

Talent Policy: Problems and Solutions

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Abstract

The identification and development of talent have long been a central target of policy making in various domains, including education, sports, the arts and business. Given the importance of talent for success in a competitive global market, governments and businesses across the globe continually devise strategic policies to identify, attract and preserve both national and international talent. Most of these talent-related practices and policies (implicitly) assume that a person's talent is predetermined and fixed, that it is readily identifiable and that effective talent development requires early identification and specific, targeted training. However, these assumptions are problematically unsupported by recent empirical and conceptual scientific research. Instead, the research shows that talent development is dynamic and context-dependent, and that early identification is an unreliable predictor of future performance. We outline the conceptual ambiguity and empirical flaws involved in current talent-related practices and propose three specific solutions to improve policy.

Keywords: Talent, talent development, talent identification, skill, policy, ethics

THE IDENTIFICATION, DEVELOPMENT AND UTILISATION of talents have long been a central target of policy making across various domains, including education, business, sports and culture. For governments, the notion of talent has traditionally been associated with the meritocratic idea of 'careers being open to talent', with its emancipatory promise of upward social mobility based on individual merit and skill. Along with policies aimed at identifying and developing talent on a national level, governments have also devised strategic policies to attract and preserve international talent in a global and mobile world, such as the United Kingdom's Office for Talent initiative announced in 2020, China's Thousand Talents Plan originating in 2007 and Finland's Talent Boost programme for 2023–2027. Managing and retaining talent also play a pivotal role in the policies of corporate institutions, with designated programmes and strategies aimed at overcoming the 'war for talent', a term coined by McKinsey & Company in 1997 to refer to the increasingly competitive environment in which talent is recruited and retained.

This paper highlights that, despite its centrality in policy initiatives, the notion of talent assumed

by these policies is often used ambiguously and rests on a mistaken understanding of how talent is identified and developed. Many of the relevant policies and programmes assume, at least implicitly, that a person's talent is predetermined and that developing talent to its maximum requires identifying it as early as possible and providing those who are talented with specific, targeted training. These conceptions of talent, and the policies based on them, feed into the meritocratic ideal that views talent as something a person deserves to be rewarded for and as a deciding factor in distributing social welfare, educational opportunities and employment prospects.

However, these widely accepted assumptions are unsupported by the scientific research on what talent is, how it is recognised and how it develops. The current and developing research demonstrates that one's level of talent is not pre-determined and fixed, but rather context-dependent and developed in interaction with environmental factors. Moreover, recent research shows that even the more modest claim, according to which it is possible to identify those who can potentially develop their talent into excellent performance, is

untenable. This is because, as we outline below, the early selection of who is ‘talented’, followed by intensive training, is not an accurate predictor of later performance standards. These mistaken assumptions are also a result of conceptual confusion, which works to further mask the inadequacy of current policy. Recent conceptual research into the nature of ‘talent’ has exposed various types of ambiguity in the ways that the term is used and defined, and provides insights into how this ambiguity feeds into problematic policy and practices.

The empirical and conceptual research on talent and its development thus highlights inaccuracies in the theoretical assumptions that ground talent policy initiatives. As we argue, taking the scientific research on talent seriously not only calls for a re-examination of current talent development practices, but also provides the groundwork to create potential avenues for the promotion of more accurate, effective and fair policy alternatives.

Current talent development practices

The term ‘talent’ is often referred to as an individual’s potential to excel in a particular skill domain and typically applies to contexts that we find valuable, such as education, sports or music.¹ Talent *development*, more specifically, is most commonly understood as the process through which an individual’s potential in a specific skill turns into the expression of a future (excellent) ability.² Talent development policies in various domains share similar characteristics, most notably including: (i) the importance of early identification of those that might be talented; and (ii) targeted, specific training of those who are identified as talented. In the field of education, for example,

‘gifted’ programmes are designed to identify and nurture academically talented children as early as the entry into the school system at around the age of five. Many standardised educational practices also rely on talent identification and development, often tracking students by separating them based on an assessment of perceived levels of ability, differentiating curricula and pedagogy accordingly. The details vary: some institutions begin tracking as early as age ten, some later on; some systems involve separate schools, whereas others involve grouping within schools.³

This approach to talent development in practice is also found in other domains, such as sport, music and corporate settings. While success in these fields clearly requires investing large amounts of time and effort, predetermined and fixed levels of talent are also considered to be crucial.⁴ For example, in the field of sports, competitive sports associations, as well as publicly funded national programmes, select young children identified as talented and strategically target their development with the hope of producing future excellent athletes.⁵ Music prodigies are also often identified early by both private and publicly funded cultural institutions, on the assumption that the early recognition of exceptional talent will breed excellent achievements given specific, targeted and intensive training.⁶ Talent-related practices that involve adults also rely on the similar assumptions that talent is fixed and can be identified reliably, and that one’s level of identified talent together with suitable training is an accurate predictor of future performance. For instance, identifying talent in the workplace often involves what are called ‘exclusive’ practices, providing special treatment for

¹R. F. Subotnik, P. Olszewski-Kubilius and F. C. Worrell, ‘High performance: the central psychological mechanism for talent development’, in R. F. Subotnik, P. Olszewski-Kubilius and F. C. Worrell, eds., *The Psychology of High Performance: Developing Human Potential Into Domain-Specific Talent*, American Psychological Association, 2019, pp. 7–20.

²D. K. Simonton, ‘Talent development as a multidimensional, multiplicative, and dynamic process’, *Current Directions in Psychological Science*, vol. 10, no. 2, 2001, pp. 39–43.

³E. A. Hanushek and L. Wößmann, ‘Does educational tracking affect performance and inequality? Differences-in-differences evidence across countries’, *The Economic Journal*, vol. 116, no. 510, 2006, pp. C63–C76.

⁴F. Gagné, ‘Transforming gifts into talents: the DMGT as a developmental theory’, *High Ability Studies*, vol. 15, no. 2, 2004, pp. 119–147.

⁵R. Vaeyens, et al., ‘Talent identification and development programmes in sport: current models and future directions’, *Sports Medicine*, vol. 38, 2008, pp. 703–714.

⁶J. Haroutounian, ‘Perspectives of musical talent: a study of identification criteria and procedures’, *High Ability Studies*, vol. 11, no. 2, 2000, pp. 137–160.

those singled out as demonstrating excellent potential.⁷

These existing talent development practices have already been criticised for a number of reasons. Educational policies have been questioned based on evidence that they do not improve educational outcomes, especially for pupils who are assigned to the 'lower' tracks, and that they aggravate social inequality by disadvantaging pupils from low-income backgrounds and other marginalised communities, such as racial minorities and immigrants.⁸ Intensive training programmes in both sport and music have also been critiqued in terms of children's well-being, since these programmes have been claimed to result in stress, burnout, pain and possible injuries, as well as loss of other valuable childhood experiences, including downtime, play and relationships with peers.⁹ When it comes to workplace talent development programmes, these have been challenged as being biased, creating frustration and impeding cooperative relations between workers.¹⁰

Notwithstanding these specific practical and ethical issues with current talent

identification and development practices, we suggest that there is yet a more fundamental issue with them that casts doubt on their very justification. The talent-related policies in all domains assume that talent is fixed, identifiable and reliably predicts future performance. However, in the next two sections, we present the empirical and conceptual research that concludes that these assumptions are empirically flawed and conceptually ambiguous.

Talent development is dynamic

The assumption that developing talent requires early detection and training not only informs current policies and practices, as described above, but also provides the point of departure for a great deal of the existing empirical studies examining which factors would typically contribute to achieving excellence in a particular skill. The implicit idea behind such research is that talent can be detected in specific factors, such as genetics, social support, the quality and extent of skill training and various psychological traits such as determination and effort. However, current research into talent development reveals that talent is not fixed and detectable in such factors, but instead develops through dynamic interactions between these factors. This research highlights empirical evidence across various skill domains showing that an individual's abilities, as well as the factors influencing them, undergo non-linear and often unpredictable changes, and that developmental pathways are often highly specific to individuals.¹¹

For example, significant research has been conducted on the development of children's learning in educational contexts, incorporating various cognitive, emotional and environmental factors. These studies show that a child's level of cognitive skill fluctuates in relation to changes in environmental factors, such as the quality of teacher-student interaction, the level of instruction and the amount of social

⁷E. P. O'Connor and M. Crowley-Henry, 'Exploring the relationship between exclusive talent management, perceived organizational justice and employee engagement: bridging the literature', *Journal of Business Ethics*, vol. 156, April 2017, pp. 903–917.

⁸Hanushek and Wößmann 'Does educational tracking affect performance and inequality?'; J. Glaeser and B. Cooper, 'Selectivity and flexibility in the German secondary school system: a configurational analysis of recent data from the German socio-economic panel', *European Sociological Review*, vol. 27, no. 5, 2011, pp. 570–585.

⁹A. Güllich and M. Barth, 'Effects of early talent promotion on junior and senior performance: a systematic review and meta-analysis', *Sports Medicine*, vol. 54, no. 3, 2024, pp. 697–710; T. Patston and M. S. Osborne, 'The developmental features of music performance anxiety and perfectionism in school age music students', *Performance Enhancement & Health*, vol. 4, nos. 1–2, 2016, pp. 42–49; H. Gembris et al., 'High-performing young musicians' playing-related pain. Results of a large-scale study', *Frontiers in Psychology*, vol. 11, 2020, article 564736.

¹⁰L. Peterson, L. Tahssain-Gay and B.-N. Laila, 'The impact of exclusivity in talent identification: sources of perceived injustice and employee reactions', *Employee Relations*, vol. 44, no. 6, 2022, pp. 1217–1240.

¹¹D. Y. Dai and J. S. Renzulli, 'Snowflakes, living systems, and the mystery of giftedness', *Gifted Child Quarterly*, vol. 52, no. 2, 2008, pp. 114–130; Gagné 'Transforming gifts into talents'; R. J. den Hartigh, et al., 'A dynamic network model to explain the development of excellent human performance', *Frontiers in Psychology*, vol. 7, 2016, article 532.

interaction.¹² The development of a child's cognitive skills is co-constructed during teacher-student interactions, rather than presented as a fixed or stable level of ability that is reliably identifiable. As such, the scientific research, at least in the field of education, shows that levels of talent demonstrated at an early age are often an unreliable predictor of the levels of performance that can ultimately be achieved. Individuals who are identified as talented can therefore fail to 'deliver' and reach the level of performance that is predicted and expected of them, whereas those considered 'less talented' at an early age may obtain high levels of skill after all.

Similar conclusions can be drawn about talents in other contexts. In sports, for instance, researchers have investigated what could be considered the main factors influencing talent development and the typical patterns that follow this development. However, these studies have concluded that athletes have individual and unique pathways toward professional performance.¹³ As a consequence, being selected at an early age for a talent development programme, and attributing future skill excellence based on past performance more generally, is unreliable and does not necessarily correspond to the overall level of future achievement. No less importantly, the performance of athletes who were not initially selected as

'talented' could, in certain circumstances, exceed the lower expectations that are placed on them.

In fact, the early involvement in and selection into talent development programmes is only positively correlated with short-term junior performance and negatively correlated with long-term senior performance.¹⁴ This implies that early identification of talent only reliably predicts short-term early performance levels, rather than longevity in one's skill domain. As such, those who go on to become professional athletes and enjoy lasting careers are usually those who have typically been selected at a later rather than earlier age. This highlights that early talent identification and tracking of ability level is not only unreliable but a mistaken predictor of future sporting success (at least when success here is defined in terms of professionalism).

The research into the nature of talent development is most notably represented by the abundant work that has been conducted into early childhood development (relating especially to education, sports and the performing arts). However, there is some existing research that also indicates the same flawed assumptions about the nature of talent development, identification and performance prediction in adults, with relevant consequences for various policy contexts such as employment and immigration. For example, excellent performance in the workplace is shown to depend not on predicted outcomes of demonstrated potential, but on multiple social, emotional and ethically related factors that may be missed in exclusive talent development schemes.¹⁵ As such, most of the policy that aims at talent identification and development makes overly optimistic assumptions about performance prediction and rests on a mistaken understanding of talents as fixed and identifiable at an early age or early stage in

¹²See for example: N. Granott and J. Parziale, *Micro-development: Transition Processes in Development and Learning*, Cambridge University Press, 2002; L. Vandenbroucke, et al., 'The classroom as a developmental context for cognitive development: a meta-analysis on the importance of teacher-student interactions for children's executive functions', *Review of Educational Research*, vol. 88, no. 1, 2018, pp. 125-164; S. van Vondel, et al., 'Ask, don't tell; a complex dynamic systems approach to improving science education by focusing on the co-construction of scientific understanding', *Teaching and Teacher Education*, vol. 63, 2017, pp. 243-253.

¹³R. J. R. den Hartigh, Y. Hill and P. L. C. Van Geert, 'The development of talent in sports: a dynamic network approach', *Complexity*, 2018, article ID: 9280154; J. Gulbin, et al., 'Patterns of performance development in elite athletes', *European Journal of Sport Science*, vol. 13, no. 6, 2013, pp. 605-614; R. Vaeyens, et al., 'Talent identification and development programmes in sport: current models and future directions', *Sports Medicine*, vol. 38, 2008, pp. 703-714.

¹⁴A. Güllich, et al., 'Quantifying the extent to which successful juniors and successful seniors are two disparate populations: a systematic review and synthesis of findings', *Sports Medicine*, vol. 53, no. 6 2023, pp. 1201-1217; see also Güllich and Barth, 'Effects of early talent promotion'.

¹⁵J. K. Mensah, 'A "coalesced framework" of talent management and employee performance: for further research and practice', *International Journal of Productivity and Performance*, vol. 64, no. 4, 2015, pp. 544-566.

one's career, and talent development as linear and a reliable indicator of future performance.

Conceptual confusion

Mistaken assumptions in current talent practices and policy are also a result of conceptual confusion about how the term 'talent' ought to be defined. Specifically, policy that involves detection of talent usually conflates two different meanings of talent, assuming that one predicts the other. The first assumed meaning of talent is that it is an *already-achieved* high level of skill, and the second meaning assumes that talent is the *potential* to attain high levels of skill.¹⁶ It is talent in the second sense, namely as potential, that would allow for the prediction of future success. But it is talent in the first sense, as an already-achieved level of skill, that is more easily accessible to empirical methods of identification and tracking. The fact that we use the same term for both of these different meanings has made it tempting to assume, against the scientific evidence, that current performance straightforwardly predicts attainable future levels of skill.

The main studies into the conceptual nature of talent have thus far come from the field of philosophy, where authors have shown that talents are better understood as a 'potential' or 'facilitator' for high levels of future achievement. This means that talents are considered as 'iterated' abilities—that is, abilities to reliably express a high level of skill development, when in the right circumstances.¹⁷ As such, the recent conceptual analyses of talent focus on it as an indicator of the way in which a skill is developed rather than indicating a final level of achievement or a fixed level of skill. This means that whilst completely lacking a talent imposes some restrictions on attaining a certain level of achievement, excellent levels of performance do not follow in a reliably discernible way from one's talent. This is in line

with the empirical studies cited above, which show that there are many possible pathways to develop and achieve skill success. A consequence of this is that those who are not identified as talented at a specific point in time may very well, nonetheless, reach excellent levels of skill success at some later stage. Talent programmes that focus on early or exclusive identification of talent as a predictor of future excellent achievement are thus at high risk of unnecessarily and mistakenly excluding a wide range of people who may go on to achieve a great deal of success.

Another important conceptual issue of contention concerns the comparative nature of how someone is picked out and labelled as being talented. When we label someone as talented in a particular skill domain, we typically intend to indicate that they are more talented than others (usually their peer group).¹⁸ This assumes an *interpersonal* comparison, indicating that one person's 'high' level of skill is a comparison with others' levels of skill. This is how most of the policies and practices described above tend to understand talent, promoting and investing in particular individuals at the cost of others. Indeed, the interpersonal comparison of who is deemed to be talented is one of the central mechanisms of how rewards are to be distributed fairly as part of the meritocratic ideal.

However, these interpersonal comparisons and the exclusionary policies they entail are unfounded. The studies cited above show that the way talents are developed is highly dynamic and individual, often failing to track reliable causation with early levels of excellent skill performances. This means that comparing individuals with their peers at a specific point in time may often prove counterproductive, resulting in misplaced investment and rewards, and importantly, a potential lack of successful or excellent performance output in those who have been labelled as 'talented'. Therefore, at least in some circumstances, a more helpful way to understand the comparative element of talent is through an *intrapersonal* lens. This would mean that talent indicates which of an individual's own abilities or skills are considered to be of the highest level and carry the

¹⁶C. M. Robb, 'Talent dispositionalism', *Synthese*, vol. 198, no. 9, 2021, pp. 8085–8102.

¹⁷K. Meyer, 'Talent, abilities and educational justice', *Educational Philosophy and Theory*, vol. 53, no. 8, 2021, pp. 799–809; B. Vetter, *Potentiality: From Dispositions to Modality*, Oxford University Press, 2015; T. Harel Ben Shahar, 'Redefining ability, saving educational meritocracy', *The Journal of Ethics*, vol. 27, 2023, pp. 263–283.

¹⁸See for example: Gagné, 'Transforming gifts into talents'; den Hartigh, et al., 'A dynamic network model'; Robb, 'Talent dispositionalism'.

greatest potential for future excellent performance, given their individual circumstances, environmental context and levels of motivation.

An intrapersonal conceptualisation of talent would have implications for talent policy and practices, implying a change of focus toward finding out which of their various skills an individual is best at, and supporting the development of these skills in ways that are suitable for them at a specific and relevant timepoint in their development. Adopting an intrapersonal definition of talent in schools, for example, would entail directing students to areas in which they are especially talented, even if compared to their peers, they may seem less skilled. And while, admittedly, workplaces are constrained by considerations of efficiency, they would undoubtedly benefit from adapting workers' roles, tasks and training to the domains and skills those workers are best at, determined by an individual comparison of each worker's abilities and skills.¹⁹

Policy improvements

As both the empirical and conceptual research highlight, the assumptions underlying current talent policies and practices are flawed, making them inadequate. This could be seen as merely an efficiency problem: if we want to devise policies that efficiently translate potential into future excellence, then we need to ground these policies in an accurate understanding of how potential is developed into excellence. But we suggest that the problem runs deeper.

Talent identification and development often involves the allocation of scarce resources and positions, providing those identified as talented with significant accumulative benefits, whilst potentially disadvantaging others. As such, ethical issues of distributive fairness arise in relation to the allocation of resources and funding. For example, talent development and retention programmes in corporate settings often involve beneficial exclusive training as well as financial incentives for those labelled as talented. Considering that the scientific research raises doubts regarding the efficacy of these talent practices, it is unclear

that the disparity created between workers as a result of the distribution of resources can be justified, even if selection is carried out conscientiously. These ethical issues are further accentuated when the talent programmes that arise from policies utilise public resources, determine the allocation of public offices or determine rights and entitlements, such as immigration status, conferred by the government. They are also especially problematic when they involve children, whose development and future opportunities may rely on these practices. And finally, significant concerns arise when the means of talent identification may be biased against those who are already under-represented, such as women or racial minorities, leading to further exclusion and disadvantage, such as in talent management programmes in the workplace, or gifted education.²⁰

In light of this, it is important that we rethink and examine talent identification development policy and practices. Those who are capable of impacting talent policy and practices, and those allocating resources toward talent development (such as policy makers, educators, coaches, employers) have a duty to reject the mistaken (and potentially unethical) assumptions described above, and to direct their practices according to the conceptual and empirical analyses of the nature and value of talent.

In particular, based on the empirical and conceptual analysis we have outlined here, there are three clear general policy improvements that can be suggested, which would be applicable across all domains and fields. First, when redesigning talent policy, decision makers should appeal to the empirical and conceptual research concerning what talents are and how they are developed. Multidisciplinary research teams would be a promising way to incorporate both the scientific and

¹⁹M. C. Meyers, 'Talent management: towards a more inclusive understanding', *Tijdschrift voor HRM*, vol. 12, 2016, pp. 1–12.

²⁰M. Festing, A. Kornau and L. Schäfer, 'Think talent—think male? A comparative case study analysis of gender inclusion in talent management practices in the German media industry', *The International Journal of Human Resource Management*, vol. 26, no. 6, 2015, pp. 707–732; J. O. Erwin and F. C. Worrell, 'Assessment practices and the underrepresentation of minority students in gifted and talented education', *Journal of Psychological Assessment*, vol. 30, no. 1, 2012, pp. 74–75.

more conceptual analyses that are necessary, preventing conceptual mistakes and reliance on flawed assumptions. As such, policy making and research into talent identification and development should engage in multidisciplinary collaborations—such as between psychologists, philosophers, public administrators and educators—bringing together different perspectives and research on the nature and value of talent.

Second, talent policy should move away from early childhood selection based on an identification of talent as a predictor of future excellence. Instead, access to talent development programmes should be widened to include the provision of training and support for individuals who have traditionally been considered ‘less talented’, as they may also obtain very high levels of skill with the right training and relevant support. Individuals included in programmes should be chosen not just based on the level of skill they currently express in comparison to their peers, but on an intrapersonal comparison of their own skills and potential in different domains, as well as other contextual factors, such as their level of motivation to improve and emotional resilience.

Finally, in order to avoid the ethical concerns regarding an unjustified distribution of resources and rewards for those who are labelled as talented, multiple pathways and methods for developing talent should be adopted. This will cater to the fact that levels of individual talent are not predetermined and fixed, but rather dynamic and dependent on interactions with various external and

social factors. In practice, this means that ‘one-way tickets’ should be reduced, and opportunities should be available for a possible return after ‘deselection’ from a talent programme.

Funding Acknowledgements

The authors would like to acknowledge the following funding sources. The work of Catherine M. Robb, Kirsten Meyer and Barbara Vetter was funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) within the ‘Human Abilities’ Centre for Advanced Studies in the Humanities, grant number 409272951. The work of Tammy Harel Ben Shahrar was funded by the Israel Science Foundation grant 848/19.

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