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"Opinion and Fact, Perspective and Truth": Seeking Truthfulness and Integrity in Coaching and Coach Education

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2 “Opinion and Fact, Perspective and Truth”: Seeking Truthfulness and Integrity in Coaching

3 and Coach Education

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Abstract

Recent developments have seen a growth in coaching, with an associated boom in interest on how it may be optimised. Clearly, we applaud this evolution. This growth has been paralleled by an explosion in the availability of information, driven through internet access and the phenomenon of social media. Unfortunately, however, this juxtaposition of interest and availability has not been matched by the application or exercise of effective quality control! While much of what is available is well intentioned, a tendency for poor quality and possibly less positively targeted "BS" has also arisen. In this insights paper, we consider some of the reasons why and argue that an emphasis on the development of critical and analytical thinking, as well as a scepticism towards the sources of information, would be a positive step against coach susceptibility to BS. In doing so, and to encourage more critical consumption of the "knowledge" available, we present a checklist to help coaches assess the veracity of claims and sift through the noise of the coaching landscape.

Keywords: coach development; coach learning; critical thinking; bullshit

46 “Opinion and Fact, Perspective and Truth”: Seeking Truthfulness and Integrity in Coaching
47 and Coach Education

48 Coaching and (hopefully therefore) coach education is a growing business. Internationally, as
49 people recognise the importance of interpersonal interactions as facilitators of much needed
50 physical activity and socially positive interaction, governments and organisations are
51 becoming increasingly aware of the need for a well-educated, well informed and
52 appropriately professional coaching workforce (Trudel, Milestetd, & Culver, 2019). In the
53 UK, as an example of other national initiatives, organisations such as UK Coaching
54 (www.ukcoaching.org) or the International Council for Coaching Excellence (www.icce.ws)
55 are working hard to establish themselves as the gatekeepers of knowledge distribution and
56 accreditation. The profession is in an apparent boom.

57 As this trend gathers pace, however, we may also be facing a “crisis of information”
58 in this crucial field. Our title is taken from the famous orator, writer and doubtless coach
59 educator Marcus Aurelius, who is often quoted as saying “Everything we hear is an opinion,
60 not a fact. Everything we see is a perspective, not the truth.” Except he didn’t, or there is no
61 credible citation of him having said it at least (Sylvester, 2019). We use this to stress the
62 essential need for criticality in knowledge consumption and application for coaches, matched
63 by overt and transparent qualification as to the limitations inherent in the stances presented by
64 educators. Unfortunately, as we also hope to demonstrate, both criticality and qualification
65 are depressingly rare, even worse an occurrence in the face of a rising tide of bullshit
66 (hereafter BS) which, we would contend, is playing a worryingly growing role in filling the
67 knowledge gap in coaching.

68 Reflecting this worrying juxtaposition (increasing BS against an increasing hunger for
69 knowledge) we present this paper as a stimulus for critical consideration and debate. Firstly,
70 we examine the phenomenon of BS, addressing its underpinnings, some distinctions between

this and its older, if often rather close relation of lying, and why it might be of increasing concern. We then situate this concerning behaviour within coach education and learning, offering an opinion on what, why and how this might do to the essential development process. We then offer some ideas for how to address this trend; namely, the development of critical skills as a common and socially encouraged (cf. Stoszkowski & Collins, 2014) feature of the coaching environment. We conclude with a call for action and debate; after all, the more we talk about this the less likely it is to promulgate!

Bullshit

BS, defined by Frankfurt (2005) as the process of communicating with little to no concern for evidence or truth, is all around us. It might even be said that "BSing" (the verb of BS!) is now the norm (Christensen, Karreman, & Rasche, 2019), with even those in the highest echelons of political power openly employing obscure, empty or pretentious talk (Kelly, 2014) to evade responsibility and/or justify their decision making. Building on Frankfurt's seminal work, Petrocelli (2018, p. 249) further defines BS as "communications that result from little to no concern for truth, evidence and/or established semantic, logical, systemic, or empirical knowledge." BSing is generally said to occur because people feel they must hold or express an opinion that makes them appear informed on almost everything (Frankfurt, 2005). In these situations, when people do not have the information or evidence required to converse about a given topic, they often simply create an illusion that they do by BSing. People naturally want to be perceived as knowledgeable, well informed and intelligent (cf. Tetlock & Gardner, 2015) and, if they do not possess knowledge that is underpinned by theoretical or logical evidence, they often try to disguise the fact that they lack this knowledge by delivering information with disregard for its truthfulness or inherent limitation. We recognise the difficulties of defining "truth" (Williams, 2002) with its connected set of notions such as belief, reference and meanings. However, in the context of this paper, we

96 emphasise the importance of being "truthful" and echo MacKenzie and Bhatt's (2020a)
97 suggestion that truthfulness entails qualities such as sincerity, accuracy, trust, trustworthiness
98 and truthfulness.

99 It is important to note, however, that a BSer is not *exactly* the same as a liar. A liar's
100 objective is to intentionally deceive those that they are lying to, and the liar has an
101 understanding or knowledge of the truth, yet they lie in order to obscure the truth from others
102 (MacKenzie & Bhatt, 2020b). For example, a college coach might knowingly lie to a recruit
103 about the playing time he or she will receive during their first year on the team. This offers a
104 good illustration of our point about truthfulness. In this context, the coach is well aware of the
105 factual truths (or at least what s/he believes them to be) but still makes the statement! In
106 contrast to the liar, however, who often has some regard for or knowledge of the truth and
107 consciously attempts to subvert it (Cole, 2001), the BSer has no concern for such actions.
108 Although the liar and the BSer both pretend to tell the truth, the BSer *may* have no intention
109 of being cunning or deceitful (like the liar) but instead, simply relinquishes any responsibility
110 for communicating the truth. For example, a presenter at a coaching conference is asked a
111 question about a new training method that s/he does not know much about, but to maintain
112 their image as an "expert" they provide an answer. Or a prominent blogger, who does not
113 really understand the nuances of different skill acquisition approaches, continues to dismiss
114 one method as it disagrees with what his/her blog or website is promoting. Notice, however,
115 that in both of these examples the line between lying and BS can be rather blurred, or at least
116 hard to discern. The intention of truthfulness is the key distinguishing factor, but one usually
117 has to investigate the perpetrator carefully to accurately ascertain this.

118 Other BS characteristics can also be seen, although they may still be hard to label
119 accurately. The BSer is often less analytical and deliberate; indeed, s/he often rather enjoys
120 the freedom of transferring the knowledge "possessed" to people while insufficiently

121 regarding truth or facts (cf. Lindskold & Walters, 1983). Unfortunately, it appears that people
122 are often extremely willing to offer judgments and opinions about subjects they know too
123 little, if anything, about in order to appear knowledgeable (Herr, Sherman, & Fazio, 1983).
124 Furthermore, and perhaps worryingly, people who often BS may eventually believe their own
125 BS. In fact, cognitive dissonance may lead to motivated forgetting of information that does
126 not align with the BS and may lead to inflated belief and confidence in the false information
127 (Polage, 2017). As a consequence, and despite a lack of evidence to support their opinion, the
128 BSer can often consider what they say to be true (Luks, 2017). We leave it to the reader to
129 characterise such behaviour on the BS-liar spectrum!

130 BSing is said to be increasingly prevalent because, at least in part, people feel obliged
131 to engage with others on matters that they are not well educated on but feel strongly about
132 (Frankfurt, 2005). People feel inadequate, uninformed and uneducated if they cannot
133 effectively express a view on a significant number of subjects; consequently, BSing takes
134 place. Moreover, BSing has increasingly become a societally detrimental but personally
135 rewarding hobby and social activity (Pennycook & Rand, 2019; Spicer, 2013), where people
136 lack concern or consideration for evidence or established knowledge. As a result, BS
137 permeates the information we are bombarded with on a daily basis (Crockett, Dhar, &
138 Mayyasi, 2014), particularly through that increasingly popular source of information, social
139 media. In this paper, we argue that much current and popular discourse in coaching is
140 impacted by BS (both actual and unintentional) and equipping coaches with the required tools
141 and strategies to discern and detect BS is therefore an important coaching intervention.

142 BS in Coach Learning and Development

143 In recent years, online technology and social media platforms have become extremely
144 sophisticated tools that now dominate the way we communicate and share information in our
145 everyday lives (Pennycook & Rand, 2019). Popular platforms like Twitter, Instagram and

146 Facebook operate based on user generated content, online collaboration, information sharing,
147 and collective intelligence (Akram & Kumar, 2017). Given that most smartphones also
148 support access to these platforms, people are provided with 24/7 interactivity and content on
149 demand. As a consequence, social media permeates our lives at home, in the workplace and
150 within our education system (Nielsen, 2015). Indeed, many educational institutions and
151 organisations now utilise web-based apps and social networking tools as a mechanism to
152 improve student engagement and attainment (Baran, 2010; Dabbagh & Kitsantas, 2012;
153 Jamro & Shaikh, 2016).

154 It is well documented that sports coaches prefer informal methods of learning as
155 opposed to formal, tutor-led coach education courses (Stoszkowski & Collins, 2016; Walker,
156 Thomas, & Driska, 2018). Consequently, online tools that allow coaches to interact,
157 collaborate and co-construct knowledge have been viewed as ripe for exploitation in coach
158 education (Piggott, 2013) and they have seen dynamic growth as both a compliment and
159 alternative to traditional face-to-face formal courses and certifications. For example, the
160 UK's largest national governing body (NGB), the Football Association, provides its coaching
161 community with free access to Hive learning (https://www.hivelearning.com), an online
162 collaborative learning platform that allows groups of coaches to share and discuss resources
163 and session ideas. Similarly, the charity UK Coaching (an umbrella body for coaching),
164 administers and moderates Connected Coaches (https://www.connectedcoaches.org/), a free
165 to access online community that allows coaches to access resources, swap ideas and share
166 knowledge; or what might be more accurately described as their experiences and perceptions.
167 Even more informally, however, coaches increasingly use online platforms such as Twitter,
168 Facebook, podcasts and blogs to share ideas and acquire information (Stoszkowski & Collins,
169 2016).

170 In tandem with this growth in online coach learning, recent years have seen a marked
171 increase in the prevalence of independent/private providers of coach education and
172 development opportunities. These providers range from lone individuals and sole traders to
173 comparatively larger commercial enterprises who, in the UK at least, offer a varied menu of
174 activities including mentoring, workshops and conferences, often at significant expense to
175 attendee coaches. These "products" are often offered directly to coaches, outside of any
176 "formal" programme of study, as well as through NGBs as part of the educational diet they
177 promote to their coaches. Notably, it appears, on the face of it at least, that many of these
178 providers first build up a following on the aforementioned social media channels, before
179 closing in on some elements of content then marketing the specific products, resources or
180 programmes that they offer to this following. Confusingly, the lines of independence are
181 often blurred too, with former (and current!) NGB/NSO staff and associates often being
182 involved in both promoting and delivering these activities in parallel to other more formal
183 duties. Indeed, the promotion and delivery of these activities reflects tenets of BS highlighted
184 elsewhere in the literature (Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015) in that
185 they strive to impress rather than inform and be engaging rather than informative (Bailey,
186 Madigan, Cope, & Nicholls, 2018). For example, private/commercial providers of coach
187 education may insist on using "impressive sounding claims and language" (Pennycook et al.,
188 2015, p.549) to get bums on seats, or jargon, which is intentionally unclear and/or confusing
189 to the audience.
190 It would be "inappropriate" to offer explicit examples of BS. Indeed, without a careful
191 and well-argued counter case to the example, we may well be guilty of BS ourselves!
192 Reflecting our comments earlier, intention must play a part in discerning BS and, in the
193 absence of insider knowledge, one must apply the benefit of the doubt. It is, however,
194 pertinent to offer examples which readers may recognise of situations which often result in

BS-like positions. For example, taking a particular position (e.g., anti-the use of drills) then promulgating lots of drill-like ideas; a common feature at the time of writing as the Covid-19 lockdown impacts on the social media environment. Another situation is a podcast inviting on a guest speaker (often a high-quality researcher) then "twisting" their stance to support your new product. As a final example, we would highlight the dual-role status of many commercial website owners. Holding a role with an NGB/NSO while also selling materials through subscription services or conferences which trade on the dual status. Of course, returning to our points earlier, this *may* be fine. After all, we are unaware of these individuals' job descriptions! There would appear to be at least a hint of a clash of interests, however, especially when one presents material commercially through one setup that is also your responsibility to promote when wearing the hat from your other setup!

Given how the growth and expansion of internet access, social media and technological advances has fundamentally changed the way coaches work and learn, as well as an educational diet that increasingly includes exposure to these commercial providers of "content," it is clear that coaches are increasingly operating in an educational milieu that likely provides an abundance of opportunity to both share and be exposed to BS (Stoszkowski & Collins, 2016). Furthermore, this BS is far more likely to spread when those who are exposed to it are simply not able to detect, challenge, question, or refute it (Pennycook et al., 2015). All too often, when individuals encounter new information, they fail to identify that it may require deeper consideration in order to judge its truthfulness. Of course, it is efficient and necessary to believe something because of the claims of others; without this our knowledge would be limited to a tiny dataset of personal experience. However, failure to apply appropriate analytical reasoning processes (Pennycook, Fugelsang, & Koehler, 2015) and instead, take information at face value and without sufficient scepticism, likely leads to BS being accepted by one person and then shared with another. For

example, the spread of ideas through the social network of coaching is well documented (cf. Stoszkowski & Collins, 2014). Unfortunately, the power of this social spread may well carry more "clout" than the receiver's own critical appraisal. In short, many may succumb to the quality of marketing as opposed to the veracity of the argument. Our earlier example of recruiting an authority to speak on your podcast then misrepresenting their ideas (as either lying or BS) is one example of this social contagion marketing (Barash, 2012). There is a clear need, therefore, to consider what kind of impact this social selling effect may have on the efficacy of coach learning, and what we might need to do to mitigate the potential negative impacts of it.

Critical Thinking: Coaches as Critical Consumers of Information

As highlighted above, we live in an information rich world and it has never been easier to access content whether through coaching resources, academic sources, search engines, or social media. The latter is an undoubtedly powerful and impactful tool and, when used properly, can be an important method of information-sharing and collaboration. However, the extent to which the information is *evidence*-based rather than *opinion*-based, or even whether this distinction is acknowledged, is at best questionable, especially given the means by which ideas on social media platforms gain traction. As such, it is important that coaches exercise caution in what they believe and, in the absence of verifying evidence, it is critical to be careful about the veracity of the claims made. Of course, we are also not saying that academics should be the only gatekeepers of knowledge; indeed, as we stress later the proliferation of these data sources may be laid, in part, at the feet of academic waffle, self-focused onanism and/or poor science (cf. Collins & Bailey, 2013). It may well be, at least in part, that social media sources have merely grown to fill the void! It must surely be acknowledged, however, that for all its faults (cf. Smith, 2006) the peer-review process does provide a level of rigour that is lacking in a "free for all" online world (Wingfield, 2017).

245 There are two points for coaches to consider here. Firstly, the quality of the
246 information consumed and subsequently used by coaches is, of course, crucial. In an ideal
247 world, information should only be disseminated with quality assurance. Online, however, the
248 quality of the information and, equally importantly, the *balance* of the information circulated,
249 does not undergo any quality control. What are the consequences of this unfiltered data?
250 Firstly, the coach can choose what and who to listen to. The assumption is that people listen
251 to people who hold similar views to themselves; we follow people on Twitter, for example,
252 who share "tweets" about things that appeal to us (Akram & Kumar, 2017). This self-
253 selection builds up a shared community of individuals with similar opinions and, by virtue of
254 preferential attachment (Matthews, 2016), information gains credibility and traction in a "rich
255 get richer" fashion. For example, those with the most followers are most likely to have their
256 ideas heard and subsequently shared which, in turn, will lead to more followers. In much the
257 same manner, those with few followers are unlikely to have their ideas amplified, and people
258 with opposing opinions can be unfollowed (or even blocked!) so those tweets, and contrary
259 opinions, do not appear on your Twitter feed. By doing this, the coach does not have to
260 contend with conflicting evidence or people questioning his/her stance. Furthermore, this
261 merely magnifies the social contagion selling we mentioned earlier; this must be right
262 because everyone (that you are listening to) says so!
263 Social media is founded on connections and relationships that promote information
264 sharing (Matthews, 2015) but this feature has significant potential for negative impact when
265 this is done in a self-selected manner. Indeed, the ability to circulate ideas that are persistent
266 and persuasive but potentially without evidence is a real danger. As such, there is an
267 important distinction to be made between the need to acknowledge experiential knowledge
268 (cf. Martens, 1987) and the more causal "in my experience" opinion, however well qualified
269 the source. The former is usually part of a careful process of execution, critical reflection and

270 refinement (Eyler & Giles, 1999). The latter can often represent a throw away comment made
271 when someone is asked for their opinion on a topic, which may often not have been directly
272 experienced!

273 Of course, in epistemology testimony is an important consideration in terms of
274 consideration whether a belief is true and when a belief counts as knowledge. For example, if
275 I trust the source, then I take the information and use it to inform my own practice. However,
276 employing this form of indirect knowledge is only useful when you believe things that are
277 actually true. As such, an important truth-seeking skill is learning how to assign trust. The
278 current social media environment has seen the rise of the "guru" who, often without
279 qualification or with a rather selective presentation of some choice titbits of information,
280 present an answer as "the" answer (Sperber, 2010). As we stress in our conclusion,
281 knowledge is surely contextual, and solutions would therefore be best seen as optimum to a
282 particular context. Failing to recognise this conditionality smells of BS. Furthermore, we
283 should surely recognise and acknowledge the quality of our experiences in offering an
284 opinion. To clarify our point in the previous paragraph, I might express my opinion on rugby
285 coaching as an experienced, deep thinking and highly reflective coach. I might also offer
286 some opinion on coaching football prefaced by "in my experience," but are my two
287 comments of different value or veracity? And should I not explain the distinction?

288 The bottom line is that such communications must come with, at the very least, a
289 health warning or preferentially, a balancing argument. Those in positions of authority,
290 indeed those with a sense of social responsibility, whether they be academics, coaches,
291 NGBs, or commercial agencies, surely have a responsibility to ensure there is an evidence
292 basis and conditionality (i.e., when it applies but also when it might not, coupled with the
293 experience base for my opinion) to the information they share. Furthermore, that private
294 agendas are not pushed or, if mentioned, qualified through context. This is especially

295 important when the consumers of this knowledge (e.g., coaches) may be swayed by the
296 authority (e.g., professional standing, associated appointment, accreditation, certification or
297 social media following) of those sharing information, concentration of persuasive,
298 (apparently) face valid but evidence lacking "tweets," or the skills to filter the good from the
299 bad.

300 Secondly, with an abundance of available information, how do coaches sift out the
301 misinformation and bogus claims, and get to the truth? The issue is not that everything
302 available online, or indeed through other sources (coach education resources, for example) is
303 lies, BS or not of value, but that there *is* content that is *all three*. As such, it is important that
304 coaches consume information critically to avoid hopping on the latest coaching bandwagon,
305 while also demonstrating an openness to change and innovation. Simply, it is important to
306 maintain enough scepticism while also being open enough to incorporate new ideas into
307 practice.

308 Imagine if scientists or doctors simply relied on information they had seen on Twitter
309 or heard from someone who was not appropriately qualified or professionally thorough; there
310 would be uproar! Yet it is currently acceptable, indeed for some laudable, for sports coaches
311 to implement coaching practices or use information they have sought from potentially
312 illegitimate sources. Note that this increasing use of uncritical sources (something we would
313 question) is in parallel to calls for greater recognition of, and professionalisation in, coaching
314 (something we are passionately in favour of and working to facilitate). The cost of BS can
315 thus be extremely detrimental (Luks, 2017), both directly to practice and indirectly to
316 reputation, particularly when considering the amount which is out in the open (Nielson,
317 2015). Of course, we might all have our favourite authors; one whose suggestions strike
318 genuine chords with our experience. This is surely qualitatively and quantitatively flawed,
319 however, if we only ever use *that* one source, *all* the time and indeed are *encouraged* to by

320 the source itself. Note also that the echo chamber effect we mentioned earlier means that
321 small groups of like thinking disciples may just mutually but blindly support.

322 It would seem to us that, in the face of increasingly polarised and group promoted,
323 "*this* is the answer" sources, sports coaches, educators and administrators are somewhat
324 lacking in the required education and knowledge to face this ongoing epidemic. Therefore,
325 we propose that coaches must learn to think like a scientist in an effort to detect (and
326 hopefully choose to avoid) BS. Unfortunately, however, critical thinking is not a common
327 feature of interactions in sport (indeed it is more often than not discouraged!) and
328 cheerleading rather than criticality is the prevalent behaviour. Could learning to think like a
329 scientist, to question what is presented in a logical manner, help kill off misconceptions, bad
330 practice and ill-informed decision making in coaching? In turn, could this level of criticality
331 provide confirmation for potentially good ideas?

332 ***Thinking like a Scientist***

333 Carl Sagan, the noted philosopher, describes how easily we can all be fooled and then
334 goes on to explain that scientists have been trained to cope with this reality with what he
335 terms a "baloney detection kit" – essentially a toolkit for critical thinking, which consists of a
336 set of skills and competencies (Catchings, 2015), and encompasses an individual's "ability to
337 make decisions by analysing issues and evaluating options, recognising the existence of
338 assumptions and the need to make inferences" (Walker & Diaz, 2003, p. 64). Sagan (1995)
339 offers a set of cognitive tools and techniques that uncover errors, flawed thinking, false
340 assertions, preposterous claims, frauds, pseudoscience, and myths; simply, some very
341 practical guidance on how to work out what is and is not "baloney" (or BS!). The baloney
342 detection kit can be thought of as the tools of healthy scepticism that we can apply to
343 everyday life. Sagan suggested that the kit should be brought out as a matter of course
344 whenever new ideas are offered for consideration. Often these ideas are attractive because of

345 who is proposing them (a figure of influence, authority, high stature, for example) or what
346 they offer (identifying the next "sure thing" or silver bullet). We can think of a number of
347 coaching initiatives that fit these descriptions! Tempting as it might be to adopt these ideas or
348 practices on face-value, however, they should be examined for their truthfulness. If the new
349 idea survives examination by the tools in the kit, it can be tentatively accepted, tested and
350 then adopted.

351 Extending from Sagan's work, we propose a checklist (Table 1) to help coaches
352 assess the veracity of a claim and sift through the noise of the coaching landscape. Each
353 element of the checklist is outlined in more detail below.

354 **There must be independent confirmation of the "facts."** Coaches must be willing
355 to ask for supporting evidence and not take all things at face value, even if the information is
356 being offered by a valued source such as the National Governing Body or a respected coach.
357 This type of thoughtful scepticism, and seeking evidence, should be encouraged as it stops
358 coaches from simply adopting practices in good faith. Instead, this process encourages
359 coaches to validate information, despite peer and social pressure to accept something, and
360 should lead the coach to get a deeper understanding of the phenomenon under consideration.

361 **Look for attempts to offer a balanced presentation.** Presentation of a position
362 should acknowledge, and ideally list, the advantages and disadvantages of that position.
363 Without these built in caveats (the law of it depends and on what!) you may well be in a BS
364 environment. Indeed, high-performing, experienced coaches often surround themselves with
365 a network of critical friends that offer constructive feedback and alternative opinions
366 compared to novice coaches who are more likely to accept information from non-reliable
367 sources (Nash, Sproule, & Horton, 2017). Simply, avoid operating within insular networks
368 that serve as an echo-chamber for certain viewpoints and instead surround yourself with
369 divergent opinions that will challenge your understanding.

370 **Engage in debate.** To detect falsehoods, Sagan encourages “substantive debate” on
371 the evidence by knowledgeable proponents of all points of view (Jones, 2016). Listening to
372 both sides of the argument and weighing up the evidence allows you to arrive at a reasoned
373 position for accepting or rejecting a particular stance. This type of debate should be (but
374 rarely is) a feature of policy development and practice in coaching. It is (but *very* rarely) a
375 positive feature of *some* blogs but far too infrequently.

376 **The authorities can be wrong!** Sagan tells us that “authorities” have made mistakes
377 in the past and they will do so again in the future and suggests that in science “there are no
378 authorities; at most, there are experts” (Purtill, 2017). Across the coaching landscape there
379 are numerous examples of initiatives and approaches that have been pushed by figures of
380 authority in NGBs or commercial coaching bodies. Based on Sagan’s toolkit we urge coaches
381 to look for the evidence and ask the question “why this way, and not another way?”

382 **Spin more than one hypothesis.** Unfortunately, solutions to coaching challenges are
383 often driven by political “neatness,” what makes for a glossy intervention, extremely
384 secondary sources such as popular books, or social media campaigns. A much better
385 approach would be to have a broader and more open debate, with the different perspectives
386 presented equally to coaches. Simply, if there is something to be explained, coaches should
387 be encouraged to think of a range of solutions to a problem and test each of these solutions to
388 ultimately alternatives and ways to allow the evidence and data decide. What survives, the
389 hypothesis that resists disproof in this Darwinian selection among “multiple working
390 hypotheses,” has a much better chance of being the right answer than the unitary approach
391 that is often proffered.

392 **Keep an open mind.** Coaches should try not to get overly attached to an idea or way
393 of doing something because it is their idea, or it is something that they have always done.

394 Rather, they should ask themselves why they like the idea and then compare it with the
395 alternatives to find which is the best fit for their specific context.
396 **Measure things.** Quantifying things takes the ambiguity and guesswork out of
397 decision-making. Whenever possible, coaches should gather data to justify what they are
398 doing, how they are doing it and, most importantly, why. Simply, coaches need to act like
399 scientists by using their coaching context (e.g., the gym, pitch or pool) to test and evaluate the
400 knowledge that they acquire (Weinberg & Gould, 2019) and ensure it transfers to that
401 context. This, rather than opinions and comments, offers a much better foundation for
402 decision-making.
403 **Occam's Razor.** This convenient rule-of-thumb states that when you have two
404 competing theories that make exactly the same predictions, the simpler one is the better.
405 What does this mean? Coaching initiatives should be as simple as possible, but no simpler!
406 **"It depends".** The concept of professional judgement and decision making (e.g.,
407 Collins & Collins, 2015) stresses the conditional nature of coaching decisions and
408 methodology. In simple terms, that more than one answer exists, that the "best" answer might
409 vary from person to person or from time to time, and that a constant process of "test and
410 adjust" is part of the way to optimise any coaching method. As an approach, this stresses the
411 need for openness and adaptability in the coach and infers the necessity of presenting variety
412 in solutions for educators.

413 ## Conclusion

414 Due to the complex and dynamic coaching landscape, coupled with a relatively
415 unregulated environment, coaches may be both susceptible and receptive to bullshit
416 (Pennycook et al., 2015). In this paper, we argue that an emphasis on critical and analytical
417 thinking and a scepticism towards the source of information would be a positive step against
418 susceptibility to BS. Instead, we stress the importance of interventions and cognitive

419 strategies that help coaches guard against BS as an important element of coach education and
420 a vital step in developing truly reflective practitioners. Indeed, keeping an open mind and
421 understanding how we reject BS can make us more aware of our own (potential) BS
422 (Pennycook et al., 2015).

423 As coaches, coach development practitioners, and academics ourselves, we are part of
424 the coaching community and we offer these ideas in good faith. It is not our intention to
425 police the integrity and legitimacy of coach education offerings or the dissemination of this
426 content, but we do encourage constructive criticism as a feature of coach education in order
427 to ensure there is a robust evidence base available to coaches. After all, and finishing like we
428 started with a quote, "No matter how big the lie [or BS], repeat it often enough and the
429 masses will regard it as the truth" (John F. Kennedy). BS is here to stay, and we need to take
430 it seriously as an intellectual and analytical problem (Nielsen, 2005). We hope readers will
431 take our comments with the courtesy, common-sense and criticality we intend.

432 References

433 Akram, W., & Kumar, R. (2017). A study on positive and negative effects of social media on
434 society. *International Journal of Computer Sciences and Engineering, 5*(10), 347-
435 354.

436 Bailey, R. P., Madigan, D. J., Cope, E., & Nicholls, A. R. (2018). The prevalence of
437 pseudoscientific ideas and neuromyths among sports coaches. *Frontiers in*
438 *Psychology, 9*(641).

439 Baran, B. (2010). Facebook as a formal instructional environment. *British Journal of*
440 *Educational Technology, 41*(6), E146-E149.

441 Barash, V. (2011). *The Dynamics of Social Contagion* [Unpublished doctoral thesis]. Cornell
442 University.

443 Catchings, G. (2015). A Practical model for critical thinking skill and leadership development

444 (C/CTSLD). *Management and Organizational Studies, 2*(4), 42-53.

445 Christensen, L. T., Kärreman, D., & Rasche, A. (2019). Bullshit and Organization

446 Studies. *Organization Studies*, *40*(10), 1587-1600.

447 Collins, D., & Bailey, R. (2013). 'Scienciness' and the allure of second-hand strategy in talent

448 development. *International Journal of Sport Policy and Politics*, 5(2), 183-191

449 Collins, L., & Collins, D. (2015). Integration of professional judgement and decision-making

450 in high-level adventure sports coaching practice*. Journal of Sports Sciences*, *33*(6),

451 622-633.

452 Crockett, Z., Dhar, R., & Mayyasi, A. (2014). *Everything is Bullshit.* San Francisco, CA:

453 Pricenomincs Inc.

454 Cole, T. (2001). Lying to the one you love: The use of deception in romantic relationships.

455 *Journal of Social and Personal Relationships*, *18*(1), 107-129.

456 Dabbagh, N., & Kitsantas, A. (2012). Personal learning environments, social media, and self-

457 regulated learning: A natural formula for connecting formal and informal learning.

458 *Internet and Higher Education, 15*, 3-8.

459 Eyler, J., & Giles Jr., D. E. (1999). *Where's the learning in service learning?* San Francisco,

460 CA: Jossey-Bass.

461 Frankfurt, H.G. (2005). On Bullshit. Princeton, NJ: Princeton University Press.

462 Herr, P. M., Sherman, S. J., & Fazio, R. H. (1983). On the consequences of priming:

463 Assimilation and contrast effects. *Journal of Experimental Social Psychology, 19*(4),

464 323–340.

465 Jamro, W. A., & Shaikh, H. (2016). Exploring the Educational and Research Insights of

466 Social Networks. *International Journal of Computer Science and Information*

467 *Security,* 14(11), 626-631.

468 Jones, J. (2016, April, 11). *Carl Sagan Presents His "Baloney Detection Kit": 8 Tools for*
469 *Skeptical Thinking.* Open Culture. http://www.openculture.com/2016/04/carl-sagan-
470 presents-his-baloney-detection-kit-8-tools-for-skeptical-thinking.html
471 Kelly, M. R. (2014). Bullshit as the absence of truthfulness. *International Studies in*
472 *Phenomenology and Philosophy*, *2*(2), 165–188.
473 Lindskold, S., & Walters P., S. (1983). Categories for acceptability of lies. *The Journal of*
474 *Social Psychology*, *120*(1), 129-136.
475 Luks, F. (2017). The ugly, the bad, and the good: Bullshit as discourse, accursed share, and
476 lubricant. *Journal of Extreme Anthropology, 1*(1), 85-90.
477 MacKenzie, A. & Bhatt, I. (2020a). Opposing the power of lies, bullshit and fake news: The
478 value of truth. *Postdigital Science and Education*, *2*, 217-232.
479 MacKenzie, A. & Bhatt, I. (2020b). Lies, bullshit and fake news: Some epistemological
480 concerns. *Postdigital Science and Education*, *2*, 9-13.
481 Martens, R. (1987). Science, knowledge, and sport psychology. *The sport psychologist, 1*(1),
482 29-55.
483 Matthews, P. (2015). Neighbourhood belonging, social class and social media – providing
484 ladders to the cloud. *Housing Studies, 30*(1), 22-39.
485 Matthews, P. (2016). Social media, community development and social capital. *Community*
486 *Development Journal*, *51*(3), 419-435.
487 Nash, C., Sproule, J., & Horton, P. (2017). Feedback for coaches: Who coaches the coach?
488 *International Journal of Sports Science and Coaching, 12*(1), 92-102.
489 Nielson, R. K. (2015). Social Media and Bullshit. *Social Media + Society, 1*(1), 1-3.
490 Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the
491 reception and detection of pseudo-profound bullshit. *Judgment and Decision Making,*
492 *10*(6), 549–563.

493 Pennycook, G., Fugelsang, J. A., & Koehler, D. J. (2015). Everyday consequences of analytic
494 thinking. *Current Directions in Psychological Science*, *24*(6), 425–432.
495 Pennycook, G., & Rand, D., G. (2019). Fighting misinformation on social media using
496 crowdsourced judgments of news source quality. *Proceedings of the National*
497 *Academy of Sciences, 116*(7), 2521-2526.
498 Petrocelli, J. (2018). Antecedents of bullshitting. *Journal of Experimental Social Psychology*,
499 *76*, 249-258.
500 Piggott, D. (2015). The Open Society and coach education: A philosophical agenda for policy
501 reform and future sociological research. *Physical Education and Sport*
502 *Pedagogy*, *20*(3), 283-298.
503 Polgate, D. (2017). The effect of telling lies on belief in the truth. *Europe's Journal of*
504 *Psychology, 13*(4), 633-644.
505 Purtill, C. (2017, April 14). Lie-proof your life with Carl Sagan's "balony detection"
506 checklist. QUARTZ. https://qz.com/959775/carl-sagans-baloney-detection-kit-can-
507 help-you-spot-fake-news-and-weaponized-lies/
508 Sagan, C. (1995). *The Demon-Haunted World: Science as a Candle in the Dark.* New York,
509 NY: Random House.
510 Smith, R. (2006). Peer review: A flawed process at the heart of science and journals. *Journal*
511 *of the Royal Society of Medicine*, *99*(4), 178-182.
512 Sperber, D. (2010). The guru effect. *Review of Philosophy and Psychology*, 1, 583-592.
513 Spicer, A. (2013). Shooting the shit: The role of bullshit in organisations. *Management*
514 *(France)*, *16*(5), 653-666.
515 Stoszkowski, J., & Collins, D. (2014). Communities of practice, social learning and
516 networks: Exploiting the social side of coach development. *Sport, Education and*
517 *Society, 19*(6), 773-788.

518 Stoszkowski, J., & Collins, D. (2016). Sources, topics and use of knowledge by coaches.
519 *Journal of Sports Sciences,* 34(9), 794-802.
520 Sylvester, B. (2019, October 15). Fact check: Did Marcus Aurelius say 'everything we hear is
521 an opinion, not a fact?' Check Your Fact. https://checkyourfact.com/2019/10/15/fact-
522 check-marcus-aurelius-opinion-fact-perspective-truth-quote/
523 Tetlock, P. E., & Gardner, D. (2015). *Super-forecasting: The art and science of prediction*.
524 London, UK: Random House.
525 Trudel, P., Milestetd, M., & Culver, D. M. (2019). What the empirical studies on sport coach
526 education programs in higher education have to reveal: A review. *International Sport*
527 *Coaching Journal*, *7*(1), 61-73.
528 Walker, S., & Diaz, L. G. (2003). Promoting critical thinking in the classroom. *Athletic*
529 *Therapy Today, 8*(5), 64-65.
530 Walker, L. F., Thomas, R., & Driska, A. P. (2018). Informal and nonformal learning for sport
531 coaches: A systematic review. *International Journal of Sports Science & Coaching,*
532 *13*(5), 694-707.
533 Weinberg, R. S., & Gould, D. (2019). *Foundations of Sport and Exercise Psychology*.
534 Champaign, IL: Human Kinetics.
535 Wingfield, B. (2017, September 26). *Peer review: The 'least worst' barrier to bad science.*
536 Social Science Space. https://www.socialsciencespace.com/2017/09/peer-review-
537 least-worst-barrier-bad-science/
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Table 1

Checklist to help coaches assess the veracity of a claim and sift through the noise of the coaching landscape

What	*How*	*Why*
There must be independent confirmation of the "facts."	Be willing to ask for supporting evidence and don't just take things at face value.	This encourages you to validate information, despite potential peer and social pressure to accept something, and should lead you to a deeper understanding of the phenomenon under consideration.
Look for attempts to offer a balanced presentation.	Any presentation of a position should acknowledge, and ideally list, the advantages and disadvantages of that position.	Without these built in caveats (the law of it depends and on what!), you may well be in a BS environment.
Engage in debate.	Sagan encourages "substantive debate" on the evidence by knowledgeable proponents of all points of view.	Listening to both sides of an argument and weighing up the evidence allows you to arrive at a reasoned position for accepting or rejecting a particular stance.
The authorities can be wrong!	Look for the evidence and ask the question "why this way, and not another way?"	"Authorities" have made mistakes in the past and they will do so again in the future.
Spin more than one hypothesis.	Think of a range of solutions to a problem and test each of those solutions against alternatives.	Solutions to coaching challenges are often driven by political "neatness," what makes for a glossy intervention, secondary sources such as popular books, or social media campaigns.
Keep an open mind.	Ask yourself why you like an idea then compare it with the alternatives to find which is the best fit for your specific context.	It is important to not get overly attached to an idea or way of doing something just because it is your idea, or it is something that you have always done.
Measure things.	Whenever possible, gather data to justify what you are doing, how you are doing it and, most importantly, why.	Quantifying things takes the ambiguity and guesswork out of decision-making. This, rather than opinions and comments, offers a much better foundation for decision-making.
Occam's Razor	Coaching initiatives should be as simple as possible, but no simpler!	This rule-of-thumb states that when you have two competing theories that make exactly the same predictions, the simpler one is the better.
"It depends"	Coaches should consider and educators project the conditional nature or context dependence of coaching decisions.	Statements on the most appropriate or optimum methodology are inherently conditional, applying better to some contexts better than others. Projecting this avoids the dogma of BS.