The trouble with talent: Semantic ambiguity in the workplace

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ABSTRACT

Over the last 20 years, "talent management" has become an increasingly popular descriptor of activities previously referred to as "human resources." Across five studies (total $N = 9,966$), we investigate this terminological shift and its organizational consequences. We find that contemporary human resource professionals prefer "talent management" to prior terminology, deeming it more optimistic and motivating. Nevertheless, "talent" is semantically ambiguous. Lay definitions of talent vary in the degree to which it is defined as innate versus learned, and these definitions correspond to differences in growth versus fixed mindsets. By contrast, "skill"—a common synonym for "talent"—more unambiguously signals that ability can change. In decision making scenarios, we found that replacing the word "talent" with "skill" more uniformly evokes a growth mindset about ability, which in turn leads to more optimistic attitudes about persistence after failure and an inclination to direct organizational resources toward employee development. Collectively, these findings show that synonyms for ability differ in the mindsets they evoke and illuminate the trouble with talent terminology in the workplace.

1. Introduction

Few terms have caught on so quickly in modern organizational parlance as "talent management"—an increasingly popular descriptor of activities previously referred to as "human resources" (Lewis & Heckman, 2006). In particular, as indicated by Google Ngram trends, the term "talent management" is on pace to overtake "human resource management" in the next two decades (Michel, J.-B., Shen, Y. K., Aiden, A. P., Veres, A, Gray, M. K., The Google Books Team, … Aiden, E. L. (2011), 2011). It remains unclear exactly *why* "talent management" is quickly becoming the preferred label for organizational activities like hiring, developing, promoting, and firing. Furthermore, it is unclear whether the growing prevalence of this term may have unintended consequences for individuals and organizations. In this investigation, we seek to understand why the word "talent" has become so popular in the workplace as well as the consequences of, and alternatives to, using this term to describe employee ability.

It has long been theorized that language not only reflects but also shapes the beliefs and values of an organization (Schein, 1985). Pfeffer (1981), for example, argued that one can "think of organizations as entities in which language is shared, and through this shared language, a common set of beliefs and understandings [are shared as well]" (p. 24). Barley (1983) similarly argued that organizations are "speech communities" that create shared "systems of meaning" that allow members to make sense of their environments (p. 393). More specifically, it has been argued that language plays an important role in employee motivation. For example, Sullivan (1988) posited that "language is a meaning making tool that helps workers construct mental models of reality" (p. 105).

If language contributes to organizational culture, what might be the consequences of referring to ability as "talent"? Existing research shows that language can influence beliefs about ability. For example, in the child development literature, it has been shown that praising ability ("You must be smart at these problems") reduces persistence and impairs performance on subsequent tasks compared to praising effort ("You must have worked hard at these problems") (Mueller & Dweck, 1998, p. 36). More recently, research has established that mindsets, in turn, influence organizational culture and employee motivation (Canning et al., 2020; Murphy & Dweck, 2010; Murphy & Reeves, 2019). Nevertheless, researchers have yet to investigate whether different *labels*

Fig. 1. Conceptual model showing the relationship between terminology, mindsets, and organizational consequences.

for ability itself (e.g., "talent," "skill," "giftedness") might activate different mindsets. As shown in Fig. 1, our conceptual model is that different terms for ability evoke different mindsets, which in turn, lead to employee motivation and decisions about the allocation of organizational resources.

Across five studies, we examine the trouble with talent terminology. First, we find that describing employees as "talent" is overwhelmingly preferred to traditional language describing employees as "resources" and that talent terminology is generally viewed as positive and motivational. Notwithstanding this consensual preference, we find that "talent" is semantically ambiguous and that there is substantial heterogeneity in whether people define it as innate and/or learned. In contrast, "skill," a common synonym for "talent," more clearly signals ability that is learnable. Replacing the term "talent" with "skill" in decision-making scenarios more consistently evokes a growth mindset, which in turn encourages employee motivation in the face of failure. Similarly, labeling ability as "skill" rather than "talent" in a resource allocation scenario leads human resource (HR) professionals to allocate less money to hiring and more to employee development. Collectively, our findings point to "skill terminology" as an alternative to "talent terminology" for organizations that seek to encourage a growth mindset and its associated outcomes.

1.1. A historical perspective on "talent" terminology in the workplace

The idea that individual abilities are important economic resources is not new (Goldin, 2016). Adam Smith (1776) argued that "the acquisition of … talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always cost a real expense, which is a capital … in [a] person … Those talents … [are] a part of his fortune … [and] likewise of that of the society to which he belongs" (p. 217). Despite this recognition, the idea that an organization would devote an entire position (much less a department) to activities related to the selection and development of employees did not emerge until the first decade of the 20th century (Kaufman, 2019). Rapid industrialization and increasing unionization in the workforce (see Eilbirt, 1959; Kaufman, 2019) helped usher in what early management pioneer Meyer Bloomfield (1915) called "the new profession of handling men" (p. 441). As suggested by Fig. 2, not long after the birth of "employment management," the term "personnel management" became the preferred label for activities related to hiring, firing, and employee development[1] (Kaufman, 2014).

By the middle of the 20th century, Drucker (1954/2006) wondered whether "personnel management [was] bankrupt" (p. 273) and proposed that organizations should, instead, think of workers as "human resources" (p. 12) As opposed to other organizational resources, human resources were unique in that they were able "to co-ordinate, to integrate, to judge, and to imagine" (p. 263). Accordingly, Drucker argued that employees should be thought of as active agents who needed to be

involved and given opportunities to grow rather than as passive recipients of fear-based motivation. Although Drucker's elaboration on the importance of "human resources" did not gain immediate traction, Miles (1965)[2] helped popularize "human resource management" as a collaborative, rather than compliance-driven, form of leadership. In the following decades, "human resource management" eventually became the predominant description for activities related to selecting, cultivating, and compensating employees.

As suggested in Fig. 2, although "human resource management" is still the most common term for managing employees, "talent management" may soon overtake it. Many scholars (e.g., Gallardo-Gallardo, Dries, & González-Cruz, 2013; McDonnell, Collings, Mellahi, & Schuler, 2017; Sparrow, 2019) trace organizational "talent management" to the publication of *The War for Talent* (Michaels, Handfield-Jones, & Axelrod, 2001), a popular book summarizing research by McKinsey consultants in the latter part of the 1990s. According to its authors, "the war for talent" was catalyzed by the emergence of the knowledge economy. In this new reality, the most valuable assets of a firm were no longer land, factories, or money—but instead its workers and their ideas. As a consequence, firms needed their top employees more than those employees needed them. The most talented employees—engineers who wrote the best code, developers with the most innovative ideas—could generate intellectual capital that companies themselves did not know how to produce. In short, the shift toward "talent management" signaled an evolution in strategy where organizations began to view workers (rather than products and physical resources) as their primary source of competitive advantage. *The War for Talent* authors argued that organizational success in the future would require a "talent mindset"—defined as "the deep-seated belief that having better talent at all levels is how you outperform your competitors" (Michaels et al., 2001, p. 22). This mindset, they argued, would lead to "bold actions," such as firing average-to-low performers and offering lavish compensation packages for top talent (Michaels et al., 2001, p. 23).

1.2. The semantics of talent

For all its popularity, there seems to be considerable confusion about what, exactly, "talent" means. While dictionary definitions often describe it as a natural ability, how people actually use the term is not always consistent with that interpretation. For example, while Gagné (2004) uses talent to refer to "well-trained skills" that are distinct from gifts (p. 123), *The War for Talent* authors more broadly characterized it as "the sum of a person's abilities—his or her intrinsic gifts, skills, knowledge, experience, intelligence, judgment, attitude, character, and drive" (Michaels et al., 2001, p. xii). In contrast to both these descriptions, other researchers define talent as being distinct from skill and motivation (e.g., Chamorro-Premuzic, 2017; Duckworth, Eichstaedt, & Ungar, 2015). This array of definitions has led talent scholars to remark that there is "no single or universal contemporary definition of talent in any one language" (Tansley, 2011, p. 266), that the term "'talent management' has no clear meaning" (Lewis & Heckman, 2006, p. 141), and that the field lacks "clear conceptual boundaries" (Collings & Mellahi, 2009, p. 304). Indeed, in our analysis of the 85 articles published in 13 special edition or theme journals about talent management since 2010, we found that 52% of the articles explicitly note that "talent" and/or

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[1] While we were unable to pinpoint a definitive cause for the change in terminology from "employment management" to "personnel management," it is possible that World War I played a role. Originally, the term "personnel" was used to refer to people in the military (Harper, 2022). However, following World War I, the term was increasingly used to refer to workers (see Personnel, n.d.). According to Kaufman (2014) personnel management was the "lineal outgrowth" of employment management, save that it "took on a modestly more integrated and broad-range of employment-related activities … [including] hiring/staffing, compensation, training, benefits, and similar employment areas" (p. 200).

[2] Although Miles (1965) has been noted as the catalyst of the human resources movement (see Marciano, 1995), other contemporaneous publications also played a role (see Bakke, 1961; Hersey & Blanchard, 1969).
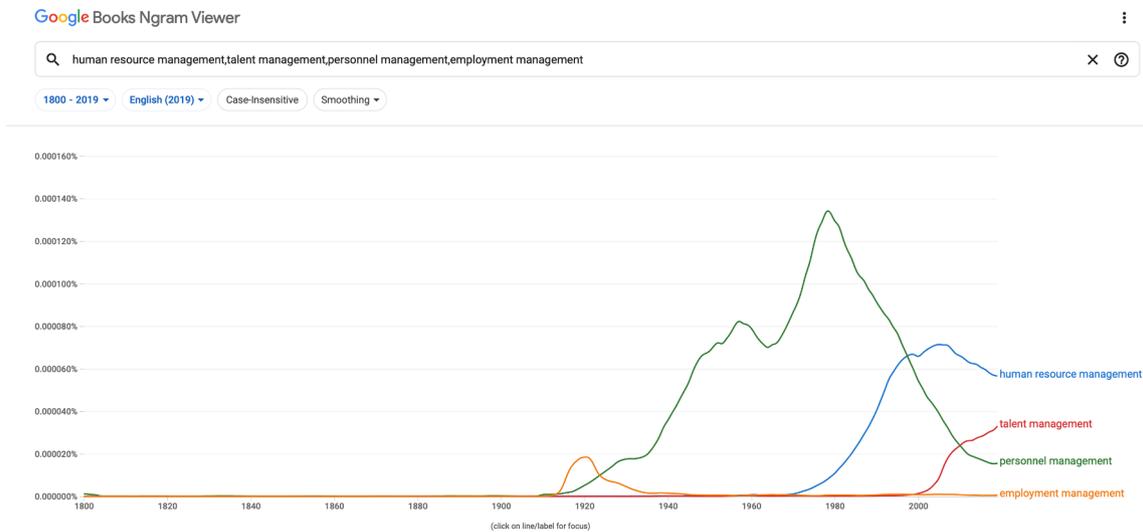
Fig. 2. Google Ngram chart showing trends in management terminology in books from 1870 to 2019.

"talent management" lacks a coherent definition (see Appendix for details).

If the meaning of "talent" is ambiguous, one potential cause is that the term seems especially far removed from its etymological roots (Adamsen, 2014; Gallardo-Gallardo et al., 2013; Tansley, 2011). Originally, "talent" ("talentum" in Latin, and τάλαντον[3] or "talenton" in Greek) referred to a measure of silver (Talent, n.d.). In the 13th century, perhaps influenced by the biblical parable of the talents,[4] the word began to take on more abstract meanings, including inclination, mental endowment, divine gift, and natural ability (Gallardo-Gallardo et al., 2013; Tansley, 2011). By the 19th century, talent not only referred to ability, but also to the person who possessed the ability (Tansley, 2011). In the modern era, talent has been called a "floating signifier"—a word so far removed from its etymological roots, and with so many conflicting connotations, that it no longer has a clear meaning (see Adamsen, 2014, 2016).

Although there may always be *some* confusion about the specific meaning of any word, "talent" may be more ambiguous than related terms. "Skill," for example, seems to carry more consistent connotations. Derived from the old Norse[5] "skil" and Middle English term "skele," "skill" originally meant discernment or knowledge (Skill, n.d.). Compared to "talent," "skill" has seen far less etymological drift: The *Oxford English Dictionary* currently defines "skill" as the "capability of accomplishing something with precision and certainty" or "an ability to perform a function, acquired or learnt with practice." Thus, while people vary in their interpretations of the ontology of talent—with some believing it is learned and others believing it is innate—"skill" seems to be more uniformly understood as learned ability. The straightforward meaning of "skill" compared to "talent" may explain why the search phrase "What is skill?" produces half the results on Google (311,000) than the search phrase "What is talent?" (688,000), despite the fact that the word "skill" is three times more common than the word "talent" on the Internet overall (see Appendix, Figs. A.1–A.4).

Does semantic ambiguity have consequences? A possible disadvantage of ambiguous terminology is that it may lead to unanticipated responses to organizational messaging. In linguistics, Hockett (1952) argued that discrepancies in the meaning of the same word across people results in "semantic noise" and increases the "probability of misunderstanding any given message" (p. 260). While the meaning of "talent" may seem clear to a particular employee, it does not mean that another will interpret the term in the same way. Although the semantic differences between "talent" and "skill" may not be large enough to merit concern in all cases, there are some circumstances in which the differences between these terms may produce very different attitudes. For example, leaders who use the term "talent" when promoting employee development may send mixed signals—with some (those who interpret talent as learned ability) interpreting the leader's message as an endorsement of the idea that everyone can improve and others (those who interpret talent as innate and unchangeable) believing that the leader was referring to a special few with natural potential. By contrast, describing ability as skill may more uniformly promote the belief that abilities can change.

1.3. Mindset theory in the age of talent

A "growth mindset" is the belief that personal characteristics can be developed (Yeager & Dweck, 2020). A "fixed mindset," by contrast, is the belief that these characteristics are unchangeable. A large body of evidence suggests that a growth mindset leads to a number of positive outcomes. For example, people with a growth mindset are more likely to pursue development opportunities (Hong, Chiu, Dweck, Lin, & Wan, 1999), pay attention to and learn from negative feedback (Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Schroder et al., 2017), and persist and perform well in the face of challenge (Blackwell, Trzesniewski, & Dweck, 2007). In organizational contexts, employees with growth mindsets learn more quickly (Wood & Bandura, 1989), offer help more readily (Heslin, Vandewalle, & Latham, 2006), and respond more positively to role models (Hoyt, Burnette, & Innella, 2012).

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[3] In the third century BCE, when the Hebrew Torah was translated into the Greek Septuagint (the Greek translation of the Old Testament), the Hebrew word "*kikkār*," which was a measure of roughly 75 lb (60 Talmudic minas) of silver, was translated into the Greek word τάλαντον, or "talenton" (Editors of Encyclopaedia Britannica, 2022; Ridgeway, 1892). The word is probably at least a half a millennium older than that though, as it referred to a weight of measurement in the Homeric epics, which are estimated to have been written in 760–710 BCE (Altschuler, Calude, Meade, & Pagel, 2013).

[4] In the New Testament, a parable is told about a man who gives five, two, and one talents to three different servants before leaving on a trip. The servants with five and two talents each doubled their money, while the servant with only one talent "hid" his money, and, as a consequence for his slothfulness, had his talent taken away from him.

[5] The origin date of the Old Norse "skil," is not entirely clear. Old Norse was used in Scandinavian countries as early as 750 CE (Barnes, 2008), and "skil" was adopted into Old English as "skele" in the 12th century, after the Viking invasions of Britain (Emonds & Faarlund, 2014; Skill, n.d.).

While mindsets influence what we do and say (Dweck, 2006), the reverse is also true: The words we choose can influence what we believe. For example, praising the person ("I'm very proud of you!") rather than process ("You must have worked very hard!") can undermine motivation, particularly in the wake of setbacks (Kamins & Dweck, 1999). Likewise, "generic" praise like telling children "you are a good drawer" leads to poorer self-evaluations and less persistence after mistakes than non-generic praise like, "you did a good job drawing" (Cimpian, Arce, Markman, & Dweck, 2007, p. 314).

Could referring to ability as "talent" have similar effects? On one hand, to the extent it is considered innate, talent may be assumed to be immutable (Dar-Nimrod & Heine, 2011). Although innateness is not the same thing as immutability (indeed behavioral genetics literature affirms that human characteristics, as a rule, are both heritable *and* mutable), ability is commonly viewed in the popular imagination as either due to nature *or* nurture—or somewhere on the continuum between the two (see Heine, Dar-Nimrod, Cheung, & Proulx, 2017; see also Sauce & Matzel, 2018). On the other hand, research on people's conceptions of talent in the workplace (i.e., "talent philosophies") provides evidence that not everyone assumes talent to be innate (Dries, Cotton, Bagdadli, & de Oliveira, 2014; Meyers & Van Woerkom, 2014). Thus, talent terminology may not always encourage a fixed mindset. For instance, recent studies investigating mindsets about the changeability of talent have shown that talent is sometimes rated as significantly more changeable than not, although these results have been inconsistent (Macnamara & Maitra, 2019; Macnamara & Rupani, 2017).[6]

If describing ability as "talent" does indeed discourage a growth mindset in the workplace, what behavioral manifestations might we expect? For one, we could expect that talent terminology (as opposed to terminology that clearly connotes learned ability) might lead to pessimism about the value of persistence after failure. In addition, talent terminology could lead to a reduced emphasis on employee development. In the very earliest stages of the "war for talent" movement, Pfeffer (2001) predicted that a focus on talent would lead organizations to overvalue the benefits of hiring outside of the firm and undervalue the benefits of developing employees from within. In particular, he argued that an emphasis on talent would encourage organizations to adopt the view that "people are essentially unchanged, at least by the time they are adults in the workforce, in terms of their abilities and capabilities" (p. 257). Consistent with Pfeffer's predictions, subsequent research found that leaders with fixed mindsets are more likely to rely on first impressions to judge a person's ability (Dries et al., 2014) and less likely to notice improvements in subordinates (Heslin, Latham, & VandeWalle, 2005). It remains to be seen whether an organizational focus on "talent" would encourage hiring outside an organization rather than developing from within. However, such a finding would be consistent with the tenets of mindset theory because those who assume that ability is largely unchangeable would likely believe that investment in employee development does not yield meaningful benefits.

1.4. Overview of studies

We present one exploratory and four preregistered studies that collectively examine the popularity of "talent" terminology, how the term is understood, and its consequences in the workplace. In Study 1, we investigated reasons for the rise in popularity of "talent" by asking HR professionals whether they prefer the term "human resource management" or "talent management" and which of these terms better reflects commonly espoused organizational values like optimism, employee development, and an emphasis on people. In Study 2 (osf.io /c6k57), we probed lay perceptions of the meaning of "talent," in particular. Specifically, we tested the hypothesis that definitions of, and synonyms for, "talent" correspond to mindsets about the changeability of "talent" and the degree to which "talent" is deemed as innate (versus learnable). In Study 3 (osf.io/nhd7e), we tested the hypothesis that "talent" is perceived as more fixed and innate than its most commonly nominated synonym "skill." We also tested whether "talent" is more semantically ambiguous than "skill." In Study 4 (osf.io/epds9), we tested the hypothesis that describing ability as "talent" (versus "skill") elicits from HR professionals more pessimistic attitudes about persistence after failure and an inclination to allocate resources toward hiring rather than employee development. Finally, in Study 5 (osf.io/zv62h), we replicated and extended the findings of Study 4, employing causal chain mediation to confirm that mindsets at least partly explain the organizational consequences of talent terminology.

2. Study 1: Is talent terminology preferred in the modern workplace?

The Google Ngram trends in Fig. 2 suggest that talent terminology is ascendant, but limitations inherent in such analyses (see Younes & Reips, 2019) recommend a more direct exploration of preferences among contemporary human resource professionals. What accounts for the increasing popularity of "talent management" relative to "human resource management?" In Study 1, we surveyed members of an international association of HR professionals—asking whether they preferred the term "talent management" or "human resource management"—and in addition, which term they preferred for emphasizing the importance of an organization's employees, communicating optimism about employee development, and attracting and selecting the best new hires.

2.1. Method

2.1.1. Participants and procedure

We collected surveys from $N = 548$ attendees at a conference for HR professionals. Demographic information was not available, but the sample consisted of members of a professional development association that has representation in more than 100 countries and includes HR professionals in a diverse array of industry sectors.

HR professionals first indicated whether they preferred the term "talent management" or "human resource management." Next,[7] they were randomly assigned to answer one of eight questions about whether "talent management" or "human resource management" better reflected the priorities shown in Table 1.

2.2. Results and discussion

As shown in Table 1, more than 9 out of 10 HR professionals preferred the term "talent management" to "human resource management" ($X^2(1, N = 540) = 404.58, p < .001$). By the same margin, "talent management" was overwhelmingly preferred for emphasizing the importance of an organization's employees, communicating optimism about employee development, and attracting and selecting the best new hires.

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[6] These results were not directly reported in these articles. However, using descriptive data reported in one article (Macnamara & Maitra, 2017) and supplementary data in the other (Macnamara & Rupani, 2019) we used one-sample *t*-tests to determine whether participants' talent mindsets were significantly above the scale midpoint (i.e., 3.5 on a 1 to 6 scale)—indicating that they were more likely to agree with growth-mindset-oriented statements. Mindset ratings were significantly higher than the scale midpoint in two out of four studies across these investigations.

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[7] Participants were also asked to indicate, in an open-ended text-box, why they preferred "talent management" or "human resource management." These qualitative responses are available upon request.

Table 1
HR professionals preferences for "talent management" versus "human resource management" in Study 1.

Survey Item	"Talent Management"	"Human Resource Management"	$\chi2$
Which term do you prefer?	92%	8%	404.58***
Which term better signals that an organization's *people* are its **competitive advantage**?	96%	4%	59.51***
Which term is more **motivating** for employees?	96%	4%	58.51***
Which term better emphasizes selecting **top players** for key positions?	94%	6%	51.96***
Which of the following is more **complementary** (sic) of employees?	94%	6%	54.91***
Which term better signals **optimism** about employee potential?	92%	8%	57.32***
Which term better emphasizes that **employee development** is an organizational priority?	92%	8%	45.56***
Which term better helps the organization attract the **best new hires**?	90%	10%	40.32***
Which term better communicates the idea that an organization **values** its employees?	90%	10%	44.18***

Note. All $N = 548$ participants indicated their general preference for "talent management" or "human resource management," then were randomly assigned to answer one additional question. Subsamples ranged from $n = 56$ to $n = 71$; ***$p < .001$.

3. Study 2: How do people understand "talent"?

Having established in Study 1 the preference of current HR professionals for talent terminology, in Study 2, we examined lay perceptions of "talent" and the extent to which they correspond to beliefs about its origins and changeability (osf.io/9yaqt). Specifically, we asked a large sample of U.S. adults to define talent in their own words, offer synonyms for talent, and finally to indicate the extent to which they believe talent is innate and fixed. Our primary hypotheses were that definitions of talent that mentioned innateness would correspond to more of a fixed mindset, whereas definitions that mentioned learning would correspond to more of a growth mindset.

3.1. Method

3.1.1. Participants and procedure

We recruited 1,054 U.S. adults using the Amazon Mechanical Turk (MTurk) online survey platform. Following our preregistration, we excluded 18 duplicate IP addresses and 32 cases of failed attention checks, leaving us with a final sample of $N = 1,004$ (48% female; $M_{age} = 39.32$, $SD_{age} = 12.38$; 75% White, 9% Black, 9% Asian, 5% Hispanic/Latinx, 2% other race/ethnicity). About 42% of participants held bachelor's degrees and an additional 15% held post-graduate degrees.

Participants were first asked to "define what the word talent means" in an open-ended text box and then to "list three words" that mean "roughly the same thing as talent." Next, participants completed two scales in counterbalanced order: One was a single-item, 7-point (-3 to + 3) bipolar measure of talent perceptions with "innate" and "learned" at the left and right endpoints, respectively[8] (see Appendix for screenshots of all survey materials). The other was a 3-item mindset measure adapted from Dweck, Chiu, and Hong (1995; observed $\alpha = 0.96$) with the following statements: "You have a certain amount of talent, and you can't really do much to change it"; "Your talent is something about you that you can't change very much"; "You can learn new things, but you can't really change your basic level of talent." Participants indicated the extent of agreement with each item on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Items were subsequently reverse-coded so that a higher score represented higher growth-mindset endorsement.

After responses were collected, two trained research assistants coded open-ended definitions for whether they mentioned innateness (99% agreement, Cohen's kappa = 0.99) and learning (99% agreement, Cohen's kappa = 0.97), respectively (see Appendix for details). For responses in which raters did not agree, raters discussed the response with each other and/or with the first author until they reached consensus.

3.2. Results and discussion

Lay definitions of talent were more likely to mention innateness (e.g., "ability that someone is born with"; 55%) than learning (e.g., "earned through practice"; 18%; McNemar's chi-square (X^2 (1, $N = 1,004$) = 310.62, $p < .001$). Specifically, 42% of definitions mentioned innateness only, 4% mentioned learning only, 14% mentioned both, and 40% mentioned neither.

The most commonly nominated synonyms for talent were "skill" (66%), "ability" (54%), and "gift" (43%). Participants who nominated "skill" as a synonym were more likely to mention learning in their definitions of talent (X^2 (1, $N = 1,004$) = 6.10, $p = .01$) and less likely to mention innateness (X^2 (1, $N = 1,004$) = 10.10, $p = .001$). Participants who nominated "ability" were no more or less likely to offer definitions of talent mentioning learning (X^2 (1, $N = 1,004$) = 0.63, $p = .43$) or innateness (X^2 (1, $N = 1,004$) = 0.65, $p = .42$). Finally, participants who nominated "gift" were more likely to mention innateness in their definitions of talent (X^2 (1, $N = 1,004$) = 30.14, $p < .001$) and less likely to mention learning (X^2 (1, $N = 1,004$) = 4.24, $p < .05$).

Definitions for "talent" corresponded to mindsets and beliefs about the innateness (versus learnability) of "talent." As shown in Table 2, participants who mentioned innateness in their "talent" definitions were more likely to have a fixed mindset about talent ($d = 0.73$, $p < .001$) and more likely to rate "talent" as being innate ($d = -1.20$, $p < .001$). In contrast, participants who mentioned learning in their "talent" definitions were more likely to have a growth mindset about talent ($d = 0.55$, $p < .001$) and more likely to rate "talent" as being learned ($d = 0.49$, $p < .001$).

A similar pattern emerged for talent synonyms. Participants who nominated "skill" as a synonym for talent were more likely to have a growth mindset about talent ($d = 0.26$, $p < .001$) and more likely to rate "talent" as being learned ($d = 0.31$, $p < .001$). Participants who nominated "ability" as a synonym for talent were no more or less likely to have a growth mindset about talent ($d = 0.03$, $p = .60$) and they were marginally more likely to rate talent as being innate ($d = 0.12$, $p = .06$). Finally, participants who nominated "gift" as a synonym for talent were more likely to have a fixed mindset about talent ($d = -0.19$, $p < .001$), and more likely to rate "talent" as being innate ($d = -0.41$, $p < .001$).

In sum, all preregistered hypotheses were confirmed.[9] We found considerable heterogeneity in lay conceptions of talent, with about as many participants mentioning innateness when defining "talent" in their own words (53%) as those who did not (47%). Likewise, 66% of our sample nominated "skill" as a synonym for talent, but 43% nominated "gift." Moreover, diversity in open-ended conceptions was not random noise: definitions and synonyms corresponded in predictable ways with beliefs about talent's malleability (i.e., growth mindset) and innateness—beliefs that were highly but not perfectly correlated ($r = 0.62$, $p <$

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[8] Although scale points corresponded to numerical values (-3 was maximally innate, +3 was maximally learned), to avoid biasing responses, numbers were not visible to participants.

[9] Additional preregistered analyses (all of which were confirmed) are available in the Appendix.

Table 2
Means of Mindset and Innate-to-Learned Scale ratings in Study 2.

Subgroup of Study 2 Participants	% Participants	Mindsets about Talent		Innate-to-Learned Scale Ratings	
		M (SD)	*d*	*M (SD)*	*d*
Definition mentions innateness	55%	3.33 (1.30)	−0.71***	−1.46 (1.38)	−1.22***
Definition doesn't mention innateness	45%	4.22 (1.19)		0.29 (1.50)	
Definition mentions learning	18%	4.31 (1.15)	0.55***	−0.01 (1.57)	0.49***
Definition doesn't mention learning	82%	3.60 (1.33)		−0.81 (1.67)	
Nominated "skill" as synonym	66%	3.84 (1.34)	0.26***	−0.50 (1.68)	0.31***
Did not nominate "skill" as synonym	34%	3.50 (1.27)		−1.01 (1.63)	
Nominated "ability" as synonym	54%	3.71 (1.35)	−0.03***	−0.77 (1.66)	−0.12†
Did not nominate "ability" as synonym	46%	3.75 (1.30)		−0.56 (1.70)	
Nominated "gift" as synonym	43%	3.58 (1.29)	−0.19**	−1.06 (1.51)	−0.41***
Did not nominate "gift" as synonym	57%	3.84 (1.34)		−0.38 (1.74)	

Note. Mindsets about talent were assesssed on a scale ranging from 1 to 6 where higher scores indicate more of a growth (versus fixed) mindset. The Innate-to-Learned Scale ranged from -3 (innate) to 3 (learned); *** $p < .001$; † $p < .10$.

.001).

4. Study 3: A comparison of mindsets about "talent" and "skill"

If "talent" is semantically ambiguous—carrying mixed associations about its changeability and innateness—what is a better alternative? In Study 3, we compared talent and the most commonly nominated synonym in Study 2: skill. Given the more straightforward etymology of skill, we hypothesized that American adults would rate skill as more malleable and learnable than talent and that perceptions of skill would be more consistent across people than perceptions of talent (osf.io/nhd7e).

4.1. Method

4.1.1. Participants and procedure

We recruited 2,153 U.S. adults using the Amazon Mechanical Turk (MTurk) online survey platform. Following our preregistration, we excluded 4 duplicate IP addresses and 69 cases of failed attention checks, leaving us with a final sample of $N = 2,080$ (50% female; $M_{age} = 40.66$, $SD_{age} = 12.36$; 75% White, 8% Black, 8% Asian, 5% Hispanic/Latinx, 3% Other). Forty percent of participants held bachelor's degrees, and an additional 17% held post-graduate degrees.

All participants expressed their beliefs about the innateness (versus learnability) of "skill" and "talent," respectively, on the same single-item, 7-point (−3 to +3) bipolar scale used in Study 2. They also completed the 3-item mindset measure described in Study 2 about "skill" and "talent," respectively (observed α = 0.95 for mindsets about skill and α = 0.97 for mindsets about talent).[10]

Participants were randomly assigned to one of two counterbalanced conditions: One group completed ratings of "talent" first and "skill" second; the other group completed ratings of "skill" first and "talent" second. This design allowed us to compare between-person differences in perceptions of "talent" and "skill" (by comparing responses for the first term that participants saw) as well as within-person differences (by comparing individual's responses across terms).

4.2. Results and discussion

All preregistered hypotheses were confirmed.[11] First, we found "talent" to be more semantically ambiguous than skill: Following Brainerd, Chang, Bialer, and Toglia (2021), semantic ambiguity was operationalized as the variance (in standard deviation units) on a relevant dimension. As shown in Table 3, the variance in innate-to-learned ratings was larger for "talent" than "skill" in both between-subjects comparisons ($F(967, 966) = 0.59, p < .001$) and within-subjects comparisons ($X^2 (1, N = 2,071) = 153.40, p < .001$). Likewise, the variance in mindsets ratings was larger for "talent" than "skill" in both between-subjects comparisons ($F(960, 973) = 0.72, p < .001$) and within-subjects comparisons ($X^2 (1, N = 2,071) = 67.71, p < .001$).

Next, we found that "talent" was, on average, rated as more fixed and innate than skill: In between-subjects comparisons, participants rated "talent" ($M = −0.34, SD = 1.70$) as more innate (versus learned) than "skill" ($M = 1.72, SD = 1.30; t(1940.5) = 26.16, d = 1.15, p < .001$). Likewise, in within-subjects comparisons, "talent" ($M = −0.52, SD = 1.72$) was rated as more innate (versus learned) than "skill" ($M = 1.56, SD = 1.31; t(2070) = 48.15, d = 1.12, p < .001$). Mindset ratings showed the same pattern: In between-subjects comparisons, participants had more of a fixed mindset about "talent" ($M = 3.72, SD = 1.29$) than "skill" ($M = 4.64, SD = 1.10; t(2028.2) = 17.46, d = 0.77, p < .001$). And, in within-subjects comparisons, participants also had more of a fixed mindset about "talent" ($M = 3.65, SD = 1.32$) than "skill" ($M = 4.67, SD = 1.12; t(2067) = 37.04, d = 0.83, p < .001$). As in Study 2, growth mindset and beliefs about learnability (versus innateness) were strongly but not perfectly correlated for "talent" ($r = 0.58, p < .001$) and "skill" ($r = 0.48, p < .001$), respectively.

To our knowledge, this study is the first to show that mindsets vary based on the particular label that is used for ability. We find that mindsets about talent differ from mindsets about skill in two ways. First, compared to skill, talent is, on average, rated as more fixed and innate. Second, compared to skill, there is more variance in the distribution of these ratings. In sum, whereas skill unambiguously signals malleability and learnability, talent carries mixed associations.

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[10] To reduce the possibility of order effects, the mindset measure and Innate-to-Learned Scale were presented in counterbalanced order for each respective term (Shaughnessy, Zechmeister, & Zechmeister, 2006).

[11] Additional preregistered analyses (all of which were confirmed) are available in the Appendix.

Table 3
Means and variances of "talent" and "skill" ratings on the Innate-to-Learned and MindsetScales in Study 3.

Scale	Comparison	Term	M	SD	Difference in Group Means	Difference in Group Variances
Innate (vs Learned)	Between-person	Talent	−0.34	1.70	$d = 1.15$***	$F_{(967, 966)} = 0.59$***
		Skill	1.72	1.30		
Innate (vs Learned)	Within-person	Talent	−0.52	1.72	$d = 1.12$***	$X^2(1, N = 2071) = 153.40$***
		Skill	1.56	1.31		
Growth Mindset (vs Fixed Mindset)	Between-person	Talent	3.72	1.29	$d = 0.77$***	$F_{(960, 973)} = 0.72$***
		Skill	4.64	1.10		
Growth Mindset (vs Fixed Mindset)	Within-person	Talent	3.65	1.32	$d = 0.83$***	$X^2(1, N = 2071) = 67.71$***
		Skill	4.67	1.12		

Note. *** $p < .001$; ** $p < .01$, * $p < .05$; † $p < .10$.

5. Study 4: Consequences of talent versus skill terminology

Having established semantic differences between "talent" and "skill" in Study 3, we investigated consequences of using these terms in the workplace in Study 4. Specifically, in a large sample of HR professionals, we tested the hypothesis (osf.io/epds9) that rating ability as talent-like (versus skill-like) is associated with pessimism about the value of persistence.[12] We also employed an experimental design to test whether tasking these HR professionals with the job of increasing "talent" (versus "skill") in a hypothetical scenario would divert funding from employee development toward employee hiring. Finally, we explored whether mindsets (i.e., beliefs about whether abilities are changeable) mediate this relationship.

5.1. Method

5.1.1. Participants and procedure

We recruited 2,269 participants from a large email list[13] of HR professionals who belong to the HR Certification Institute (HRCI), a U.S.-based nonprofit credentialing organization, and invited them to participate in our survey. Following our preregistration, we excluded 160 cases of duplicate IP addresses and 232 cases of unfinished surveys, our final sample of $N = 1,876$ (81% female; $M_{age} = 57.01$, $SD_{age} = 10.06$; 77% White, 9% Black, 6% Hispanics/Latinx, 4% Asian, 4% Other).[14] Fifty-six percent of participants held managerial or executive positions; 44% held lower-level positions in human resources. Forty-six percent of participants held bachelor's degrees and an additional 44% held postgraduate degrees.

First, HR professionals were randomized to either a *talent* condition ($n = 938$) or a *skill* condition ($n = 938$) and asked to provide three synonyms for their assigned term. Next, they rated their assigned term on bipolar scales, presented in random order.[15] One bipolar scale used the same 7-point "innate" (-3) to "learned" (+3) anchors as in Studies 2 and 3. The other bipolar scale was, in effect, a single-item mindset scale

using "unchangeable" (-3) to "changeable" (+3) as anchors.

Next, HR professionals in both conditions provided judgments of sales ability[16] using a 6-point scale ranging from 1 (*entirely a talent*) to 6 (*entirely a skill*)[17] and, in addition, indicated the degree to which they believed someone who was not "very good at sales" could "dramatically improve with practice and effort" on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). They then read the following vignette and indicated their advice for this salesperson on a 6-point scale ranging from 1 (*he should definitely move on*) to 6 (*he should definitely stick with it*):

> Imagine that you're a top-level manager at a mid-size company. Unfortunately, despite working very hard, one of your salespeople is consistently underperforming and you have no choice but to let them go. During your exit interview with this salesperson, he tells you that he's "always wanted to be a successful salesman," but he's not sure if he has what it takes to succeed in that role. He then asks your advice about what type of job he should pursue next.

Finally, HR professionals read the following vignette with either "talent" or "skill" terminology, depending on their assigned condition, and then designated the percentage of resources they would allocate toward employee recruitment and development, respectively.

> Imagine that you have just accepted a role as a top-level manager at your company. Unfortunately, the level of **talent/skill** in your company has been lacking for years, and your job is to fix that. The CEO gives you a budget of $100,000 to spend on developing your current employees or on hiring new ones. Considering that your main job is to raise the level of **talent/skill** at your company, what % of your budget would you allocate to hiring versus employee development? (total must equal 100).

> (See Appendix for screenshots of all survey materials.)

5.2. Results and discussion

Consistent with Study 3, the variance of talent ratings was larger than the variance of skill ratings on the Innate-to-Learned Scale ($F_{(932, 933)} = 0.87$, $p < .05$), suggesting greater semantic ambiguity (see Table 4). There was likewise marginally more variance in ratings on the Unchangeable-to-Changeable Scale ($F_{(930, 934)} = 0.87$, $p = .06$). Also consistent with Study 3, "talent" was rated by HR professionals as more

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[12] All analyses in Study 4 were preregistered with the exception of mediation pathways and tests of semantic ambiguity. However, these additional hypotheses are preregistered and confirmed elsewhere in other studies in this investigation.

[13] HRCI emailed 38,226 human resources professionals on their mailing list with an invitation to participate in this study. A total of 1,876 (4.9%) professionals from unique IP addresses completed the hyperlinked survey. This compares favorably to the 2.6% email click-through response rates across industries ("Email Click Rate, see https://apastyle.apa.org/learn/faqs/web-page-no-author") and is consistent with the < 1% to 11% opt-in participation to a text message enrollment reported by Bergman, Lasky-Fink, and Rogers (2020).

[14] Note that the majority White and majority female composition of our sample reflects the demographics of the human resources profession (Burden, 2019).

[15] In total, respondents completed eight bipolar scales. Results for the six scales not shown in the main text are available in the Appendix and are consistent with the pattern of findings we report here.

[16] We chose to ask about salesmanship because it is an ability that is broadly needed in most real-world organizational contexts and one that most HR professionals would likely have experience in evaluating. The single most common job in the United States is retail sales (3.69 million workers), and the total sales force represents nearly 10% of the total workforce (see United States Bureau of Labor Statistics, 2020a, 2020b, n.d.).

[17] Following this question, participants were prompted to indicate why they rated salesmanship as either being more talent-like or skill-like in an open-text box. Responses and analyses for this prompt are available in the Appendix.

Table 4
Group means and variances of "talent" and "skill" ratings on the Innate-to-Learned and Unchangeable-to-Changeable Scales in Study 4.

Scale	Comparison	Term	M	SD	Difference in Group Means	Difference in Group Variances
Innate (vs Learned)	Between-person	Talent	0.21	1.37	$d = 0.63$***	$F(932, 933) = 0.87$*
		Skill	1.05	1.27		
Changeable vs (Unchangeable)	Between-person	Talent	1.37	1.31	$d = 0.41$***	$F(930, 934) = 0.87^{\dagger}$
		Skill	1.89	1.23		

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$.

innate ($M = 0.21$, $SD = 1.37$) than "skill" ($M = 1.05$, $SD = 1.27$; t (1855.8) = −13.68, $d = 0.63$, $p < .001$). Talent was also rated as more unchangeable ($M = 1.37$, $SD = 1.31$) than skill ($M = 1.89$, $SD = 1.23$; t (1857.9) = −8.85, $d = 0.41$, $p < .001$).

Synonyms nominated for talent were similar to those nominated in Study 2, with "skill" (64%), "ability" (55%), and "gift" (16%) being the most frequent entries. The most common synonyms nominated for skill were "ability" (76%), "talent" (39%), and "knowledge" (27%). These results provide additional evidence that "talent" and "skill" are used interchangeably.

Despite the frequent synonymous usage of "talent" and "skill," these terms were associated with very different attitudes and decisions. As shown in Fig. 3, labeling sales ability as more talent-like (versus skill-like) predicted the endorsement of quitting as an appropriate response to failure ($\beta = 0.13$, $B = 0.11$, $SE = 0.02$, $p < .001$), and this relationship was partially mediated by beliefs about the possibility of improvement in the workplace ($\beta = 0.09$, $B = 0.07$, 95% CI [0.06, 0.10]).[18]

Relatedly, framing ability as "talent" (versus "skill") led to the allocation of fewer resources toward employee development ($\beta = 0.12$, $B = 4.31$, $SE = 0.87$, $p < .01$). As shown in Fig. 4, this relationship was partially mediated by beliefs about the changeability of the relevant term ($\beta = 0.02$, $B = 0.8$, 95% CI [0.01, 0.03]).

Consistent with the notion that heterogenous perceptions about "talent" may lead to more heterogeneous attitudes and decisions, the variance in resource allocation towards hiring or development was larger in the "talent" condition ($SD = 18.13$) than in the "skill" condition ($SD = 17.21$)—although this difference failed to reach significance (F (937, 937) = 0.90, $p = .11$).

As a whole, these findings suggest that framing ability as skill rather than talent more consistently encourages optimistic attitudes about improvement, persistence, and employee development.

6. Study 5: Conceptual replication of Study 4

Study 5 is a set of four experiments (referred to below as Studies 5a through 5d) that addressed several methodological limitations of Study 4 (osf.io/zv62h). First and foremost, the association between HR professionals' belief that sales is more "talent-like" and their pessimistic attitudes about improvement and persistence was correlational. In Study 5a, we randomly assigned participants to "talent" or "skill" scenarios in order to strengthen causal inference. In Study 5b, we strengthened causal inference for our proposed mediational variable by using a causal chain design (i.e., exogenously manipulating beliefs about improvability and measuring impact on advice about persistence versus quitting). In Study 5c, we improved the wording of the resource allocation experiment in Study 4. Specifically, in Study 4 HR professionals read about a lack in "the level of talent/skill in your company," which might have been interpreted as having too few employees. In Study 5c, we improved

this prompt by specifying that "the people in your company lack the talent/skill necessary to do their jobs." In Study 5d, we conducted a causal chain test of mediation by manipulating beliefs about improvability and measuring impact on resource allocation decisions. Finally, in Study 4, the continuous response options presented to participants made responses near the midpoint difficult to interpret, since they might have indicated difficulty in deciding or, alternatively, an unambiguous desire for 50/50 division between options (see Chyung, Roberts, Swanson, & Hankinson, 2017). Thus, in all four experiments in Study 5, we forced participants to choose between two alternative responses.

6.1. Method

6.1.1. Participants and procedure

We recruited 3,992 U.S. adults using the Amazon Mechanical Turk (MTurk) online survey platform. Following our preregistration, we excluded 3 duplicate IP addresses and 4 cases of failed attention checks, leaving us with a final sample of $N = 3,985$ sample (52% female; $M_{age} = 39.77$, $SD_{age} = 12.40$; 75% White, 9% Black, 8% Asian, 5% Hispanic/Latinx, 2% Other). About 39% of participants held bachelor's degrees, and an additional 17% also held post-graduate degrees.

Participants were randomly assigned to one of eight conditions across four separate between-subjects experiments (Studies 5a through 5d) that collectively tested whether talent (versus skill) terminology, and beliefs about the possibility of improvement, influence attitudes about persistence and resource allocation decisions toward hiring or development.

In Study 5a, participants read the following prompt with either "talent" ($n = 540$) or "skill" ($n = 532$) terminology, depending on their assigned condition:

> Imagine that you've just accepted a role as a top-level manager at your company. Unfortunately, one of your salespeople **lacks talent/ skill**.

After reading this prompt, participants were asked whether it was "very likely" or "not very likely" that "this salesperson can substantially improve." Next participants were asked, "what advice would be most helpful" for the struggling salesperson and to indicate whether she or he should "persist in sales" or "pursue a different career."

In Study 5b, we followed Spencer, Zanna, and Fong (2005) causal chain design for testing mediation. As opposed to traditional approaches, in which the mediational variable is measured and incorporated into a regression model (e.g., Baron & Kenny, 1986), a causal chain design exogenously manipulates the proposed mediational variable to more definitively determine whether it is causal. In this experiment, we manipulated beliefs about the possibility of improvement—which was the mediational variable in Study 5a. Specifically, participants read the following prompt indicating that an employee was either "very likely" ($n = 461$) or "not very likely" ($n = 406$) to improve, depending on their assigned condition:

> Imagine you've just accepted a role as a top-level manager at a mid-size company. Unfortunately, one of your salespeople hasn't made very many sales this year. In your opinion, as a manager it is **very likely/not very likely** that they can substantially improve their sales ability.
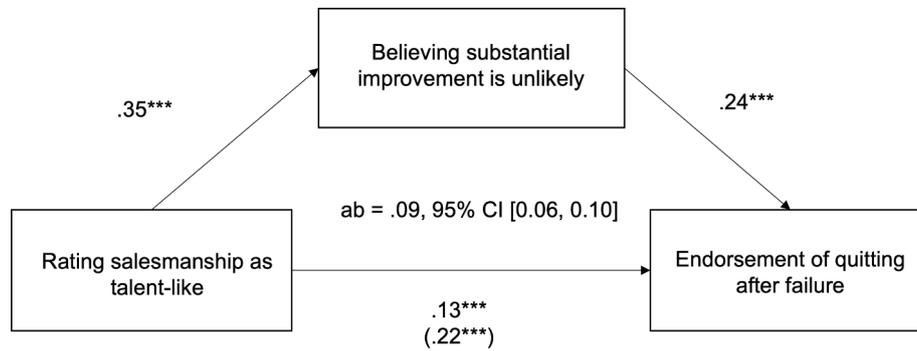
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[18] We used the Lavaan package in R for both mediation analyses in Study 4. We consider there to be evidence for an indirect effect of a predictor X on an outcome Y through a mediator M if a 95% confidence interval for a bootstrapped sampling distribution of the indirect effect does not contain 0. All mediation figures in this manuscript report standardized coefficients. Figures with unstandardized coefficients are available in the Appendix.

Fig. 3. Believing substantial improvement was unlikely mediated the relationship between rating salesmanship as more talent-like (versus skill-like) and the endorsement of quitting after failure in Study 4. *** $p < .001$. Coefficients are standardized.
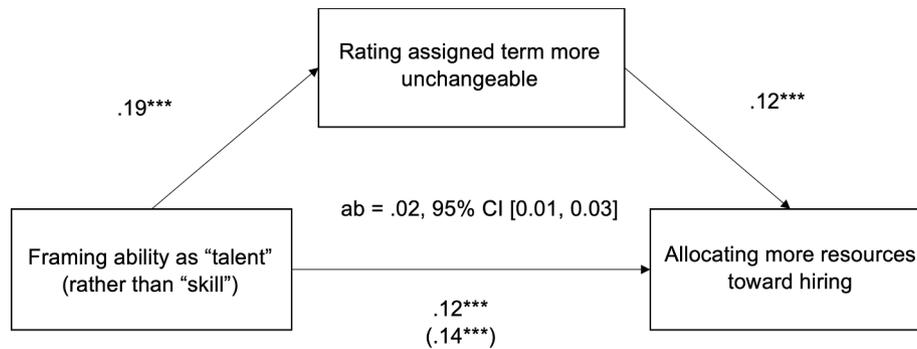

Fig. 4. Rating their assigned term ("talent" or "skill") as unchangeable mediated the relationship between framing ability as "talent" and allocating more resources toward hiring (and fewer toward employee development) in Study 4. *** $p < .001$. Coefficients are standardized.

After reading this prompt, participants answered a binary-choice question indicating whether they believed the struggling salesperson should "persist in sales" or "pursue a different career."

In Study 5c, participants read the following prompt with either "talent" ($n = 528$) or "skill" ($n = 524$) terminology, depending on their assigned condition:

> Imagine that you have just accepted a role as a top-level manager at your company. Unfortunately, the people in your company **lack the talent/skill** necessary to do their jobs.

After reading this prompt, participants were asked whether it was "very likely" or "not very likely" that the employees in the company "can substantially improve." Next participants were asked whether they would allocate more of their resources toward "developing current employees" or "hiring new employees."

Study 5d was a causal chain test of mediation in which we manipulated beliefs about the possibility of improvement (the mediational variable in Study 5c). Specifically, participants read the following prompt indicating that employees were either "very likely" ($n = 463$) or "not very likely" ($n = 486$) to improve, depending on their assigned condition:

> Imagine that you have just accepted a role as a top-level manager at your company. Unfortunately, the people in your company lack the ability necessary to do their jobs. In your opinion, as a manager, it is **very likely/not very likely** that these employees can substantially improve.

After reading this prompt, participants answered a binary-choice question indicating whether they believed the organization should allocate more resources toward "developing current employees" or "hiring new employees."

6.2. Results and discussion

As shown in Table 5, all preregistered hypotheses were confirmed.

In Study 5a, describing ability as "talent" (versus "skill") increased the likelihood of believing that the "most helpful" advice for a struggling salesperson was to change career paths rather than persist ($\beta = 0.07$, $B = 0.07$, $SE = 0.02$, $p = .001$), and this opinion was mediated by the belief that this salesperson was "not very likely to substantially improve" ($\beta = 0.13$, $B = 0.13$, 95% CI [0.08, 0.17], $p < .001$; see Fig. 5). Finally, consistent with findings about the semantic ambiguity of "talent" in Studies 3 and 4, beliefs about the possibility of improvement ($X^2 (1, N = 1,072) = 30.69$, $p < .001$) and attitudes about quitting versus persistence ($X^2 (1, N = 1,072) = 13.86$, $p < .001$) were more heterogeneous in the talent condition than the skill condition.[19]

In Study 5b, describing ability as "not very likely to improve" (versus "very likely to improve") led to the belief that a struggling salesperson should pursue a different career ($X^2 (1, N = 927) = 474.39$, $p < .001$).

In Study 5c, describing ability as "talent" (versus "skill") led to allocating relatively more resources toward hiring new employees rather than developing current ones ($\beta = 0.03$, $B = 0.03$, $SE = 0.02$, $p < .01$), and this preference was partially mediated by the belief that this salesperson was "not very likely to substantially improve" ($\beta = 0.12$, $B = 0.12$, 95% CI [0.07, 0.16]; see Fig. 6). Finally, beliefs about the possibility of improvement ($X^2(1, N = 1,052) = 20.25$, $p < .001$) and preferences for allocating resources toward hiring versus development ($X^2 (1, N = 1,052) = 21.99$, $p < .001$) were more heterogeneous in the talent condition than in the skill condition.

Finally, in Study 5d, describing ability as "not very likely to improve" (versus "very likely to improve") increased the preference for hiring new employees rather than developing current ones ($X^2 (1, N = 929) = $

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[19] We used the Lavaan package in R for both mediation analyses in Study 5.

Table 5

Results across four experiments in Study 5.

| Study	Mediation Design	Condition	Mediational Variable	$\chi2$	Dependent Variable	$\chi2$
Study 5a	Measurement of mediation	Ability described as "talent" Ability described as "skill"	56% believed improvement likely 72% believed improvement likely	30.69***	46% endorsed persistence after failure 65% endorsed persistence after failure	40.44***
Study 5b	Causal chain mediation	Improvement likely Improvement not likely	NA NA	–	85% endorsed persistence after failure 13% endorsed persistence after failure	474.39***
Study 5c	Measurement of mediation	Ability described as "talent" Ability described as "skill"	51% believed improvement likely 67% believed improvement likely	25.34***	54% allocated resources to development 69% allocated resources to development	24.06***
Study 5d	Causal chain mediation	Improvement likely Improvement not likely	NA NA	–	90% allocated resources to development 25% allocated resources to development	405.09***

Note. *** $p < .001$.
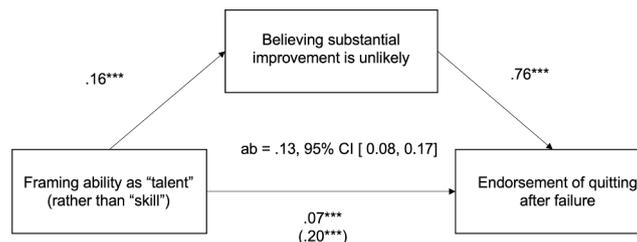
Fig. 5. The belief that substantial improvement is unlikely partially mediated the relationship between framing ability as a "talent" and endorsing quitting after failure in Study 5a. *** $p < .001$. Coefficients are standardized.
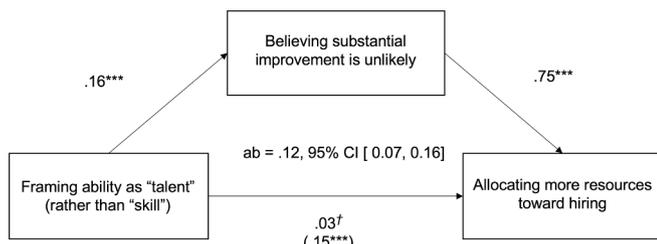

Fig. 6. The belief that substantial improvement is unlikely partially mediated the relationship between framing ability as a "talent" (versus "skill") and allocating resources toward hiring (versus employee development) in Study 5c. *** $p < .001$; † $p < .10$. Coefficients are standardized.

405.09, $p < .001$).

In sum, across four experiments that improved upon the designs in Study 4, we replicated findings about the consequences of "talent" (versus "skill") terminology. Specifically, using traditional measurement-of-mediation designs, as well as causal-chain tests of meditation, we show that talent terminology leads to more pessimistic beliefs about the likelihood of improvement, which in turn leads to more pessimistic attitudes about persistence and employee development.

7. General discussion

Despite growing interest in "talent management," surprisingly little empirical research has explored the connotations of "talent" terminology and associated consequences in the workplace. In this investigation, we provide evidence that talent terminology may have emerged, at least in part, to signal the value of employees and their development. Nevertheless, we find the term "talent" carries conflicting connotations about how innate or learned it is, as opposed to a clear signal of ability that can be developed. Moreover, talent terminology can encourage a fixed mindset and, in turn, lead to recommending quitting as an

appropriate response to failure—and the inclination to direct resources toward hiring rather than employee development.

In Study 1, contemporary HR professionals overwhelmingly preferred the term "talent management" to "human resource management" and deemed it a better signal of organizational values like optimism, employee development, and an emphasis on people. In Study 2, lay definitions of, and synonyms for, "talent" varied, with mentions of innateness (or equating talent to a gift rather than a skill) corresponding to a fixed mindset about the changeability of talent. In Study 3, we compared "talent" to its most commonly nominated synonym, "skill." Not only was talent assumed to be more innate and fixed than skill, on average, there was also more heterogeneity in beliefs about talent than in beliefs about skill—indicating that "talent" is more semantically ambiguous. Finally, we demonstrated in a series of random-assignment experiments (with HR professionals in Study 4 and a convenience sample of adults in Study 5) that describing ability as "talent," as opposed to "skill," elicits a fixed mindset about the possibility of employee improvement, which in turn leads to pessimism about the value of persistence and the allocation of fewer resources toward employee development. Moreover, referring to ability as "talent" led to more heterogeneous attitudes about the value of persistence and resource allocation decisions.

7.1. Theoretical contributions and organizational implications

Our investigation connects the nascent scholarship on the semantics of talent (see Adamsen, 2014, 2016) with the more established literature on growth and fixed mindsets. Building upon foundational studies on individual differences in beliefs about talent (e.g., Dries et al., 2014) and organizational performance (e.g., Pantouvakis & Karakasnaki, 2018), we examine the causal effects of talent terminology. We are the first to show that mindsets vary across different synonyms for ability. Specifically, we find that when ability is described as "skill," people more consistently believe that it can change, but when ability is described as "talent," mindsets are more heterogeneous. Given that all mindset scales

rely on words (e.g., "intelligence" mindsets, "ability" mindsets), the tight connection between mindsets, language, and measurement should be explored in future studies.

Our investigation also suggests practical implications for organizational culture. Organizational language is the outgrowth of shared beliefs and norms (Schein, 1985). Our findings highlight the possibility of a reciprocal relationship (see Schein, 1985). Companies that make frequent reference to "talent" may unwittingly encourage a "culture of genius," in which abilities are widely believed to be mostly fixed (see Murphy & Dweck, 2010). Employees at such companies describe the culture as less collaborative, less innovative, and lacking in integrity (Canning et al., 2020). Separate laboratory research has found that when groups endorse the belief that innate ability is required for success, newcomers shift their self-presentations in ways that feature their innate abilities (Murphy & Dweck, 2010). As an alternative to "talent," we recommend that companies consider the term "skill" (or related terms like "upskilling" and "reskilling") to promote a "culture of development" (Murphy & Dweck, 2010, p. 293) in which employees are interested in learning and improvement rather than in competing to prove who is the smartest.

Our findings also have implications for organizational decision making about resource allocation. Around the time that "talent management" began to gain popularity, Pfeffer (2001) predicted that a focus on talent would incline organizations to provide fewer resources for employee development and to experience an increase in turnover. Although Pfeffer was not explicitly concerned with the semantics of talent, our findings directly support his predictions. The allure of recruiting talented employees is easy to understand, but having more "talented" employees doesn't always produce superior results. Organizations that recruit talented employees externally are often disappointed to find that the performance of "stars" declines after switching firms (Groysberg, 2010). For example, in a study that tracked Wall Street security analysts' performance over a 9-year period, "star" analysts who left to work for another bank suffered a performance decline that persisted for 5 years relative to other top performers who stayed put (Groysberg, Lee, & Nanda, 2008). And even if organizations are able to recruit employees who sustain superior performance, the strategy of paying more money for better employees is easily replicable by competitors (O'Reilly & Pfeffer, 2000), and the increased demand for talented employees may end up costing organizations more than the talent is worth. Rather than aiming to recruit potential employees who are in the top 10 percent, O'Reilly and Pfeffer (2000) argue that a better strategy is to "build an organization that helps make it possible for regular folks to perform as if they were in the top 10 percent" (p. 2). While recruitment should always be an important priority for organizations, describing ability as "skill" rather than "talent" may be one way for organizations to maximize the value of their existing workforce.

7.2. Limitations and future research

Several limitations of the current research suggest promising avenues for future research. First, we relied on hypothetical scenarios to assess whether describing ability as "talent" versus "skill" influences organizational decision making. Although our studies included HR professionals who routinely make similar decisions for their organizations, additional research with objectively measured outcomes in field settings is needed. It is possible that self-reported attitudes and decisions after reading hypothetical scenarios are not reflective of people's actual attitudes and decisions based on talent and skill terminology. Future studies that ask, for example, whether "skill development programs" encourage greater persistence for entry-level employees than "talent development programs" could provide better evidence that talent and skill terminology influence real-world attitudes and behavior.

Second, future research is needed to establish moderators and boundary conditions. We cannot assume that our conclusions generalize across languages and cultures. Indeed, it is likely that connotative

differences between talent and skill differ across countries (see d'Armagnac, Guettiche, Janand, Klarsfeld, & Cloet, 2020; Tansley, 2011). It is also likely that benefits of skill terminology may vary depending upon the industry or particular job task. For example, some abilities may be less trainable than others, and it may be more appropriate to refer to these abilities as "talent" or perhaps even as "gifts." Even scholars who are most skeptical of innate talent have conceded that things like height and body size are largely fixed (Ericsson, Krampe, & Tesch-Römer, 1993). Other factors like eyesight, vocal quality, and physical attractiveness may also be less amenable to improvement. Referring to untrainable characteristics as "skills" may have drawbacks. In fact, one of the downsides of growth mindsets may be an escalation of commitment in pursuits that are unlikely to succeed (Lee, Keil, & Wong, 2021). It is possible that skill terminology could have similar consequences.

Third, while we confirmed that perceptions of "talent" vary substantially across individuals, we did not examine the degree to which "talent" lacks a consensual definition within a particular organization. It may be that, within an organization, definitions of talent are more consistent, which would draw into question the degree to which the semantic ambiguity of "talent" has meaningful consequences. On the other hand, several studies have shown that people within organizations can disagree about the definition of talent. For example, in an international study of HR managers in 60 different companies, more than two-thirds of organizations did not have a consistent definition of talent management (Latukha, 2015). Additionally, a number of studies have shown that there is often disagreement within companies about what qualifies a person as talented (Dries & De Gieter, 2014; Sonnenberg & Zijderveld, 2014). Although some quantitative studies have explored definitional ambiguity of talent within organizations (e.g., Latukha, 2015) and the consequences of holding different types of talent definitions (e.g., Meyers, van Woerkom, Paauwe, & Dries, 2020), these studies primarily utilize informant surveys from a single manager to represent an entire company. Future research is needed to confirm the degree to which talent lacks semantic clarity within, as well as between, organizations. For instance, researchers could collect data from many individuals within each organization to assess the degree to which organizations hold consensual or conflicting views about "talent."

Fourth, our investigation explored negative consequences of talent terminology but neglected its potential advantages. For example, while our investigation highlighted undesirable outcomes associated with fixed mindsets, some scholars argue that believing one's positive traits are stable actually improves motivation (e.g., Seligman & Schulman, 1986). In our experiments, participants were only presented with hypothetical scenarios in which talent (or skill) was lacking. What if, instead, the scenarios described individuals whose talent (or skill) was prodigious? Some previous research suggests that, although motivation is hampered when employees perceive that they are not considered talented, those who perceive that their organization does consider them talented feel a greater sense of support and are more committed to the organization (e.g., Gelens, Dries, Hofmans, & Pepermans, 2015). Relatedly, while our investigation looked at potential undesirable outcomes of semantic ambiguity, it is possible that ambiguous terminology may also have benefits. For example, in advertising, the idea of "strategic ambiguity" (Ceccarelli, 1998) or "purposeful polysemy" (Puntoni, Schroeder, & Ritson, 2010) is often used as a way to effectively target different audiences with the same advertisement. For example, the Nike slogan "Just do it" can appeal to young athletes preparing for a marathon or older people considering whether to start exercising (Puntoni et al., 2010). Although "Just do it" clearly encourages a person to take action, the admonition is vague enough to allow consumers to infer the specifics. Similarly, "talent" generally refers to ability, but the type of ability that is valued is left open to the interpretation of the audience. If talent means "giftedness" to those who primarily value natural ability and "skill" to those who primarily value development and learning, the term can be appealing to both groups—making it more likely to grow in popularity than words that appeal to only one value. In sum, to better

understand how talent terminology influences individuals and organizations, future research should consider contexts in which describing ability as "talent" may be advantageous.

Fifth, more research is needed to discern the ramifications of talent terminology for diversity, equity, and inclusion. One could argue that emphasizing "talent" over "skill" and, in turn, devoting more resources to hiring, could open the door to a more diverse workforce—particularly if an organization has developed strategies for attracting and selecting individuals from underrepresented backgrounds. However, since "talent" is commonly thought of as more innate than skill, it is in our view more likely that such emphasis would further disadvantage marginalized groups. Separate research suggests that words signaling innate intellectual ability (e.g., "brilliance," "genius") can suppress representation of groups that are stereotypically portrayed as deficient in that ability (Leslie, Cimpian, Meyer, & Freeland, 2015; Storage, Horne, Cimpian, & Leslie, 2016). And, in cultures where high achievement is seen as possible for a select few (i.e., in cultures with "non-universal" mindsets), resources may be disproportionately allocated to more advantaged, majority groups (Rattan, Savani, Naidu, & Dweck, 2012). Further research on these questions would contribute to a growing literature connecting mindset theory to diversity, equity, and inclusion outcomes at work (see Rattan & Ozgumus, 2019; Murphy & Reeves, 2019).

Finally, although most of the studies and analyses presented in this investigation were preregistered, as summarized in the Appendix, a minority of analyses were not. In keeping with best practices in open science, every effort should be made to anticipate and preregister analyses when planning future empirical research.

7.3. Conclusion

If shifting preferences in organizational language over the last century have shown anything, it is that the war for terminology is not over. Language is ever evolving (Hock & Joseph, 2019), and although "talent" has grown in popularity over the last two decades, its continued ascendance is not inevitable. Whatever the current trends, we recommend that organizations use language intentionally to reflect their values and priorities. In the end, describing ability as "talent" or "skill" cannot influence how innate and improvable it actually is or isn't,[20] but such labels *do* seem to influence our mindsets about the possibility of change. Even if a particular ability is largely heritable,[21] it does not mean that it is not malleable (Sauce & Matzel, 2018). Indeed, research on expertise has shown that almost any ability can be improved with the right strategy and enough effort (Bloom, 1985; Ericsson & Pool, 2016). Unfortunately, referring to abilities as "talent" may send the opposite message. To the extent that organizations hope to encourage the belief that ability is more earned than endowed, an emphasis on "skill" rather than "talent" is advisable.

8. Author note

CRediT authorship contribution statement

Daniel A. Southwick: Conceptualization, Investigation, Methodology. **Zhaoying V. Liu:** Conceptualization, Investigation, Methodology. **Chayce Baldwin:** Conceptualization, Investigation, Methodology. **Abigail L. Quirk:** Conceptualization, Investigation, Methodology. **Lyle H. Ungar:** Conceptualization, Investigation. **Chia-Jung Tsay:** Conceptualization, Investigation. **Angela L. Duckworth:** Conceptualization, Investigation, Methodology.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.obhdp.2022.104223.

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[20] Heritability coefficients for behavioral traits and abilities typically range between 40% and 60% (see Devlin, Daniels, & Roeder, 1997; Krapohl et al., 2014; Vukasović & Bratko, 2015).

[21] Indeed, Turkheimer's "first law of behavioral genetics" is that "all human behavioral traits are heritable" (2000, p. 160).

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