila Bosch said at a recent seminar on the methodology of FC Barcelona, **football is the most complex game**. He's not talking about the rules; he's talking about the game's demands on our perceptual movement systems.

In my experience most people only recognise the first part of Johan's message – **Football is simple** – and end up missing his point; **the hardest thing is to play simple football**. Unfortunately this comes from (a now) world-wide desire to explain things and or reduce them to their simplest, most valid, reliable and tangible forms. In many minds a desire for simplicity rules over complexity.

The idea that football is simple may have become a worldwide *meme* that constrains, limits and inhibits the development of skilful, creative, adaptive players. ★¹

Memes are ideas that replicate: Spread by one person copying another (Tinning, 2012). Heylighen and Chielens (2009) liken memes and cultural traits to genes or viruses – transmitted from person to person.

The misinterpretation that ‘Football is simple’ could be considered a key socio-cultural constraint on the way we (coaches) think about football. The way we think about the game dictates our session design and the environment we create for young players.

“The very idea that football is simple may be the most influential socio-cultural constraint on the development of skilful, adaptive, creative players.”

The idea that football is a simple game suggests that the games many problems and challenges have simple solutions. This, in turn, suggests the coach’s job is to simply inform the players of these simple solutions.

I’d suggest the coach’s job is to produce realistic football problems and then assist (when and where appropriate and in an appropriate manner) players to discover the solution by guiding their attention towards key (developmentally appropriate) sources of information in the learning environment. This can be done by simple design and a good understanding of the latest research – check out one of [marks sessions plans](#) as a great example.

In the worlds of Joan Vila Bosch, head of methodology at FC Barcelona:
“Football is the most complex game there is.”

Mark seems to be someone who gets it: Playing what Johan called simple football is the hardest thing because it requires (environmental) complexity, it requires more skill, more decisions, a greater awareness and more courage than any other style of football.

To develop skilful, adaptive and creative players we must expose them to a complex and dynamic environment within our sessions. We must resist the worlds desire for simplicity and expose our players to all the complexity the game has to offer.

References

Heylighen, F., & Chielens, K. (2009). Evolution of culture, memetics. In *Encyclopedia of complexity and systems science* (pp. 3205–3220). New York: Springer.

Tinning, R. (2012). The idea of physical education : a memetic perspective. *Physical Education & Sport Pedagogy*, 17(2), 115–126.
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ABOUT THE AUTHOR



James Vaughan is a Co-founder of PDP and a PhD candidate studying culture, creativity and motivation in football.

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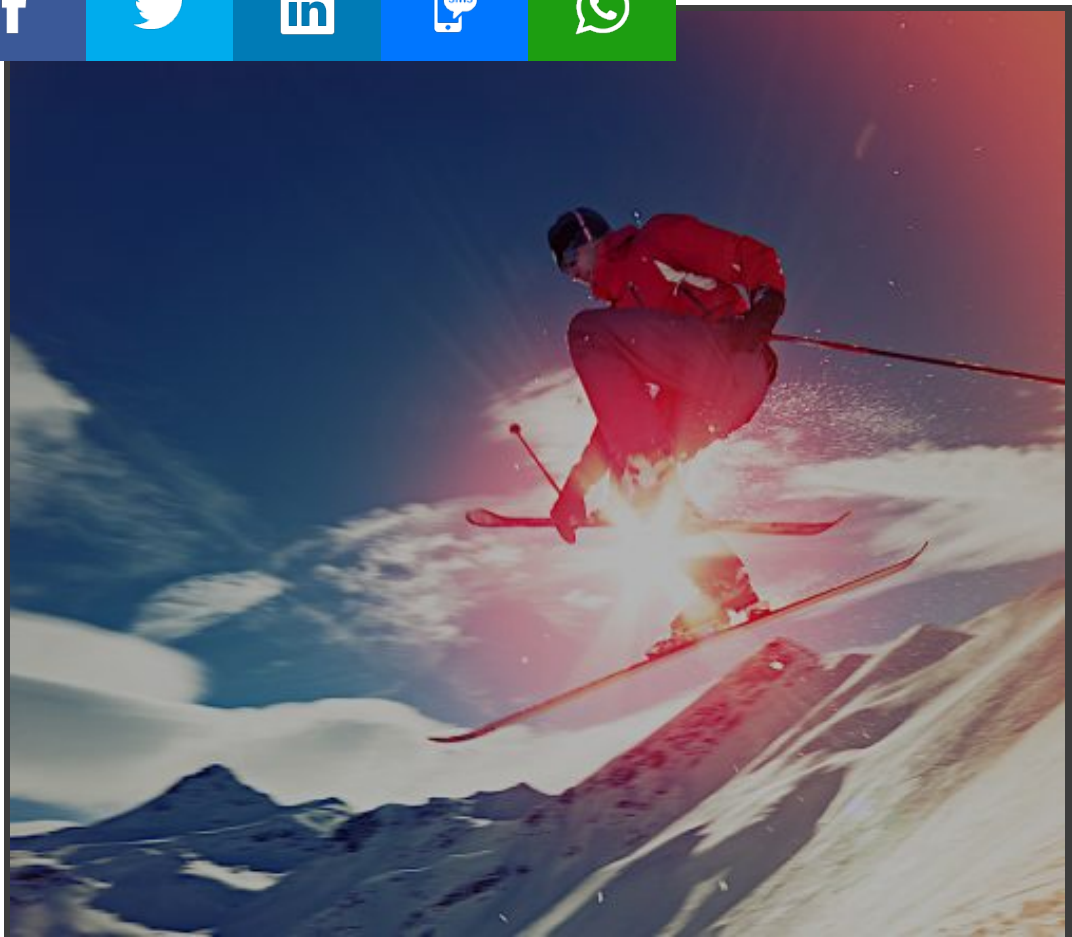
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MARK DAVIS

April 13, 2016 at 10:03 am

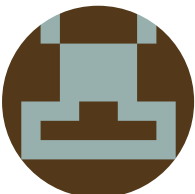
As Oliver Wendell Holmes put it: “I would not give a fig for the simplicity this side of complexity, but I would give my life for the simplicity on the other side of complexity.”



PETER R

April 13, 2016 at 1:49 pm

Great article James – a very welcome and thought-provoking perspective on the counter-productive consequences of over-simplifying in order to try to exert (the illusion of) control over the chaotic beast that is the beautiful game. While it is “only human” to want to alleviate our fear of uncertainty, it is essential to acknowledge that much of the complexity comes from the fact that whatever we do (as coach/player, individually or collectively) inevitably necessitates VERY selective choices that always involve trade-offs (defence vs attack, speed vs control, reliability vs adaptability) and produce unexpected outcomes. We don’t need comfort, or certainty, we need adaptability.



JAMES

April 16, 2016 at 7:20 am

Thanks Peter, I think you summed that up better than I did. The trade-offs are fascinating and learning to live with, embrace, and even look at them as opportunities for innovation is essential – in all areas of life. This <https://www.brainpickings.org/2014/10/15/nietzsche-on-difficulty/> is a great read.

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