

# The Complex and (Sometimes) Conflicting Beliefs About Talent: A Case Study of Elite Distance Running Coaches

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## Abstract

The word “talent” is commonly used to describe the antecedents of successful performance, especially in the context of sport. Despite the commonality of its usage, our understanding of what this term means and how it is used is limited. This case study has two main objectives: (1) to investigate the use and context of the term talent by a sample of distance running coaches and (2) to understand the coaches’ subjective beliefs regarding talent in their sport. Ten elite male coaches from across Canada participated in semi-structured interviews. All interviews were transcribed verbatim and analyzed using inductive thematic analysis. The statements made by this sample of coaches indicate that they believe that talent a) exists, b) can exist in multiple forms (e.g., raw talent and trained talent), c) can have physical and psychological components, and d) can present itself in obvious and less-obvious ways. Findings emphasize the nuanced and complex beliefs about talent in the context of elite distance running and reveal the need for a greater understanding of what the term means if it is to be used for consequential actions such as athlete selection.

## Keywords

Talent identification, expert coaches, elite athletes, distance running, qualitative design, qualitative description

## Introduction

Few concepts in science are as laden with conceptual baggage as talent. Notions of talent are reflected in the ubiquitous use of the word to describe performance across nearly every domain of human endeavour (e.g., a talent for music, a natural talent in sport). Till and Baker (2020) noted the word itself has different meanings across different contexts. For example, a coach may describe an athlete by saying he/she *has* talent in a specific sense (a particular ability sometimes referred to as raw material) or even more generally to say he/she *is* a talent (the end product of a complex developmental process; Gagné, 2000). Another aspect further complicating talent and its

operationalization is the number of closely related terms used synonymously. As noted by Tranckle and Cushion (2006), “The terms talent, gifted, and aptitude can, and frequently are, used interchangeably and can be found in most dictionary definitions where any one of these words tends to be used to describe the other” (p. 267). Howe and colleagues (1998) also noted this frequent misuse, succinctly stating, “People are rarely precise about what they mean by this term...” (p. 399) when referring to the term talent. Knowing this, it is perhaps not surprising that the inconsistent use of terms, combined with the added confusion of closely related (but theoretically

distinct) terms, has resulted in a lack of both definitional and conceptual clarity.

In an effort to differentiate talent from its neighboring term, giftedness, Gagné (2000) proposed a continuum whereby aptitude and gifts are at one end of a spectrum, and talent is at the other, naming it the Differentiated Model of Giftedness and Talent (DMGT; Gagné 2000). With respect to the DMGT, Gagné believed maturation or even informal learning resulted in aptitudes or gifts, whereas talent was the product of development and thus, in theory, gifts can become talent (Gagné, 2000; Tranckle & Cushion, 2006). “Potential,” in a similar sense, has been described as “latent qualities or abilities that, if developed appropriately, may lead to future success; having or showing the capacity to develop into something in the future” (Roberts, 2021, p. 6). As demonstrated in these examples, subtle, but unique, aspects of the terms separate the construct of talent.

Over the past two decades talent and talent identification in sport have gained considerable research attention (Anshel & Lidor, 2012; Baker et al., 2020; Davids et al., 2013; Li et al., 2014; Lidor et al., 2009). Much of this work to date has focused on how talent can be measured (for reviews see Baker et al., 2020 and Johnston et al., 2018) and how talent can be developed (see Burgess & Naughton, 2010 and Coutinho et al., 2016). Both these areas of research are rooted in the assumption that talent (a) exists, (b) can be measured, and (c) can be manipulated. Very few articles in these fields, however, examine how talent is understood, (see Baker & Wattie, 2018 and Howe et al., 1998 for reviews). The limited theoretical and conceptual evidence on sporting talent appears to reflect talent as an extremely complex phenomenon (non-linear, emergent, and has self-organizing tendencies (Cox et al., 2019), meaning different things to different people within various contexts (Jones et al., 2020). For this reason, some believe it too elusive (Howe et al., 1998; Mann et al., 2017), and some even question its existence (see Ericsson et al., 2005).

Talent as a scientific concept can be traced to the formative work of Francis Galton, the first person to study the extent to which

differences in attainment between individuals (in domains ranging from judicial appointments and politicians to wrestlers and rowers) were the result of hereditary factors. This early work found what Galton considered strong evidence for the role of biological and hereditary factors on attainment. Over the past 150 years, the pendulum of research has swung from Galton’s strong evidence, to the work of Lewis Terman (1920; 1922) and his genetic studies of genius (which was also grounded in the assumption that talent was a significant contributor to eventual attainment), to more recent explorations of deliberate practice and experience-based models which relegate talent to a minor role, if having any role at all (Ericsson et al., 1993; Ericsson et al., 2005). Despite this almost continual deliberation about the role and value of talent for understanding human exceptionality, the concept remains poorly understood and ill-defined (Baker et al., 2018).

One of the most influential definitions guiding much of the scientific discourse today (cited more than 1,100 times at the time of writing this paper) is the work by Howe and colleagues (1998). Specifically, Howe et al. proposed a five-point definition of talent:

- (1) It originates in genetically transmitted structures and hence is at least partly innate.
- (2) Its full effects may not be evident at an early stage, but there will be some advance indications, allowing trained people to identify the presence of talent before exceptional levels of mature performance have been demonstrated.
- (3) These early indications of talent provide a basis for predicting who is likely to excel.
- (4) Only a minority are talented, for if all children were, there would be no way to predict or explain differential success.
- (5) Finally, (5) talents are relatively domain-specific. (p. 399-400).

Recently, Baker and Wattie (2018) revisited the assessment and discussions of talent according to Howe et al. and reviewed relevant

research in the domain of sport to determine the usefulness of the original criteria 20 years later. The authors concluded the original five-point definition remains useful, with the exception of the fifth criterion. The authors also concluded that innate talent (defined as genetically constrained, biological influences on exceptional human performance) was conceptually and theoretically valid but had limited utility to those who work in sport because of limited research, questionable research designs, and inconsistent definitions.

This type of work may provide valuable insight for neighboring fields such as athlete selection (also commonly known as talent selection). For example, directing greater attention to unpacking what talent might be may provide information about the way coaches and other sport stakeholders behave when selecting and developing talent. Baker and colleagues (2018) suggested coaches' beliefs about where an athlete's talent stems from may affect the way they think about and interact with that athlete in their program. More specifically, a coach who believes talent is the product of genetic makeup may behave differently compared to a coach who believes talent is the product of hard work (for examples in other contexts, see Dar-Nimrod & Heine, 2011; Dweck, 2003; Phelan et al., 2002). Greater exploration of this hypothesis from various stakeholder perspectives could be useful for understanding the social and psychological factors of talent selection and development. Especially from the perspective of those responsible for making selection decisions (e.g., a coach who decides which athletes stay and which athletes are removed from the team), and thus directly influences an athlete's participation in the sport.

In a recent study of what talent means to collegiate level coaches, Jones and colleagues' (2020) raised a number of questions about how their findings (e.g., talent is multidimensional, context specific, has physical and psychological attributes, and is highly subjective) are positioned with other samples in other sports and at various levels of competition. Moreover, if talent is seen as a developmental construct (at

least within the context of the Jones et al., 2020 study), then how does this influence coaches' subjective beliefs about talent across athlete development pathways? The present study hopes to complement work by Jones and colleagues (2020), along with others in the field, to explore subjective beliefs about talent further within competitive sport. Distance running coaches were chosen as the focus sample due to the unique features of athletes in this sport. For instance, distance runners tend to have a later peak age (Allen & Hopkins, 2015) – meaning athletes continue to improve their performance until a later time in adulthood compared to other sports (e.g., gymnastics, swimming, soccer, etc.). This often means athletes at the highest levels of competition are at a relatively stable period from a developmental perspective (at least compared to childhood and adolescence). Asking coaches about their perceptions of talent during these later stages of athlete development, ideally removes elements of talent selection that may be related to puberty (e.g., differences in growth and maturation that promote relative age effects, [Wattie et al., 2015]). Additionally, distance running is an individual sport where coaches are not necessarily making selection decisions based on position-specific criteria (e.g., selecting a goalie over a forward in the context of ice hockey). Controlling some of these elements by focusing on a sport such as distance running allows us to center on the specific individual components of talent in this context.

To this end, the broad objectives of this case study were to interpret coaches' rich descriptions for the following purposes: (1) to investigate the use of, and the context where, the term talent is used, and (2) to explore coaches' subjective beliefs about talent in the context of distance running, all in an effort to better understand the phenomenon of talent.

## Methodological Considerations

### Philosophical and Theoretical Positioning

The authors determined the research question, designed the study, conducted the research, and interpreted the results through a pragmatistic lens. In this sense, the authors hold the

ontological position that reality is always in a state of negotiation and can be debated, or interpreted, differently (Kelly & Cordeiro, 2020). Aligning with a pragmatistic paradigm, the epistemological positioning supports the notion that knowledge (in this case about talent) should be examined using suitable tools. The following methodology section explains the authors' use of certain approaches deemed suitable for this research question under investigation.

A key tenet of pragmatism is the exploration, through the sharing of experiences, what information has worked for the user. In this sense, "experiences create meaning by bringing beliefs and actions in contact with each other" (Morgan, 2014, p. 1046). For this reason, the present study embraces coaches' perceptions of their experiences in relation to talent in sport and accepts and explores an individual's subjective awareness.

## Methodology

A Qualitative Descriptive (QD) design was chosen as the approach to address the question "How can we find out?" QD research is known in health psychology research to be the one of the most appropriate designs when a description of a phenomenon is desired (Bradshaw et al., 2017). It also embraces a naturalistic perspective (i.e., aims to produce a straight description when examining poorly understood phenomena) and respects the notion there are many realities and individuals craft their own interpretation and meaning of the phenomenon, once again, keeping with the congruency of the philosophical and theoretical underpinnings (Kim et al., 2017; Sandelowski, 2000; 2010; Sullivan-Bolyai et al., 2005; Willis et al., 2016).

For this study, the question "Why might that be the case?" for the interviewee's responses was not the focus of the investigation. Rather, findings are reported below in a straightforward manner and include descriptive summaries of the "who, what, where, when, and how" in relation to talent and coaching. For this reason, sometimes, QD is known to be less theoretical than other qualitative designs and has been criticized for being too simplistic and lacking

rigor (Sandelowski, 2000); however, when used appropriately, the design can be rich in other ways. To highlight the unique elements of this approach, Neergaard and colleagues stated, "The aim of QD is neither thick description (ethnography), theory development (grounded theory) nor interpretative meaning of an experience (phenomenology), but a rich, straight description of an experience or an event" (Neergaard et al., 2009, p. 52). Furthermore, it is particularly useful for concept identification and development and for providing a vehicle for the voices of those experiencing the phenomenon. It has typically been employed as a suitable methodology for guiding policy documents and educational tools, which has particular value for shaping coach education discourse and selection policies in competitive sport.

This approach is believed to be advantageous for allowing the researchers to stay close to the data and allow for low inference when reporting findings (Neergaard, et al., 2009). Moreover, QD is recognized for its "focus on producing rich description about the phenomena from those who have the experience offers a unique opportunity to gain inside or emic knowledge and learn how they see their world" (Bradshaw et al., 2017, p. 3). As this is one of the first studies investigating this research question within this context, the authors believe a straightforward description of the coaches' experiences and perceptions can act as the foundation for future investigations that include descriptions of the meaning or essence behind those experiences and perceptions. To date, there is considerable conceptual and definitional baggage associated with the word talent, and, until more work has been done focusing on understanding what "talent" means in the context of elite sport performance, scholarship in the area may benefit from a variety of philosophical, theoretical, and methodological positions and approaches (both qualitatively and quantitatively). Ultimately, with the use of QD interpreted through a pragmatistic lens, the authors hope to contribute to the broader theoretical and conceptual understanding of talent and its application in sport settings.

## Participants

Participants included 10 distance running coaches (all male) from across Canada<sup>1</sup>. Seven were in head-coach positions at the time of the interview, two were in assistant-coach or co-coach positions, and one was currently in a physiologist's role, but had held a coaching position in the past. The ten participants had been coaching for an average of 24 years at the regional ( $n = 1$ ), international ( $n = 5$ ) or Olympic levels ( $n = 4$ ) with a range between four and 48 years of coaching experiences. Combined with the number of years in a coaching position along with the competitive level of the athletes being coached, we believe this sample of coaches is "elite" (Swann et al., 2015). In addition to their relationship to sport as coaches, all were previously distance running athletes at either the regional ( $n = 2$ ), national ( $n = 3$ ) or international/Olympic level ( $n = 5$ ) and sometimes referenced their past experiences as athletes.

## Data Collection

Once ethics approval was obtained by our University's Office of Research Ethics,<sup>2</sup> coaches were recruited using a snowball sampling technique. Each participant provided informed consent and a time was arranged for an interview either in-person ( $n = 1$ ), over video calling ( $n = 8$ ), or by phone ( $n = 1$ ) when face-to-face or video calling was not feasible (Sweet, 2002). While telephone and video calling present some notable limitations (Holt, 2010; Irvine et al., 2012), for accessibility and safety reasons, they offered the only feasible ways to converse with some participants in this sample.

Semi-structured interviews were conducted with the goal of gaining an in-depth understanding of coaches' beliefs about talent in sport. The primary framework for the interview guide followed Morgan and Krueger's five main question areas: opening question(s), introductory question(s), transition question(s), key question(s), and ending question(s) (Morgan & Krueger, 1998). The main questions from the interview guide directed the flow of the conversation and probing/follow-up questions (such as "Can you tell me what you mean by

....?") were used to clarify or expand upon participant's answers (Patton, 2002; Rubin & Rubin, 1995; Smith & Sparkes, 2016). See Table 1 in the Appendix for a complete list of main and probing questions.

The interview guide was developed as part of a larger research project by a team of three researchers and was piloted with nine collegiate level coaches. then revised for interpretability, quality, and fluidity. The guide was based on the authors' in-depth reading of the literature (Potter & Hepburn, 2005) and was informed through discussions with two researchers in the field who have extensive experience in interviewing elite-level coaches.

Unlike prior investigations, we intentionally avoided the use of the word talent in the interview guide. We did not want to assume that the word was used within this specific sample of coaches; therefore, the research question under investigation was rooted in understanding whether or not the term was used, and if so, how participants used the term without being prompted. This approach to gathering information on the frequency of words or phrases, along with the context within which the information is presented, is practiced in multiple disciplines (e.g., linguistics, psychology, and psycholinguistics, the blending of these disciplines) and is rooted in the belief that understanding language can help in the understanding of behavior (Harley, 2013). While this is the first study of its kind to explore the word talent in the context of distance running coaches, other studies have used a similar approach to study interview transcripts for phrases, sentiments, and words (such as Gibson et al., 2015 in the health psychology field).

## Data Analysis

The interviews lasted between 24 minutes and 2 hours and 36 minutes, with an average length of 46 minutes.<sup>3</sup> Interviews were transcribed verbatim producing 109 single-spaced pages of data. Inductive Thematic Analysis (ITA) was used to analyze the data from this study. ITA was selected given its application can help in the interpretation of various aspects of the research

topic by highlighting similarities and differences across the data, which is important for understanding the present research question (Boyatzis, 1998). In addition, the data were analyzed using an inductive process without trying to fit the data into pre-existing themes or coding outlines (Braun & Clarke, 2006; 2020), which also complements the principles of QD. This was attractive for the present study's design, as generating potentially unanticipated insights through the lens of coaches was important for a broader understanding of the research topic.

The phased approach of the ITA was shaped by Braun and Clarke's work (2019, 2021a, 2021b). The process began with the researchers familiarizing themselves with the data by listening and re-listening to the interviews, and once transcribed, reading and re-reading the interviews line by line. In addition, the lead author maintained descriptive field notes before and during data collection and analysis. The authors then coded the data by generating labels which highlighted important features of the data central to the research question. After the coding, the authors reviewed the labels and the associated data, and identified patterns which became the themes (and possible themes) of the data. The authors then performed a continuous cycle of reviewing and generating themes to help determine the fit of the themes to the research question. Finally, a process of defining the themes was performed to determine informative names that captured their scope and focus. The authors ensured that coaches were assigned a unique identifier (C1 to C11) to promote anonymity; additionally, all identifying information was removed for the coaches as well as the athletes they referenced.

## Rigor

To demonstrate the quality of the data, the credibility, dependability, confirmability, and transferability will be addressed in congruence with Bradshaw and colleague's (2017) rigorous approach to QD and shaped by the early work of Lincoln and Guba (1985). With respect to credibility, a friendly rapport was established between the primary investigator and the

interviewees before interviews began. This rapport was built through a number of e-mail exchanges and sometimes a phone call to discuss convenient meeting times. This helped build a more trusting relationship, which in turn, may have helped increase the likelihood of information sharing.

The confirmability of the data was addressed by incorporating a follow-up e-mail to each participant after the interview asking for confirmation of accuracy in the demographic information collected (e.g., number of years coaching, level of competition, etc.). In addition, the primary investigator added notes in a reflective journal. This reflectivity practice is known to be an essential component of the research process not only to engage more deeply with the data, but also to augment the trustworthiness (Finlay, 2006; Kingdon, 2005). The descriptive field notes were shared, read, and discussed with another researcher, which helped minimize the interpretation of the coaches' comments within the context of the lead author's personal experiences (Shaw, 2010). Additionally, findings are reported in a direct quotation fashion; that is, the authors have not modified or adjusted the information shared by the participant.

In terms of dependability, an audit trail was created describing the study's processes and procedures and this was closely monitored and adjusted as the study progressed. Finally, the transferability of the study was addressed in several ways; a) a purposeful sample of expert coaches from multiple places in Canada was chosen, b) a reflexive journal was used, and c) sufficient details of the present study's processes and procedures have been included to allow for future re-creation by other researchers.

## Positioning the Authors in the Research

The authors acknowledge that it is inevitable that different researchers will approach research with different perspectives intertwined with their own personal and situational experiences. Knowing this, it is important to discuss the positionality of the researchers within the study to show how the positions they occupy are deeply rooted in the construction of knowledge

(Simon & Dippo, 1986). The interest in the present research question stems from the work and research experience of the two authors. Both authors have worked alongside coaches in a consulting and coach education role regarding the capacity of talent identification and selection. A particular concern expressed by coaches is talent wastage; therefore, one can presume that we entered this research looking through the lens of our own experience to find ways to identify inefficiencies and improve selection practices.

By situating ourselves within the context of this study, we acknowledge the influence of our experiences on the way in which this study was conceived and conducted. While the authors tried to minimize their personal interpretations (keeping descriptive field notes, using QD design, consulting with other practitioners and researchers, not using the word talent until it was used organically in conversation), the authors acknowledge that they brought with them preconceived ideas and theories regarding what talent is and how the word is used operationally.

## Results

Findings are presented according to the themes (and sub-themes) identified through the ITA process, including (1) the contextualization of talent and (2) the characteristics of talent.

### Contextualization of Talent

The following sections describe contextualization of coaches' use of the term talent, including discussion regarding the frequency of the term's use, how the term was positioned and used, and the specific application of its use. Four sub-themes were identified: (a) embedded in lexicon, (b) a descriptor for the best athletes, (c) specific yet variable, and (d) closely related to other terms.

### Embedded in Lexicon

As noted above, the word talent is inconsistently defined and can be laden with personal meaning, thus it was important for the present sample that the authors should not make

assumptions about how the term is used or the context within which it is used. For that reason, the interviewer made no mention of talent until a coach used the term of his own volition. The majority of coaches used the term talent in one form or another to reference distance running athletes. This finding helps to highlight the frequency of the term's use within this coaching sample and specifically within the context of elite distance running performance.

### A Descriptor for the Best Athletes

The coaches most frequently used the term talent for the first time in response to the request "Tell me about the best athletes you have worked with." For example, Coach 10 was describing one of the athletes he recently coached and said, "You could see that she had a ton of talent." Statements such as this were made matter-of-factly and were not given any further explanation of the term as to context or meaning unless prompted by the interviewer, which may also shed light on how common and accepted this term is. In another example, Coach 1, when describing the athletes in his program, said, "I believe talent is everywhere." He further explained that the athletes he coached at that particular competitive level all had talent, but in varying degrees. In a similar sense, Coach 6 shared, "I work on the very, very sharp end of the curve and so. umm, to me talent at that end of the curve is already there and established and we're just, we're almost polishing it." As shown in these two quotes (Coach 1 and 6), these coaches believed talent had already been selected for within the pathway and was widely observed within the athletes they worked with. In a way, the ease with which the term talent was used conversationally, combined with the sheer frequency of its mention with respect to descriptions of best athletes, indicates that these coaches believe that talent exists in the context of elite distance running.

### Specific Yet Variable

The sub-theme "discrete and specific" was chosen because it captured the distinct spheres within which coaches believe talent exists. This sample of coaches emphasized that a person can

be talented in very focused areas and not others. For example, Coach 2 expressed, "...you have other athletes like whose talent is their speed, right? Like my talent laid in my efficiency. I was like a super smooth, efficient learner. I never had to really work on that." It would appear from Coach 2, talent may apply only to certain qualities, aspects, or skills and may not be understood to carry over broadly to athletic ability. In line with Coach 2's reference to the specific attributes of being talent, Coach 4 shared the following:

I've been lucky enough to be around a number of Olympic gold medalists. Most of them are very self-aware, which is different than an elite performance perspective because it's their ability to just make themselves better which is part of who you are, and that's part of their talent.

Similarly, Coach 9 explained, "Of course, it's not you have it or you don't, but everyone has it to a certain degree." These quotes help to highlight that this group of coaches believes that talent, even in its unique spheres (like the sport of distance running), does not apply in an all or none fashion. Specifically, a coach's understanding of an athlete as being talented does not necessarily mean the coach views that athlete as being generally talented, but rather being talented in specific and focused areas.

### **Closely Related to Other Terms**

During conversations with coaches, it was noted that they used certain either interchangeably or in place of the word talent. For example, here is Coach 8's explanation:

This kid is just like a bottle of wine. He just gets better as he's progressing... He doesn't have the blistering speed, but he's just a methodical individual who puts that time in and, you know, I wouldn't say he doesn't have the talent, but maybe he has a gift, right?

In contrast, Coach 9 explained, "I've had some extremely hard workers on the team that just, you know, go above and beyond. Not always, you know, matched by the gift of talent,

but their work ethic is certainly quite exemplary."

From these two examples, and others, it appears there may be opposing views of what talent and gift mean in the context of elite sport. Having used both terms in the same sentence and having used the word potential in an earlier statement, Coach 9 was asked to explain his definition for all three terms. He responded as follows:

I think I would say potential, you don't really know it's there until you start to really see a glimpse of it... I mean, you can look at someone's physical attributes and say, oh, they look like a runner, but really you got to see them race, and you got to see them run to be able to confirm that they're running fast. Potential I think maybe speaks to when there's maybe been some more concrete signs of that talent. You've got a high school runner or someone new who's just started in and, you know, maybe they look like they might have talent and then the first couple showings, you know, I think this could be developed into something fast or based upon their rate of progression... And I think it comes also to the idea that talent is not an all or nothing, right? I mean it. It's a spectrum, you know, some people have a lot more talent than others, and so potential I think maybe speaks to where that ceiling of talent might lie. This athlete has the potential to be a champion maybe if you're getting some glimpses of, you know, they've really progressed early on or some other attributes about how hard they're ready to work or their resiliency to injury. You can, maybe, make a guess. Gift, I think I would only use that in the context of someone who has sort of demonstrated talent to an exceptional level. So as opposed to talent being a spectrum, and we all have some talents to some degree, I would describe that runner has the gift when they're just highly blessed, they run fast or have, you know, tremendous potential to be fast.



This long statement clearly indicates that Coach 9 believes the three terms are distinct, as demonstrated by the definitions he provided for each term; however, the lack of clarity about what the differences and/or unique characteristics of each construct are speaks to the conceptual clutter around such nebulous and nuanced terms.

### Characteristics of Talent

Once the term was used conversationally, the coaches were asked questions such as “What does talent mean to you? What does it look like? What does it act like?, How long does it take to know if someone has talent?” Coaches’ responses are captured below in the main theme, characteristics of talent, and are further separated by sub-themes including (a) raw (untrained) and trained forms, (b) various physical and psychological components, and (c) different degrees of obviousness. Below, these sub-themes will be explained and supported by coach commentary.

### Raw and Untrained Forms

Interestingly, many coaches in this sample perceived talent as existing in two distinct forms, raw (sometimes referred to as untrained) and trained. For example, Coach 3 said, “Yeah, they had the raw talent for sure. They were winning from the first step they took.” When asked to elaborate on what was meant by this dichotomous perception of talent, Coach 3 explained as follows:

So, there are a couple of ways to measure kind of raw ability in our sport. This kind of untrained abilities, usually it’s a younger athlete, and they enter the sport without having, you know, done any training, or they or they don’t know much about it at all, and they kind of see how well they do kind of right out the gate. So that’s one kind of potential [uses air quotes]... the second kind is trainability [uses air quotes], so these are the people who ... intuitively understand the training process, but also, they physically respond to it more robustly. So, an athlete can

have the first thing, the high, like high non-trainability but not a high level of adaptability, so they don’t respond that robustly to training stimulus, and you can have people who aren’t very good without training but are becoming extremely good on very little bits of training. It’s when you get a person with both of those qualities both like high, non-trained ability (raw talent) and also very high response to training stimulus that’s where your top people come from. So yeah, so that’s raw ability and neither is really sufficient to reach the top. You have to have some degree of, you have to be above average to some degree in both of those areas.

As demonstrated in this quote, Coach 3 believes untrained talent is seen/recognized in athletes who may have entered the sport with little sport-specific training but displayed obvious signs of potential. Trained talent, on the other hand, describes athletes with many years of sport specific training who have also displayed superior abilities. In a similar sense, Coach 9 discusses the distinction between the two forms of talent in his statement, “You can just tell the difference between a thoroughbred and a workhorse. Simply based on how someone moves and what they look like.” Coach 9’s statement sheds light on a potential dualistic perspective of athletes and perhaps the belief that there are signs/signals indicating whether an athlete fits one profile or the other. This distinction was also particularly interesting because of the choice of terminology (i.e., thoroughbred and workhorse). A statement such as this is both rich and intriguing, and the authors believe that this dualistic perspective offers an interesting area for future explorations (perhaps from a socio-cultural lens).

This cognitive separation between the forms of talent was further expressed by Coach 2. When asked in a follow-up question what he meant by the term talent in his previous response, he immediately responded, “So I think the term you mean is what we like to call a raw athlete.” The authors interpret this statement to mean the coach may equate talent with innate

qualities/characteristics or perhaps genetic predispositions, as captured in the use of the expression raw athlete. This was further captured in Coach 1's definition of talent, who explained, "I think, especially on the women's side, there is a lot of untapped potential before the high school level in particular." Here, Coach 1 may be alluding to the notion of a raw athlete as one who has little training but still demonstrates superior performance. When asked to elaborate on why this was female-dependent, Coach 1 continued, "I think it's probably related to the ability to upregulate mitochondria through endurance training on the women's side compared to the men's side. I think you can actually derive a lot more aerobic fitness on the women's side and out of thin air, than on the men's side." This quote speaks to the coach's recognition of the potential physiological differences between females and males which draws attention yet again to the idea of genetic predispositions shaping this raw component of talent.

Through conversations with the coaches, it appeared both forms of talent, raw and trained, were important qualities for an elite distance running athlete, and in some cases, certain athletes displayed signs of both forms (as mentioned by Coach 3). Coach 2 shared his particular excitement around the individuals he classified as having raw talent as he explained, "The most undeveloped, the under-developed ones are the exciting ones because there's so much to gain still and if they're showing especially, you know, high school athletes that show good speed, so like I'm a good example...I had this like speed gift, but I had never run a day of mileage in my life." What remains unclear is whether this group of coaches preferred a certain form of talent. For example, Coach 8 discussed the value of both the raw and trained forms of talent by explaining, "She [the athlete] dispelled the myth that distance runners have a certain physique, where she proved that hard work, obviously there's some genes, and there's some physiology there, it made her such a unique athlete." Statements such as these by Coach 2 and Coach 8 indicate the need for further work using different approaches in

qualitative exploration to gain a deeper understanding of why—or if—coaches prefer raw or trained forms of talent.

### Various Physical and Psychological Components

It would appear, based on the discussions in the present sample, that talent in distance running is considered to have physical and psychological components. This was reflected in several comments throughout the interviews, some drawing greater attention to the physical components, as demonstrated by Coach 9:

You can tell a runner based on their, their stature, their leg length, their physique, you know their build. ... and then, of course, then there's the physiological component to it, their aerobic capacity, their anaerobic capacity, their ability to sustain endurance. You know, of course, all driven by everything from the muscle composition, the cardiovascular system so that's, of course, in varying degrees, where some people have more or less.

Other coaches drew greater attention to the psychological components as demonstrated by Coach 10 who discussed the role of mental skills and balancing emotions required for an athlete to persevere through the challenging competitive sport pathway. Specifically, as if he were speaking to the athlete, "Can you just push yourself to the absolute limit? It's not good at some point to keep doing that, but I would say that the majority of people [described as talented] are just super motivated to do that." Moreover, Coach 10 continues, "Well, I mean, in a part, we're just talking about being very mentally strong, right? And like have a positive outlook and be confident. I guess you'd say be very resilient, right? Because there's lots of ups and downs."

Surprisingly, even within the study group of elite distance running coaches (all male, coaching in Canada, at similar stages in the developmental pathway), there was variability in the physical profile used to describe the best

athletes in their programs. For example, Coach 2 explains, “That’s what’s so cool about running, is you get both sides of that fence. We have people, we have like two athletes who are essentially, have identical times and they’re literally the opposite ends of the spectrum when it comes what their athletic IQ<sup>4</sup> is like.” There is much to consider in this quote, perhaps most notably that the best and arguably most talented elite distance runners do not fit a cookie-cutter mold. Rather these athletes present unique combinations of physical attributes and skills.

Moreover, similar to the aforementioned physical profiles, a one-size-fits-all approach was not observed within the psychological characteristics. For example, Coach 3 noted the lack of leadership that two of his best and talented athletes exhibited with the following quotation:

I wouldn’t describe them necessarily as team players, they’re very cooperative athletes, and they’re liked and respected on the team, but neither of them has been captain. They don’t play leadership role in that respect; they’re very much focused on their own goals.

In contrast, Coach 7 believed that his best and most talented runner did have leadership qualities by stating, “You can never tell who’s going to be on your team, and you can never tell who is going to be one of the better leaders on your team, and she was a leader.”

One of the more agreed upon characteristics was the ability of the best athletes to understand and accept that reaching the end goal (which was athlete-dependent) will be a long, difficult, and possibly painful journey. Multiple coaches mentioned their best athletes had abilities to delay gratification. For example, Coach 2 discussed this notion by saying, “He was able to just buckle down for like three months of training and not let it get the better of him. Just get the benefit from it and walk away knowing it was for a bigger picture.” He continued to explain that this ability to delay gratification may be increasingly important in this generation of athletes which is “hyper-focused on the day-to-day” but needs to see “the bigger picture.” A quote from Coach 6 highlights the relevance of

this capacity to delay gratification especially at the elite levels of performance.

[She] is a multi-time Olympian but her cumulated running time at the games is 8 or is 12 minutes of racing. And if you divide 12 minutes by the 14-year career she had, it’s a pretty small percentage of time, and so you figure your self-worth is based on the Olympic outcome, and you do that percentage, you’re crazy! You better enjoy the journey and enjoy the people you meet, and you better have a bigger life purpose to what you do but, that said, the outcome is also important for a lot of people.

In addition to highlighting how vital it is for an athlete to see the bigger picture and delay gratification, these quotes highlight an area ripe for further exploration: the nuanced and complex interactions between athletes’ lived experiences and self-identity in pursuit of athletic success.

Another common psychological characteristic of talent was a strong work ethic. As noted by Coach 9, this work ethic may be, more broadly, one of the driving components of talent:

Hard work is, is obviously essential regardless and so what separates those who do really well is those who have the, the physical gifts, especially in a sport like running, where you know, you have to just be endowed with certain attributes—the right body type, the right physiology—but you also have to have the, the psychological component—composure—to be able to put it all together and persevere and keep training, to suffer...

This comment may speak to the idea that talent is perceived, at least in part, to be related to an athlete’s capacity to work hard and train at very high levels. This coach paid particular attention to the idea of how important this is for the sport of distance running, but also acknowledged the dynamic interactions of both the psychological and psychological abilities of the athletes to reach these elite levels of performance. It is also

important to acknowledge the coach's use of the word gift in this context because the question to which he was responding was framed as "What does talent mean?" Perhaps this speaks once again to the notion of innateness or genetic predisposition being related to talent.

### Different Degrees of Obvious

Intriguingly, some coaches stated that talent has varying degrees of obviousness. Some of the coaches' comments could be interpreted to mean that they think talent can be observed easily in some athletes but seemed to be hidden in others. For example, consider Coach 8, who explained that talent is ostensibly recognized through watching an athlete in practice execute a given task (perhaps with more ease than other athletes). Coach 8 said specifically, "You know, talent is one of those athletes who can just kinda come in and just, you know, you can just see that they have the ability right away. They're able to do the workouts that you want them to do. Right?." In another example, Coach 7 stated, "You see something in their first practice." Coach 10 said the following:

You see them run, you know a hundred meters, or two hundred meters, and you see the time, and you're like, wow, that's pretty talented for a grade nine girl to be able to just walk out here and do that for the first time...there's some people that just run and anybody would say, "Look how talented they are!"

In contrast, Coach 3 said, "It's not to say they couldn't achieve these things, but they're not showing it in the obvious way that the [Athletes C & D] are, which is by kind of winning at every level sort of thing." In this case, Coach 3 compared two of the best athletes he worked with and believed that one was talented in more obvious ways and the other in less obvious ways.

The coaches' stories shared during the interviews highlighted the difficulty in identifying talent for even the most elite coaches in this field. With talent being displayed in both obvious and less obvious ways, it is easy to imagine that athletes have been overlooked

throughout the selection and developmental pathways. While this is difficult to test, it can be postulated that fluctuations in athlete abilities over time are a likely cause. This may be magnified in a sport like distance running where peak race performance can occur later in an athlete's life compared to other sports like gymnastics (i.e., distance running is considered a late peak age sport). This complicates selection practices as many selections occur before an athlete may have reached their peak performance. This is expressed by Coach 3 who noted, "Talent is very difficult to identify as there are people who don't excel at every stage, but then all of a sudden will jump four or five stages when they hit the age of 25." This was emphasized further by comments from coaches who indicated that they believe talent was missed in the developmental pathways. Coach 1 noted, "I think there's talent in lots of places. It's just not developed correctly. So, like those are runners that would have been overlooked and never recruited by schools that then became champions [i.e., the runners, not the schools]."

Comments regarding the institutional and organizational structures influencing athlete selection helps to position the coaches' perspective with regards to talent identification (and thus, selection) practices. In the case of Coach 1, it is a relatively short window to identify, and this window makes selection decisions even more challenging as coaches acknowledged the variability in time it takes for athletes to demonstrate their athletic abilities and for coaches to subsequently recognize those abilities.

### Discussion

This study aimed to explore the frequency of use, contextualization, and subjective beliefs regarding the term talent through the lens of a sample of elite coaches working with an elite group of distance running athletes. In the following discussion, the authors (1) consider the term's use and significance and discuss how these beliefs may affect coach behavior and (2) consider the extent to which the authors' findings provide support for the reconsideration of the term from an operationalization

standpoint and discuss potential implications for future research.

First, it was important for the authors to determine whether the term talent was used at all, and whether the coaches believe that this construct exists *before* asking them what the term means in the context of their sport. Findings of the present study indicate that coaches in the sample do use the term talent in their lexicon (at least at the time of, and context of, the interviews with them). For this reason, the authors interpret this to mean that the coaches believe that talent exists.

Through discussions with coaches regarding the systems they work within and the athletes with whom they worked, it appears that coaches use the term talent as a description of athletes' abilities. Most often, coaches described the best athletes as those who have talent, are talented, or display signs of talent. In other words, the coaches articulated an association between talent and the best athletes in their programs. When asked to confirm whether the person described as the best athlete was someone who did or did not match their connotations of the term talent, all respondents believed the terms best and talent went hand in hand.

The interview data also suggested that coaches believe talent has multidimensional qualities, in the sense that talent includes psychological, physical, emotional, and physiological components. This finding aligns with the work by Jones et al., (2020) where collegiate coaches were asked, "What does talent mean to you?" Their answers varied, and in some circumstances were inconsistent within the relatively homogenous group (from the same institution, at the same point in time, working with athletes at the same competitive level). Beyond the multidimensionality of talent, in the work of Jones et al., (2020) and the present case study, beliefs about talent appear to be context-specific (e.g., understood within the coaches' environment and realities and depending on the individual and their circumstances), complex, and nuanced.

The data in the present study also implied that coaches believe talent not only exists but can exist in multiple forms (raw and/or and

trained). This finding echoes the dualistic perspectives already observed within the literature with respect to expert performance (i.e., nature versus nurture debate; for an in-depth review of the perspectives in sport, see Davids & Baker, 2007, and Phillips et al., 2010) and draws attention to the notion of talent having a genetic component. Specifically, in the case of the present sample, similarities can be drawn between what coaches considered raw talent and what is recognized in the literature as being a genocentric (nature) perspective (Phillips et al., 2010). Likewise, what the coaches considered to be trained talent may be similar to that of the environmentalist perspective (nurture). Despite somewhat heated arguments to the contrary, some would argue that the notion of talent, at least as defined as genetically constrained, biological influences on exceptional human performance, is not only reasonable, but also irrefutable (Davids & Baker, 2007). A recent meta-analysis (Plomin, 2019) found no evidence of a single trait that was not, to some degree, heritable. This finding is also expressed in the "First Law of Behavior Genetics" which concludes, "All human behavioral traits are heritable" (Turkheimer, 2000, p. 160). With a sport such as distance running, where genetic predispositions have been studied (see Brown et al., 2011; Moir et al., 2019; Scott et al., 2004 for examples), it is perhaps unsurprising that coaches in the present sample referred to raw talent when describing their best athletes.

While it was not clear whether one form of talent was preferred, there were subtle signs that (at least for one Coach) there was interest and intrigue with raw/untrained athletes. While deeper investigations are needed to explore this further, statements such as that of Coach 2 (see p. 47 for direct quote), may shed light on a particular preference for innateness within the context of elite distance running. This preference or intrigue with a person's natural/innate ability/abilities was studied empirically by Tsay and Banaji (2011) in the context of music. Findings helped to highlight the potential interest or fascination—called naturalness bias—in those who are described as

being a natural talent. More work is needed however, to test this naturalness bias in the context of sport and to explore the stability of coaches' beliefs, especially as Tsay and Banaji (2011) demonstrated, the stated preference (in their case for "strivers" or trained talent) does not always align with the actual decisions/selections made (which favored natural or raw talent).

Regarding beliefs about the two forms of talent, findings of the present study may also hold important insight into the way a coach thinks about and develops an athlete (i.e., a coach who believes an athlete's talent is trained, may believe his<sup>5</sup> ability to work with and further develop the athlete is limited). The finding that beliefs about talent (and its meaning) matter aligns with existing research in the field (Baker et al., 2018; Dweck et al., 1995; Wulf & Lewthwaite, 2009). Specifically, the notion that individuals' attitudes about talent affect their motivations, behaviors, and performances was popularized by the term "Growth Mindset" by Dweck (1999), and this research suggests people have beliefs regarding the source of their abilities (inherent and innate or developed). These authors (among others like Baker and Wattie, 2018) believe that a view of sporting talent as something a person either has or does not have has the potential to influence both the coach's and athlete's behavior in significant ways. Simply put, "When a coach or scout makes a decision about who has talent or has the potential for further development, they are ultimately making a prediction about a range of future sport outcomes" (Baker et al., 2018, p. 50).

Second, to add to the complexity of discussions regarding sporting talent, many coaches used words such as gift and potential in their descriptions of talent. This was seen with Coach 9 earlier in the coach commentary, and with Coach 8, who described the terms gift, potential, and talent, which speaks to the challenges of using such nuanced words for such a specific and precise task. In light of this finding, and to position the finding with other research in the field (e.g., Baker et al., 2018; Johnston & Baker, 2020), the authors of the

present study take the position that using a term such as talent may be problematic. In their recent work, Baker and Wattie (2018) argued the validity of talent from a theoretical perspective (i.e., there is reason to believe talent exists in the world); however, they concluded the term may not serve any real use in practice without concrete definitions and reliable measurement tools. Moreover, trying to identify a uniform understanding of talent may never be feasible because of its dynamic and fluid nature (see, for example, Phillips et al., 2010). Knowing this, if talent cannot be seen or measured with reliability or validity, what purpose does it have for a coach to use this term when identifying an athlete's suitability to their program? The use of this term (and potential misuse) has repercussions for the coach when tasked with making accurate selection decisions, as well as for the athlete whose behavior may be influenced by their beliefs about whether they have talent or not (Dweck, 2003; Dweck & Yeager, 2019). The reality is that talent is a pervasive phenomenon in sport. This is seen in the language used in the media (e.g., Bleacher Report, 2021), the use in policy and organizational documents (e.g., swimming; Ontario Artistic Swimming, 2019) and the accreditations that coaches and other administrators can earn (e.g., The Football Association Level 1 Talent Identification; The Boot Room, 2021). Collectively, these findings reinforce the importance of considering the language used in athlete development and sport participation, as it is a way of expressing beliefs (whether consciously or subconsciously) and may have lasting repercussions. Future work in the field is needed, even if for no other reason than to challenge the existence of talent and to question whether it deserves a place at all.

### Future Directions

The authors believe this work should be interpreted as a case study whereby findings should be contextualized by the location (all in Canada), time (cross-sectional investigation), and sample (elite-level coaches discussing an elite-level sample of athletes). Future work could strengthen the credibility of the findings

by expanding the focus of investigation to other sport stakeholders (i.e., athletes, sport staff, parents), and policies and guiding documentation (i.e., through discourse analysis). This triangulation of data may help broaden the understanding of the socio-cultural factors at play and may provide more robust findings of how talent is constructed and perceived.

Additionally, future work could benefit from exploring how talent varies based on different training and education backgrounds. For example, this study included a coach who also worked as a physiologist. It would be interesting to compare findings with coaches who hold dual (or multiple) roles, which may provide a unique, more diverse perspective of talent in runners. Athlete selectors (such as coaches) are a critical sample from which to learn as many at the elite level have years of working with, developing, observing, and selecting athletes. If researchers can capture more coaches' insider's knowledge (often referred to as tacit knowledge), then this deeper understanding of motives, goals, and practices could inform the development of more efficient models. For example, exploring how coaches believe that their approaches to athlete development change based on their subjective beliefs about talent may highlight personal and system biases. This, in turn, may help coaches work within the system, address their blind spots, and decrease talent wastage in the system (Johnston & Baker, 2020).

### Limitations

While the present case study presents information that can advance our understanding of talent and talent identification in distance running, it had notable limitations. For instance, there are potential biases affecting the type and nature of the answers the coaches provided. As noted by Brink (1989), interviewees may respond with what they believe is the preferred social response, whether or not it aligns with their own personal beliefs. Similarly, the very nature of self-reporting requires the use of memory, which is often influenced by various cognitive biases and limitations (i.e., participants may draw from their most recent experiences for reflection as these are more

easily pulled from memory; Tversky & Kahneman, 1973).

The researchers worked to mitigate these effects and biases by creating a safe and comfortable space for the interviewee (all interviews were done in the coach's office or in their own home) and the authors expressed the prioritization of protecting the coaches' (and their athletes') anonymity. To help mitigate the effect of the recollection bias, a probing question was added: "How might your perspective of talent have changed over time?" It is worth acknowledging that these biases are difficult to monitor, and future work may benefit from participant-driven methods such as journaling or think-aloud protocols during selection tasks (Whitehead et al., 2016).

Finally, while the perspective of such an elite sample of distance running coaches is a strength of this study, the lack of diversity among the sample was a potential limitation. That this sample consisting entirely of white, male coaches likely speaks to the coaching landscape in Canada and highlights the need for greater diversity (e.g., various backgrounds, gender expressions, etc.) at the institutional and organizational level.

### Concluding Thoughts

In a commentary on Howe et al. (1998), Davidson and Sloboda's work (1998), Starks and Helsen stated, "Coaches scour the country looking for it, professional scouts claim they can identify it, the media wager on the basis of it, and the athletes judge their own worth based on others' perceptions of it, yet like the search for talent in music, precursor talents in sport remain elusive" (1998) (p. 425). Talent holds a particular place in the lexicon and practice in sport, and yet, to date, there is little empirical evidence to show its existence. Findings from the present study echo these elusive sentiments and further support the need to question its use in sport, as there remains little utility for the term when it comes to identification and selection practices. Findings also support the idea that talent means different things to different people under different circumstances, and without a better understanding (what talent

looks like, how to predict it, and how it changes over time), it will likely remain a barrier to enhancing identification, selection, and developmental practices.

## Endnotes

1. Coaches were working at the Provincial and National Sport Organizations as well as the U SPORTS Canadian collegiate sport body and private coaching opportunities
2. University Research Ethics Board certificate number for approval: STU 2019-067
3. While this may seem relatively short for the research question under investigation, the coaches in the present sample (for the most part) stated their beliefs quite succinctly. The interviewer then used follow-up questions to illicit more information, but it seemed this sample had a matter-of-fact approach in their responses.
4. IQ refers to intelligent quotient.
5. The term his is being used in reference to the present sample.

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## Authors' Declarations

The authors declare that there are no personal or financial conflicts of interest regarding the research in this article.

The authors declare that they conducted the research reported in this article in accordance with the [Ethical Principles](#) of the Journal of Expertise.

The authors declare that they are not able to make the dataset publicly available; however, data are able from the institutional Ethics Board of York University (contact: ore@yorku.ca).

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## Appendix

**Table 1.** Interview Guide

Main question	Potential probing question(s)
Can you tell me a little bit about how you arrived in this coaching role?	<ul style="list-style-type: none"> <li>- How long have you been coaching?</li> <li>- What level of competition do you coach right now?</li> <li>- What is your current role working with athletes?</li> <li>- Have you held other roles while working with athletes in the past?</li> </ul>
Can you tell me about the best athletes in your program? (Can you provide 2-3 examples?)	<ul style="list-style-type: none"> <li>- How long did you work with him/her?</li> <li>- What makes him/her the best?</li> <li>- Did your impression of him/her change throughout your time working with him/her?</li> <li>- What age and competitive level was this athlete when you started working with him/her?</li> </ul>
What would you say makes this athlete stand out from the others?	<ul style="list-style-type: none"> <li>- Was this something that was obvious to you? To others?</li> <li>- How did this change over time?</li> <li>- How long does it take to notice something like that?</li> <li>- Does it take special training?</li> </ul>
IF the word talent was mentioned:	<ul style="list-style-type: none"> <li>- What does talent mean to you?</li> <li>- How did you arrive at that understanding?</li> <li>- What does it look like?</li> <li>- What does it act like?</li> <li>- How long does it take to know talent when you see it?</li> <li>- How might your perspective of talent have changed over time ?</li> <li>- How does your understanding of talent relate to the athletes you described at the beginning of the interview?</li> </ul>
IF a word like gift or potential was used:	<ul style="list-style-type: none"> <li>- Can you define that word?</li> <li>- How does that differ from the word ‘talent’</li> </ul>
Is there anything else you would like to share about your experiences when assessing athletes and making selection decisions?	