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**Understanding the Leaders of Tomorrow:
The Need to Study Leadership in Adolescence**

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Abstract

Leadership traits and behaviors are observed early in human development, and although an improved understanding of youth leadership would usefully inform many real-world contexts (e.g., education, parenting, policy), most empirical work on leadership has been limited to adult populations. The purpose of the current manuscript is to add a developmental perspective to leadership research that has so far been absent. Here, we (1) highlight adolescence as a critical developmental period for leadership emergence and development, (2) argue that leadership among youth is poorly understood and critically understudied, (3) provide exemplars of synergy between research on leadership and adolescent development that are ripe for focused inquiry, and (4) underscore some of the positive consequences of accelerating empirical research on leadership in adolescence, including implications for a deeper understanding of leadership in adult working populations.

Keywords: leadership development, youth leadership, leadership intervention, personality development, adolescence

Highlights:

- The developmental period of adolescence is marked by personality and interpersonal changes that have relevance for later adult leadership behaviors.
- Leadership research has almost exclusively focused on adult populations, despite the clear emergence and relevance of leadership in adolescence.
- Advancing empirical work on adolescent leadership has implications for selection and intervention that might inform and be informed by existing practical resources already devoted to early leadership.

Understanding the Leaders of Tomorrow:
The Need to Study Leadership in Adolescence

Although hidden to most, teen leaders are all around us and impact modern society in consequential ways (Carroll & Firth, 2020; Tackett, Slowinski, et al., 2019). These teens will become the adults of tomorrow who successfully found startup companies, rise from entry-level roles into top management, guide society toward political change, oversee scientific breakthroughs, and inspire and transform struggling organizations. Indeed, closely observing any schoolyard, high school classroom, or other context where teens congregate, allows one to easily identify patterns of leadership and followership. Some adolescents display a natural propensity for influencing their peers' attitudes, goals, and behavior, whereas others fall more easily into the role of follower. For some, these roles will remain quite consistent, whereas others may shift flexibly between leader and follower across different situations and contexts. This relative flexibility suggests that leadership can be meaningfully influenced and intervened upon during these formative teenage years.

Unfortunately, there is a critical knowledge gap that hinders our ability to take advantage of this flexibility and encourage and shape future leaders. Even though leadership begins to develop early in life (e.g., Brummelman et al., 2021; Day, 2011; Hensel, 1991; Oakland et al., 1996; Parten, 1933; Trawick-Smith, 1988; Zaccaro et al., 2018) theoretical developments and related empirical investigations have focused almost exclusively on adults (see Day et al., 2014; Dinh et al., 2014; Lord et al., 2017; MacNeil, 2006; Murphy & Reichard, 2012; Reitan & Stenberg, 2019). Yet, from Nobel Peace Prize winners to leading efforts battling climate change, gun reform and other societal

challenges, teen leaders are already impacting the world in major ways (Cordes, 2020). Importantly, these leaders show future potential and not just current success; they do not look like, or occupy the same spaces as, an average politician or company president. This underscores the need for an empirical understanding of teen leadership in its own right and highlights ways that adult leaders of tomorrow can be better understood and developed to maximize their effectiveness in the workplace of the future (Oswald et al., 2019).

Despite this scientific lapse, many interested parties (e.g., educators, parents, policymakers, employers) are highly invested in understanding leadership potential and leadership behavior early in life, where multiple developmental pathways of leadership develop into diverse sets of knowledge, skills, abilities, and other characteristics (KSAOs; e.g., Ployhart et al., 2014) relevant for leadership behavior in adulthood (Carroll & Firth, 2020; Day et al., 2014). Broadly speaking, understanding these leadership development pathways would involve studying a range of leadership antecedents (e.g., leadership emergence), mediators (e.g., group effectiveness), and outcomes (e.g., leader satisfaction) (Day et al., 2014; Zaccaro et al., 2018). Thus, devoting theoretical and empirical attention to adolescent leadership, both in its own right and as a contributor to adult leadership, has a range of important scientific and practical implications.

Just what is leadership? Like the definitions of many other complex-yet-important constructs (e.g., adaptability, resilience, critical thinking), scientific definitions of leadership are varied and complex, and continually discussed, refined, and questioned among experts in leadership science (Campbell, 2013; Dinh et al., 2014; Hogan et al.,

1994). However, most definitions of leadership include three major aspects: the exertion of social influence, maximizing and coordinating the efforts of others, and moving others toward the achievement of a goal (House, 1996; Yukl, 2013). These definitional aspects are relatively specific, useful, and relevant to adolescent development.

Also worth noting is the fact that leadership is contextual and dynamic (Day et al., 2014), arising with respect to a given combination of individuals and in a specific situation, each of which may contain both facilitating and constraining features that evolve over time (Dinh et al., 2014; Murphy & Johnson, 2011). This latter point illuminates how our developmental focus of adolescent leadership is substantively compatible with theoretical frameworks of adolescent development more generally (Lerner et al., 2015). It is also important to acknowledge research showing that leadership potential and propensity emerges in childhood, well before adolescence. Nonetheless, we view adolescence as particularly important for focused inquiry for a number of reasons we articulate below, and an important next step in moving the field toward an even broader lifespan understanding of leadership development.

In the current manuscript, we call on social and behavioral scientists to attend to this understudied research topic and consider how psychology's current silos (e.g., social, industrial-organizational, developmental, clinical, management) have overlooked early leadership development as a target of focused scientific research. By bringing together expertise from different areas of psychological science, interdisciplinary teams can advance scientific understanding of early leadership. We further underscore the negative consequences of neglecting this area of research, ranging from (a) missed opportunities for youth to recognize and nurture their own leadership potential (Lerner et al., 2015), to

(b) the wasted resources in schools, neighborhoods, and communities that are launching leadership development programs lacking a comprehensive scientific foundation to justify large-scale investments of time and resources (Carroll & Firth, 2020; Karagianni & Montgomery, 2018), to (c) the consequences borne by society as a whole from ineffectual or incompetent high stakes leadership (Hogan & Kaiser, 2005). The need and demand for this type of work are clear; it will take interdisciplinary teams of scientists and practitioners, sharing and working across their areas of experience and expertise, to meet this call effectively.

Adolescence as a Critical Developmental Period for Leadership

We begin with a theoretical justification for focusing on adolescent leadership emergence. In general, critical developmental periods throughout the lifespan – such as adolescence – represent times of heightened vulnerability due to accelerating maturity or development (Dahl et al., 2018; Lerner et al., 2015; Steinberg, 2005). These periods are not only “vulnerable” to risk, but also to opportunities for development of a host of constructs, skills, and tasks. In many respects, adolescent development is acutely aligned with early leadership emergence.

First, in the middle-to-late adolescence developmental period, key leadership traits and processes are emerging and/or changing, including expressions of social dominance, self-control, heightened relevance of the peer group, social status, peer influence, and attention to social hierarchy (all of which we discuss in greater detail below; Albert et al., 2013; Blakemore, 2018; Hawley, 1999). At the same time, adolescence typically represents a critical entry-point into the world of work in most Western industrialized cultures, as well as a time for increased engagement in other

sophisticated and complex social groups and networks as found in extracurricular activities, clubs and organizations, and volunteer and activism efforts (Eva, Cieri, Murphy, & Lowe, 2021; Fredricks & Eccles, 2010). Relative to both children and adults, adolescents tend to show increased social sensitivity, a finding that converges across neural, hormonal, and behavioral levels of analysis (Albert et al., 2013; Blakemore, 2018; Hawley, 1999) and adolescents are also generally more embedded in social hierarchies. Regarding the latter, adolescents show reasonable consensus when identifying their peers' levels of social status, competence, and reputation (Fournier, 2009), meaning that they are not only developing their own potential leadership skills, but also that they are likely particularly sensitive to its development in others.

It seems clear, then, that adolescence is a window of development that offers a critical opportunity for scientifically understanding early leadership emergence, development, and influence on adulthood leadership. Many interesting scientific questions about adolescent leadership deserve deeper scholarly investigation: e.g., How early do young leaders emerge? What psychological, parental, and peer group characteristics and processes underlie the development of adaptive leadership skills in adolescence? What is the nature, timing, and effects of teens evaluating one another over time on leadership-relevant traits, such as social dominance, inspiring others, and prestige? Under what conditions does adolescent leadership translate into successful adult leadership and related skills? How might greater understanding of adolescent leadership facilitate diversification of the leadership pipeline? A better scientific understanding of these and related questions is sorely needed.

Laying the Foundation for the Study of Adolescent Leadership

As previously noted, leadership research has predominantly engaged adult samples, but there are excellent examples of theory-based approaches to understanding early leadership (e.g., Day et al., 2014; Eva et al., 2021; Liu, Venkatesh, Murphy, & Riggio, 2021; MacNeil, 2006; Murphy & Johnson, 2011; Popper & Maysless, 2007; Zaccaro et al., 2018) along with some emerging empirical work (e.g., Brummelman, Nevicka, & O'Brien, 2021; Gottfried et al., 2011; Guerin et al., 2011; Liu et al., 2019; Liu, Xu, He, & Li, 2018; Reitan & Stenberg, 2019; Waasdorp et al., 2013). Nonetheless, the overfocus on adults in the leadership literature has persisted over time.

Here we consider how and why and how we might build a truly interdisciplinary conceptual framework of adolescent leadership. Drawing on the rich scientific knowledge base on adolescent development, we identify many topics that have likely relevance for leadership emergence and development. Generally speaking, adolescent development occurs in rich, multilayered contexts including biological, cognitive, and personality development within the individual, the context of the peer group, and external contextual factors such as the societies, time periods, and institutions within which adolescents are embedded (Lerner et al., 2015). Here we will highlight some of the key aspects of adolescent development across these different contextual levels alongside key findings from leadership research in adults, to identify potential points of synergy ripe for more fully developed integration. These are meant to serve as illustrative examples rather than a comprehensive review but underscore the extent to which leadership research is amenable to and would benefit from consideration within the developmental context of adolescence and the broader knowledge base of developmental science.

Personality and Individual Difference Factors

One domain that researchers must explore in the context of early leadership is that of personality and individual differences. Adolescence is a time of remarkable change, with development occurring across cognitive, physical, personality, and social domains simultaneously (Lerner et al., 2015; Soto & Tackett, 2015; Steinberg, 2008). Two major developmental domains highlighted in these models are: (1) the development of cognitive and behavioral self-regulatory skills, including decision-making and inhibitory control, and (2) the increase in sensitivity to reward and heightened reward processing, including attention to social rewards such as reputation and social status (Steinberg, 2008). Both domains are clearly relevant to leadership, and as leadership-relevant traits become increasingly differentiated across adolescent development, it becomes especially important and useful to be able to measure these traits, examine their predictive validity for leadership processes, and engage in contextual interventions.

A number of individual difference variables have been identified as relevant for occupational leadership success in adulthood, arising from many areas of study including social psychology, industrial-organizational psychology, and management (e.g., Campbell & Knapp, 2001; Connelly & Ones, 2010; Judge, Bono, Ilies, & Gerhardt, 2002; Zaccaro et al., 2018). Examples include the personality trait of *social dominance*—a tendency to behave in assertive ways coupled with a desire to serve as a leader, often nested within extraversion—which is regularly associated with leadership assessment and outcomes (e.g., Bono & Judge, 2004; Hogan et al., 1994; Roberts et al., 2003). *Self-control* is another important dispositional characteristic resulting in occupational and leadership success (Hogan et al., 1994; Judge et al., 2002), often emerging as one of the strongest—if not the strongest—dispositional predictor of occupational performance

across a variety of contexts (Ozer & Benet-Martinez, 2006). Although several other individual differences have been linked to leadership in adults, it is striking that two of the strongest correlates—social dominance (an aspect of extraversion) and self-control—map directly on to the two major domains of intrapersonal development in adolescence (Steinberg, 2008). Personality traits change in response to work experiences (Judge et al., 2014; Roberts et al., 2003), and because the teenage years are a common entry point to the world of work, scientific study of these processes must begin before these early occupational experiences.

Surprisingly, although social dominance is widely studied in the adult leadership literature, it is rarely included in measures of youth temperament and personality as an individual-level trait. This may reflect actual blind spots in identifying socially dominant tendencies in children from an adult vantage point (e.g., parent or teacher informants of a child's personality), given inherent power differentials therein. Compounding this problem, the collection of self-report data from children and adolescents faces multiple limitations (e.g., poor psychometric properties, biases in self-awareness) that render those data undesirable as stand-alone, or even primary, sources of information (Tackett, Herzhoff, Kushner, & Rule, 2016). Together, these problems have hindered the ability to assess children's leadership potential accurately and thereby understand how early social dominance traits emerge and develop.

Although psychometrically validated youth personality scales often lack measures of social dominance, they frequently measure conscientiousness as a broad trait reflecting intrapersonal self-control characteristics, such as industriousness and orderliness; and conscientiousness is reliably assessed in children as young as age 3 (e.g., Tackett et al.,

2012). By extension, when developmentally sensitive individual differences measures are either unavailable or infeasible to measure, we may anticipate some traits related to early leadership potential to be more readily incorporated in empirical examinations than others. Furthermore, the mechanisms by which personality traits lend themselves to leadership emergence and/or effectiveness, might be different across ages (Brummelman et al., 2021), highlighting the need for a developmentally sensitive and contextually centered framework.

In addition to normal-range personality traits, several pathological personality traits (such as narcissism, callousness, antagonism, and manipulativeness) are relevant to adult leadership behaviors (Hogan et al., 1994; Judge et al., 2009). A developmental extension of this work could align with a small but substantial literature delineating similar traits in youth (e.g., Brummelman et al., 2021; Reardon et al., 2018; Reijntjes et al., 2016). A thorough and comprehensive investigation of both normal-range and maladaptive personality traits associated with youth leadership is an important next step to make progress in this burgeoning research domain.

Peer Group and Interpersonal Factors

Another important domain to consider for adolescent leadership development is the that of peer and interpersonal factors. Leadership emergence and effectiveness can only be fully understood in an interpersonal context (Campbell, 2013; Dinh et al., 2014). Interpersonal relationships are one of the most important and ubiquitous environmental contexts in which individuals develop, and this is especially true for adolescents (Lerner et al., 2015; Smetana, Campione-Barr, & Metzger, 2006). Whereas early childhood is dominated by family and caretaker relationships, adolescence is more strongly associated

with peer groups and the transitions into those groups (Rubin, Bukowski, & Parker, 2006). Thus, the development of social attention and social skills becomes especially important during adolescence in the context of peer relationships (Bolling et al., 2011; Massey et al., 2008; Steinberg, 2008; Steinberg & Morris, 2001). Indeed, research has found greater hormonal, neural, and psychophysiological sensitivity to peer rejection in adolescence relative to childhood and adulthood (Bolling et al., 2011; Silk et al., 2012). Thus, adolescence serves as a critical developmental period for social skills and social perception – both key processes that underlie leadership (Zacarro et al., 2018).

Leaders' knowledge of their group members plays a critical role in their ability to manage the group, assign certain members to tasks, and allocate resources in a way that promotes both the group and its goals. Good leaders also display responsibility and commitment; provide concrete guidance and broader vision to subordinates; understand and further the priorities of a group, both internally and externally; and earn the respect and trust of others in the social system (Chughtai et al., 2015; Searle et al., 2011). Good leaders should also be effective both interpersonally and perceptively; they should be skilled at reading and understanding the verbal and nonverbal signals of others (Guerin et al., 2011; Ferris et al., 2007). Emotional intelligence and the ability to consider the perspectives and feelings of others (e.g., one's subordinates and peers) are key social skills underlying leadership (Gardner et al., 2005; George, 2000; Harms & Credé, 2010; Joseph & Newman, 2010), and they tend to develop rapidly during adolescence (e.g., Choudhury et al., 2006; Van der Graaff et al., 2014).

Leadership capacity and its concomitants, such as social dominance, have rarely been studied in adolescence. However, mechanisms of peer influence have played a

prominent role in developmental theories of adolescent decision-making and risky behavior (Dishion & Tipsord, 2011; Mrug et al., 2014; Steinberg, 2008). This research suggests that peer influence mechanisms (e.g., peer pressure) are particularly strong in adolescence, as compared with other age groups, and may even account for many deleterious outcomes disproportionately affecting youth (e.g., delinquency, obesity, unhealthy body image). Positive effects of peer influence, as we might anticipate in successful or adaptive adolescent leadership behavior, have been studied far less often than have negative effects of peer influence in children and teens (Brechwald & Prinstein, 2011; Dishion & Tipsord, 2011).

One highly important aspect of adolescents' interpersonal contexts (as well as leadership more broadly) is the structure and function of social hierarchies. Social hierarchy is relevant for leadership, as it serves to organize social relationships and coordinate efforts toward common goals (Maner & Case, 2016). Social status is highly context-dependent: an individual may have high power but low status (Fast et al., 2012), or high status in one group, but low status in another (Anderson, Hildreth, & Howland, 2015). Importantly, a leader's social status is largely conferred by his or her peer group, creating a potential challenge for an adult or anyone outside that specific social context to easily evaluate a target youth's position in a given social hierarchy.

The developmental importance of social hierarchy in adolescence is underscored for its subsequent effect on leadership capacity, emergence, and effectiveness. As youth shift away from a developmental focus on parents and family toward relevant peer groups (Rubin et al., 2006), teens are constantly facing the salience and importance of interpreting their social hierarchies, including their own and others' positions (e.g.,

Andrews, 2019; Huo et al., 2010; Ryan et al., 1997). Empirical research on the formation of childhood and adolescent social hierarchies is limited (e.g., Brummelman et al., 2021; Fournier, 2009), although preliminary empirical research suggests that adolescent social status and reputation can be reliably measured (Fournier, 2009; Zacharatos, Barling, & Kelloway, 2000). Individuals' attention to social power can be assessed reliably in children as young as 7-9 years of age (Gülgöz & Gelman, 2017) and the emergence of social dominance within early childhood peer groups has been measured systematically (Hawley, 1999).

Research on youth popularity offers a synergistic opportunity for connection with adult leadership science, as well. This work has identified two distinct dimensions of popularity: sociometric and perceived (Cillessen & Rose, 2005; Parkhurst & Hopmeyer, 1998). Children who are high in sociometric popularity, or likeability, tend to be described as prosocial, entertaining, cooperative, kind, and trustworthy. Sociometric popularity is associated with better emotional adjustment and high-quality friendships. Children who are high in perceived popularity, or status, tend to have higher social ranking, influence, and dominance. They may engage in prosocial behaviors but also engage in antisocial behaviors, such as overt and relational aggression. Importantly, these two types of popularity draw comparison to two widely studied pathways to leadership in adults, prestige versus dominance, respectively (Maner & Case, 2016). Ultimately, the field needs to better understand how teenagers sort into social hierarchies and confer leadership status to their peers, as well as those factors predicting adaptive, successful, or effective leadership functioning in those systems.

Contextual Goals and Social Roles

A third highly relevant domain for adolescent leadership is that of broader contextual goals and social roles. In addition to personality and peer group factors, a number of broader contextual features likely influence leadership emergence and development. Prominent theoretical models of adolescent development emphasize developmental processes as occurring as a result of mutual interactions between the adolescent individual and the peer group, hierarchies, and other contexts in which they are embedded (the peer group and hierarchies, just discussed, being one such context; Brofenbrenner, 1977; Lerner, 1991; Lerner et al., 2015). These theoretical frameworks emphasize the many layers in which adolescents exist and develop, such as schools, neighborhoods, institutions, and societies, as well as broader cultural systems and influences on development that undergird these layers (Rogers, Niwa, Chung, Yip, & Chae, 2021; Vélez-Agosto, Soto-Crespo, Vicarrondo-Oppenheimer, Vega-Molina, & García Coll, 2017). This work is highly complementary and consistent with leadership research on understanding emergent and effective leadership based on group composition, specific situational tasks, and other key contexts (e.g., Alvesson & Einola, 2019; Dinh et al., 2014; Neubert & Taggar, 2004). We can look to the articulation of these developmental frameworks for potential directions of focus in considering how, where, and under what conditions adolescent leadership emerges and is fostered. We can also make use of the advanced approaches to modeling these complex systems in adult leadership research (e.g., Gehman et al., 2013; Lang, Bliese, & Adler, 2019; Newman & Wang, 2019) to better understand how adolescents rise to leadership positions within these highly interactive, multi-layered, dynamic contexts.

An example of a developmentally salient context that may exert influence on leadership development are the high achievement demands during adolescence (e.g., pressure to graduate from high school, taking college entrance exams; Wigfield et al., 2015). These achievement demands undoubtedly shape behavior, and these behavioral shifts may in turn shape the nature and direction of achievement motivation (Bleidorn, 2012). Relatedly, adolescence is a critical period for the development of academic goals, college and career goals, and vocational interests. These major developmental processes range from the development of identity and values (Eccles, 2009) to more specific occupational interests, including those captured in the hexagonal model of RIASEC interests: realistic, investigative, artistic, social, enterprising, and conventional (Holland, 1966; Tracey & Caulum, 2015).

The high salience of achievement and occupational pressures during adolescence are likely critical for channeling certain youth into leadership-relevant occupational paths, as well as for facilitating identification as a leader and motivation to achieve (Eva et al., 2021). The processes of identity, vocational, and goal development are all critical in forming early self-concepts of leadership identity and competency, which then contribute to the foundation of effective leadership in adults (Oliver et al., 2011; Reitan & Stenberg, 2019). Some youth may not be supported by their environments to develop these self-concepts, in spite of a propensity to lead, and perhaps they are most in need of support to develop their latent leadership skills. To inform these ideas, a developmental approach to leadership research can very fruitfully work within the wide range of contexts that adolescents occupy and lead, including sports, student extracurricular

organizations, arts engagement, and charity and volunteer work (Arthur et al., 2017; Eccles et al., 2003; Eccles & Roeser, 2011; Knifsend & Graham, 2012).

Toward Empirical Investigations of Adolescent Leadership

We hope that greater attention to this topic will result in many creative approaches to focused empirical investigation of leadership in youth. Nonetheless, there are some pragmatically feasible places to start. First, other areas of psychological science have successfully extended existing measures derived in adult populations to adolescent populations, such as relevant data from personality science (e.g., Soto & Tackett, 2015). Identifying leadership constructs often measured in adults using questionnaires (or leadership-relevant constructs, such as the personality trait of social dominance) offers a quick entry into examining these topics in younger age groups, with the analytic benefit of direct measurement harmonization across these age populations (i.e., a developmentally “top-down” approach).

A second pathway to consider is examination of archival data sources in developmental psychology that may have incorporated leadership-relevant items or constructs. As previously stated, popular demand for understanding adolescent leadership is already high, such that many existing surveys may have created items attempting to tap into leadership. Similarly, many developmental datasets are likely to have leadership-relevant information, such as participation in school organizations and extracurricular activities, which may also include information about leadership involvement, or constructs relevant for understanding leadership conferral among youth, such as resource control (e.g., Thomas, Connor, & Scott, 2018). Archival datasets examining adolescent social networks could also be analyzed through a leadership lens, to offer some data on

leaders and pathways of influence in teenage samples. Similarly, these datasets may be useful starting points to begin disentangling the multifaceted construct of “leadership” in youth from other relevant constructs such as popularity or status.

Of course, a more laborious but also necessary future pathway is the collection of new data. Adolescents are not simply “little adults”, and proper investigation of leadership emergence in this age group must include data-driven efforts attempting to conceptualize leadership from the bottom up. These efforts might include the use of experiential and observational tasks and scenarios, collection of qualitative data from youth themselves and relevant stakeholders, and expanding the scope of measurement to capture those venues where adolescent leadership is likely to emerge (e.g., youth sports, school clubs, and social justice initiatives). Another promising approach is to examine developmental theory and empirical findings in parallel content domains to draw inspiration and insights for understanding leadership development across the same time span (e.g., see a provocative example of this in the domain of politics in Heck, Santhanagopalan, Cimpian, & Kinzler, 2021). Progress along these pathways will ideally facilitate movement toward a lifespan developmental understanding of leadership that bridges related empirical work earlier in childhood as well as the large empirical literature pertaining to leadership in adults.

Implications of an Enhanced Understanding of Adolescent Leadership

Thus far, we have argued that neglecting scientific study of adolescent leadership likely comes at a great cost, ranging from a youth’s potential to thrive, to the unrealized benefits that would accrue to schools, neighborhoods, and societies. We have also argued that juxtaposing findings from developmental science and leadership research suggests

opportunities for rich and important scientific synergies. Next, we continue to build the case for increased focused attention on adolescent leadership by considering the far-reaching and wide-ranging implications—and applications—of a better understanding of early leadership emergence and development.

It is easy to generate an extensive list of interested parties who would benefit from a solid scientific understanding of youth leadership—from teachers, parents, and youth themselves, to policy makers, education administrators, and youth-focused non-profit organizations, to organizations, recruiters, and anyone invested in the leaders of the future. Indeed, many of these parties are actively involved in the real-world *application* of youth leadership and/or predicting leadership potential (e.g., personnel selection, university admissions, military recruitment and classification, and myriad “interventions” already implemented in middle and high schools aiming to develop early leadership capacity), but without a solid scientific research base on which to draw (Karagianni & Montgomery, 2018). The resources already being invested in this topic further underscore the immediacy of this type of work—many stakeholders are in immediate need of a scientific understanding of youth leadership emergence and development. We turn next to consider opportunities for a scientific approach to contribute to the selection and development of young leaders.

Implications for Selection and Development

Leadership emerges from a complex suite of traits and experiences that develop through adolescence and into adulthood, making it challenging to select future leaders. As if selecting on multiple traits were not complicated enough, the leadership behaviors to be selected on are also multidimensional, given that leaders manage tasks,

interpersonal relations, and change within their organizational contexts (Yukl et al., 2002), each of which may benefit from somewhat different sets of leadership traits and skills. Furthermore, leaders are influencing the very situations, behaviors, and teamwork that they then end up leading (e.g., managing internally, representing externally).

Keeping this multidimensional appreciation of leadership selection in mind, we propose to move the research agenda on adolescent leadership forward in multiple ways. First and foremost, research and practice partnerships can consider how individual leadership characteristics map onto academic and workplace behaviors, either directly (e.g., their own time management behaviors) or indirectly (e.g., inspiring subordinates to manage their time and meet goals). Within organizations, industrial-organizational psychologists are often hired to perform this mapping via job analysis techniques, to specify job requirements that inform appropriate recruitment, selection, training, and promotion processes (Morgeson et al., 2019). Indeed, this practice in the organizational literature is consistent with the developmental concept of mapping “individual assets” to “ecological assets” to promote youth thriving (e.g., Lerner et al., 2015). This therefore calls for additional multilevel research and application, given data with time points nested within developing adolescents, who in turn are nested in academic, family, and career-related environments. To heed this call and measure relevant personal and situational features of leadership development, more proactive efforts to incorporate multidisciplinary insights and expertise are essential, such as by engaging developmental, educational, industrial-organizational, school, and vocational psychologists in collaborative efforts.

Second on the research agenda is to develop leadership interventions that will improve adolescent's chances (particularly those who may be or may become motivated to lead) to find roles that complement and contribute to their growing multidimensional leadership talents, well prior to leadership in the workplace and other formal settings. Measuring adolescent's leadership strengths and weaknesses in a psychometrically and practically effective manner is a desired prerequisite that informs those effective interventions that will ultimately improve their leadership capabilities. This is a long-term investment strategy that will stand to improve job applicant pools for all organizations engaging in selection, even improving workforce readiness and the national economy at a collective level. Additionally, adolescence is a critical time where personal *identity* is especially malleable and open to experimentation and change. Identification as a leader, or as one who could be a future leader, is crucial to the enactment of leader-related behaviors; but by the time individuals reach adulthood, their identities, knowledge, and assumptions in the leadership domain are often quite fixed, which can make the transition to first time leadership fraught with anxiety, threat, and conflict (Yip et al., 2019). If people have the opportunity to experience and experiment with leadership development during adolescence allowing themselves to explore, succeed, and fail—then there is a greater chance that leadership will become incorporated into a stable and enduring sense of self. The time is ripe for direct intervention and could lead to longer lasting change than leadership training efforts aimed at adults.

Third is to continue to engage in and strengthen longer- and broader-term thinking in selection research that merges developmental and organizational psychology, where adolescents are eventually selected for training (e.g., college, technical training) then are

selected to become employees; and with accumulated experience many employees are selected into a series of formal leadership roles. Employers should at least support the ideas toward the end of this pipeline, where even when organizations are not selecting directly for a leader, they benefit greatly from selecting applicants with leadership capabilities. Those who display, for example, effective task support, empathy, and teamwork, may be (a) more likely to be effective informal leaders in a group, (b) more willing and able to develop themselves into more formal management roles in the future, and (c) more likely to contribute to the accomplishments, climate, support, and management within organizations. Here, selection and leadership development should be considered alongside a broader array of interrelated activities that organizations undertake to cultivate their leadership talent: e.g., recruitment, management, training, teamwork, and incentivizing. Selection for leadership-development activities within adolescent contexts are critical, because they happen by default if not by design, where that which is not selected for is likely to vary more strongly and might need to be managed more carefully to avoid risk. Therefore, more explicit attention to selection for leadership development in adolescence offers an opportunity to disrupt the systems that are undoubtedly failing to serve youth identifying with underrepresented and marginalized groups and otherwise promoting the diversification of the leadership pipeline, an issue that we return to below.

Fourth, leadership development programs and interventions would benefit from a merging of evidence from developmental and organizational psychology. For example, such efforts aimed at youth may turn to the empirical evidence on the positive impact of parents and other role models on adolescent thriving, including the development of

leadership orientations (Deane, Meissel, Moore, Gillham, 2018; Eva et al., 2021; Yuan, Sun, Chen, Liu, & Xue, 2020). But note that overparenting, which might be perceived as a form of close adult intervention, may actually restrict youth leadership emergence, in part through negative experiences and subsequent impacts on self-esteem and self-efficacy (Liu et al., 2019; Yip et al., 2019). Thus, with the right amount and type of parental and social support, early intervention can help to put kids on an appropriate “leadership track”, thereby increasing the pool of future leaders. Further, the development of specific skills and activities in adolescence is likely linked to future leadership outcomes. Identifying and developing these parental and situational supports as precursors to fostering, if not accelerating, future leadership success is a very fruitful area for future research.

Gender, Race/Ethnicity, and Intersectionality

We have previously considered how research might address leadership diversity in terms of psychological features (e.g., knowledge, personality, interests). Future research should also consider the linkages between adolescent social development as it pertains to demographic diversity, with special attention to gender and race/ethnic minority groups, given their protected class categories (Title VII), as well as the combination of these categories (i.e., intersectionality).

Regarding gender, the theory of gendered organizations argues from the strong position that biased social hierarchies are what permeate and shape workplace cultures that tend to favor the careers of men over those of women (Acker, 1990). Broader investigations need to examine how gender and race-imbalanced leadership structures and hierarchies can be changed (if not disrupted), given the hopeful presumption that

organizations are striving for fairness and accountability mechanisms that strongly support equality of opportunities—and equality of outcomes—for all people, regardless of demographics (Tetlock & Mitchell, 2009). In this context, adolescent girls develop their identities in the context of both real and perceived leadership biases against them, leading to role incongruity effects (Eagly & Carli, 2003), in spite of strong existing and incoming evidence that women equal men in their leadership capabilities (Sanchez-Hucles & Davis, 2010).

To explain role incongruity effects in the leadership context, Eagly and Carli (2003) argued that women face a double bind, meaning that as leaders, they are often not only penalized for engaging in communal (i.e., warm and nurturing) behaviors expected of women; they are also penalized for engaging in agentic (i.e., assertive) behaviors expected of men. For women leaders or women with leadership aspirations, communal behaviors can be often viewed by men and women alike as a sign of weakness, and agentic behaviors are often viewed as overly aggressive or combative (Eagly & Carli, 2007). Yet, meta-analytic evidence suggests that female leaders are more transformational than male leaders, engage in more contingent reward behaviors (a component of positive transactional leadership) than men and are less likely to engage in ineffective components of transactional leadership or laissez-faire behaviors than men. Thus, socially learned expectancies affect women's leadership behaviors negatively, yet women leaders also tend to exhibit several uniquely positive leadership characteristics compared with men.

In addition, certain early aspects of leadership development—such as developing a self-perception of oneself as a leader—likely occur differently in male and female

adolescents (Eva et al., 2021; Heck et al., 2021) and the consequences of this gender difference may already have profound disadvantaging effects on girls by college entry (Wolniak, Chen-Bendle, & Tackett, 2021). Gendered stereotypes and expectations about girls' potential skill and identification with STEM careers and political aspirations are encoded early in life, well before adulthood, and it is reasonable to expect broader leadership motivations to show similar patterns (Heck et al., 2021). Such group differences likely generalize to comparisons with other marginalized or underrepresented groups—for example, although holding a leadership role in high school positively predicts white male teens' later income, that economic advantage is not found for female teens or non-white male teens (Hopp & Pruschak, 2020). A developmental, organizational, and sociological approach in this line of research would support a multidisciplinary understanding of the interpersonal (e.g., teamwork), intrapersonal (e.g., empathy), and structural factors (e.g., policies and practices) that maintain or reduce biased social hierarchies in organizations, an approach that should pay greater attention to these issues much earlier in life.

Intersectional adolescent leadership research would also be beneficial in understanding how adolescents can leverage their multiple, distinct identities (e.g., race, gender identity, ability status, or sexual identity) as they are developing their leadership capabilities (Rogers et al., 2020). Understanding how intersectional-specific identity stereotypes can undermine (or facilitate) leader emergence, or how one is viewed by others, is useful to science and practice. Extending our discussion of gender, women of color are subject to multiple role congruity principles in addition to stereotypes unique to their race. Indeed, Black and Asian women are both more likely to face organizational

penalties for agentic behavior than are white women, with the severity of the penalty being tied to stereotypes unique to their respective racial categories (Rosette et al., 2016). Their results support Eagly and Carli's (2007) argument that women of color, more than white women, are likely to be forced to navigate a labyrinth of unique social expectations that require balancing demands on agentic and communal behavior. As such, leadership barriers for women of color extend beyond the previously mentioned double bind situation.

Because intersectionality reflects the process and outcomes of integrating multiple identities to construct one's social reality (Cole, 2009), an intersectional research agenda is apt to highlight the combinations and interactions of multiple social categories (e.g., gender, race, sexuality, class) in developing and cultivating diverse forms of leader identity and engendering identity-related leadership outcomes (Barling & Weatherhead, 2016; Sanchez-Hucles & Davis, 2010). Given the evidence that leadership behaviors emerge during adolescence--during a critical period for identity development--adolescent leadership research may be enriched by adopting an intersectional lens and exploring how unique stereotypes develop over time, the processes by which individuals with multiple identities integrate their unique identities, and variance in how intersecting stereotypes and biases might amplify or attenuate one another in affecting leader emergence and effectiveness.

Conclusion

Leadership propensity and motivation clearly emerge much earlier in life than adulthood, when leadership ability and effectiveness have primarily been studied. Yet, very little is known about the scientific underpinnings of early leadership – whether

leadership looks the same in children as in adults, how these early behaviors develop and may be further facilitated or encouraged, and how these early life phenomena in early life may turn into later leadership behaviors in adulthood. Although leadership per se is not a common topic of inquiry for those studying children and adolescents, many vibrant areas of developmental science clearly intersect with leadership emergence and development. In the current manuscript, we attempt to build a case for greater attention to this understudied area of research, highlighting both the substantial costs of continuing to neglect it while also pointing to many rich opportunities and potential impact of this work.

Better understanding the nature of leadership potential in adolescence is highly consequential for developing and predicting future leadership, as well as for understanding and intervening on the course of individual careers, the nature and dynamics of organizational behavior, and even broader characteristics of the labor force and national economy (Hogan & Kaiser, 2005). In addition to many potential applied impacts of a larger scientific base on early leadership, integrating the currently disparate domains of leadership and developmental science creates a synergistic opportunity to identify biological, social, and contextual correlates of leadership capacity and development—an exercise that would be mutually beneficial across areas of study, but will only be realized with truly interdisciplinary teams and approaches. We hope to offer an early contribution to such an integration, stimulating more scientific thinking and knowledge on this critically important multidisciplinary topic in leadership science.

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