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Beyond 'heightism' and 'height premium': An anthropology and sociology of human stature

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Abstract

This review article examines the meanings and materialities of human stature, from serving as a marker of human difference to shaping the socio-spatial experiences of individuals. I introduce existing perspectives on height from various disciplines, including biomedical discourses on the factors (e.g. nutrition, genetics) that determine height, economic discourses on how the average heights of populations have changed over time, sociobiological and psychological discourses that assume a pre-cultural, evolutionary "height premium", and popular discourses on heightism and height discrimination. Drawing from a diverse range of scholarship since Saul Feldman called for a "sociology of stature" in the 1970s, I then present ways in which height and height differences have figured in various domains of human experience, from employment and education to sports and social relationships. Finally, I survey people's attempts to become taller or shorter, and the implicit values that inform such height-making practices. What these figurations and practices show, I argue, is that height intersects with notions of race, class, gender, and beauty – but is irreducible to any of them, and is thus best viewed as a distinct, embodied form of distinction, difference, and inequality. I conclude by proposing a research agenda for future work.

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1 | INTRODUCTION

In the 1970s, the sociologist Saul Feldman (1975:437) pointed out how height is valorized in American society, and consequently, shortness is problematized independent of other forms of discrimination:

Physical stature is a variable that has general been ignored by social scientists. American society is a society with a heightism premise: to be tall is to be good and to be short is to be stigmatized.

Feldman suggested that these valuations of height are encoded in language and inscribed in various domains of society, from romantic relationships and popular culture to economic and political life. Referencing Sorokin's (1927) work on the bodily differences between social classes as a rare forerunner, he called for a "sociology of stature" that would further explore and make sense of what he called "heightism" or discrimination based on height akin to racism and sexism.

Today heightism and the related term "height premium" (i.e. the idea that height confers favorable labor market outcomes) are concepts that hold great currency in different disciplines and are widely mentioned in various platforms, from scholarly journals to popular magazines and books (e.g. Hall 2006). In support of the existence of a height premium, various studies have correlated tallness with better education and social mobility (Bielicki & Waliszko 1992), higher income (Case and Paxson, 2008; Mankiw & Weinzierl 2010; Sohn, 2015), workplace success (Judge & Cable, 2004), and leadership positions (Lindqvist, 2012). For men, other proposed advantages include attractiveness (Nettle 2002; Shepperd and Strathman, 1989), mating success (Pawlowski 2003), and better quality of life (Komlos, 1994).

Historians have traced a high regard for tallness since ancient times, citing the 'physiognomic consciousness' (Parsons, 2001, p. 51; see also Parsons, 2005) during the Greco-Roman period that has persisted in contemporary Western thought (Barton, 1994; Twine, 2002). Coeval with this general attitude has been a philosophical, academic, and political interest in explaining the mechanisms of human growth (Tanner, 1981). Anthropometry figured in 19th century racial science in an attempt to measure racial difference (Kyllingstad, 2012; Lasco, 2018), while, in parallel, concerns over the plight of factory children arose in Europe in the aftermath of the Industrial Revolution, contributing to heightened attention towards children's growth and its eventual quantification through growth charts (Tanner, 1981, 1992).

Meanwhile, building on evolutionary theory, psychologists have proposed that heightism can be explained in terms of sexual selection (Nettle, 2002; Pawlowski, 2003). Other proposed explanations (see Stulp & Barrett, 2016 for a review) include the interpersonal dominance theory or the idea that tall people project "dominance" and are thus more likely to win confrontations with competitors (Stulp and others, 2015), as well as social capital gained by tall adolescents that is then converted into "non-cognitive" or social skills (Persico et al., 2004).

Complementing these works and also reinforcing the idea of 'height premium', economic historians have used height as a marker of development and a historical index of events, premised on the fluidity of the average heights of populations (Komlos 1994; Sokoloff & Villaflor 1982; see Galofré-Vilà 2018 for a history of this field). Drawing on archival and archeological evidence, their investigations suggest that various events and factors in the course of a child's life - from famine (e.g. Schwekendiek 2008) and weather shocks (Ogasawara & Yumitori 2019) to maternal education (Handa 1999), paternal presence (Dearden et al., 2013), can influence the average statures of entire generations. Their studies have also led to establish a general pattern of wealthier countries having taller people, and within countries, the rich being taller than the poor (Komlos 1994; Komlos & Snowden, 2005). This analysis has also been extended to people of different occupations and social classes (e.g. Komlos 1994; Szklarska 1999). Traditionally, scholars held that as nations reach the same standard of living, their populations reach similar height profiles (Martorell & Habicht, 1986) but more recent scholarship suggests that genetics remains a factor in explaining height variations across populations of similar socio-economic status (Grasgruber et al., 2014). Populations today are

generally taller than their ancestors, but such a “secular trend” (Malina, 1990; Tanner, 1981) has stopped in some countries like the United States (Fryar et al., 2018) and the Netherlands (Schönbeck et al., 2013).

Human biologists have also sought to explain human growth variation, as well as the anthropometric properties that make up ‘total height’, like leg length and ‘sitting height’ (see Eveleth & Tanner, 1990). Finding height to be a complex interplay between genetics and the environment, they have identified nutritional influences on height like milk-drinking (De Beer, 2012; Dor et al., 2022), meat intake (Horrell & Oxley, 2012), fruit and vegetable consumption (Mori, 2017), and overall agricultural abundance (Baten & Blum, 2014). The influence of living in high altitude (e.g. the Himalayas or the Andes) has also been the subject of considerable study (e.g. Malik & Singh, 1978; Stinson, 1982; Tripathy & Gupta, 2007).

All of the above demonstrate an interest in human stature in diverse fields. Feldman's call for a sociology of stature, however, has yet to be organized as such. In this essay, I survey the scholarship on height that touch on social, cultural, and political aspects of human stature: its meanings and making; how it is measured and how it materializes in people's everyday lives. Crucially, while Feldman saw height discrimination as independent of other sources of discrimination, various strands of scholarship have explored its intersectionality with race, colonialism, and gender. Just as importantly, they do not view heightism and the height premium as precultural givens, documenting and acknowledging the possibility of other ways of being, resistance, and change.

2 | THE RELATIONSHIP OF HEIGHT/TALLNESS AND BODY SIZE/BIGNESS

“Many of the world's peoples prefer, desire, and idealize big bodies,” writes Claire Cassidy (1991:181), concluding that “Bigness symbolizes the power of dominance, so people who want to appear dominant try to be imposing.” Cassidy suggests that body size has two components, height and bulk, the latter of which can be further divided into boniness, muscularity, and fattiness; the power of tallness lies in its being a component of ‘bigness’ (Ibid:182). Cassidy's acknowledgment that the social meanings of the other attributes, especially fattiness, have changed over time and across culture, gestures to the importance of specifically looking at tallness as an object of study - a point that Hopkins (2008:2121) also makes in calling for “microgeographies associated with people's everyday experiences of their body size”.

Nonetheless, the broader scholarship in body size, and the body in general, offers some key principles that are relevant in looking at human height, including fundamental perspectives in looking at the biosociality and multiplicity of the human body (Lock & Farquar, 2007; Mol, 2002); its materiality and corporeality (Longhurst, 1997); its medicalization (Conrad, 1992; Vertinsky, 1999); as well as its malleability and amenability as sites for body projects (Ogle & Damhorst, 2004; Shilling, 2016). Cassidy's (1991:182) observation that what may be “big” in one population may be “small” in another anticipates the insights of height scholars about the relationality of human stature (e.g. Murano, 2019). In similar vein, critiques about the ‘normative’ or ‘normal’ body in medicine, global health, biology (Cullin et al., 2021) as well as about the very act of measuring the body (Canguilhem, 2012; Mol, 1998) mirror critiques of the normativity of height standards (Hruschka, 2021; Morrison, 2019).

Though addressing a different dimension, the scholarship on fat and obesity is another (if unrealized) source of inspiration and analytical engagement (see Bordo, 2004; Murray, 2007; Pieterman, 2007; Sobal, 2011). Crossley (2004), for instance, challenges sociological claims about the rise of ‘body consciousness’ and preoccupation about body image in modern societies (see Grogan, 2021) and how it relates to the trend towards obesity. There are also striking intersectional parallels between height and other aestheticized attributes of the body like skin color (see Hunter, 2007) and facial features (see Edmonds, 2010). This paper will not rehearse this literature, but it is still worthwhile to reconnoiter if only to serve as a warning against a reified focus on a particular aspect of the body.

3 | LIVING WITH HEIGHT DIFFERENCES

In looking more explicitly at human stature and critically engaging with the idea of heightism, one productive starting point are works that look at how people live with height differences. Across 4 decades, some of these works looked at

dwarfism in general (Ablon, 1981, 1990; Pritchard, 2020, 2021, 2023); (Adelson, 2005; Lima, 2019); others focused on particular conditions such as achondroplasia (Cortinovis et al., 2011; Gollust et al., 2003), Turner syndrome (Radkowska-Walkowicz, 2019; Radkowska-Walkowicz & Maciejewska-Mroczek, 2023; Silver-Russell syndrome (Ballard et al., 2019), and spondyloepiphyseal dysplasia tarda (Ruyani et al., 2012). Shakespeare et al. (2010) underscore the liminality experienced by people with these conditions, who are at once living “fairly normal lives” but also face medical problems, employment disadvantages, and stigma, as one of their informants describe (Ibid:26):

I've gone through life trying to make a joke, but I can't stand being patronised, I can't stand being patted on the head, you pat children and dogs on the head. Not me... I fight hard to be dignified and I fall flat on my face every time!

While earlier scholarship tended to emphasize how shortness functioned as a “crucial symbolic difference in a society where tall stature is prized” (Ablon, 1990, p. 880), more recent works have emphasized the interrelated, embodied social and spatial barriers - from harmful cultural representations to “a built environment created for the average-sized person” - that disable individuals (Pritchard, 2021; see also Ktenidis, 2022; Harvey, 2023).

The importance of social organizations is highlighted in some of these works. In Malaysia, Baidi et al. (2018) cite the existence of Pertubuhan Kebangsaan Orang Kerdil Malaysia (PKOKM) – as a “huge development for the welfare of Little People in Malaysia” (Ibid: 138). Weinberg (1968) charted how, from its inception in 1957, the Little People of America (LPA) has benefited people with short stature, giving them social (including dating) opportunities and social support. Succeeding work on the LPA has found similar findings (Ablon, 1984; Humphries, 2012).

Meanwhile, studies done in other, particularly nonwestern societies, challenge the universality of the disadvantages experienced by people with dwarfism. For instance, Malcolm and Zimmerman (1973) found that among the Buang people in Papua, people with the condition did not demonstrate shame or reclusiveness, and they did not experience stigma. Even then, however, they were not permitted to marry, suggesting that the condition still led to some kind of discrimination.

Beyond works that examine *extreme* height differences (that are often defined in terms of standard deviations from the mean), others have looked more broadly at more subtle, but no less meaningful, height differences. Among these works are auto-ethnographic accounts that document the lived experience of heightism (Frankel, 2006; Nakamura, 2005; Tizon, 2014; Valtonen, 2004). Webb's (2015) critical gaze at what he calls the “staturization of culture” or the “prevalence of taken-for-granted symbolic meanings of tallness, shortness, and relative height difference throughout society” (p.5) led him to recognize that “[h]eight is more personal than a cursory examination would suggest because non-normal stature touches some of the most private aspects of people's lives” (p.14). Lasco (2023a) found while tallness confers many advantages among young people in the Philippines, some also don't want to be “too tall” as tallness also creates expectations like being good in basketball, or, in the case of women, having a taller partner.

Lasco speaks of height as a “relational” attribute, and that “people measure their heights not with a measuring stick, but with each other”; like Webb, he includes the heights of his interlocutors and their environment (e.g. the 10-ft basketball ring) in the text as a way of acknowledging the spatiality of the subject matter. Echoing this material relationality, Murano et al. (2020) found that their interlocutors - ten individuals with “below average stature” in the Netherlands - “assign meaning to height when they do things, when they engage with others and move in space” (p.4), including coping with “tall refrigerators or high shelves” (p.5) or meeting other people's gazes. Rahman and Navarro (2022) also take this materiality seriously by looking at how men 68 inches and less in Canada consume fashion. Attributing heightism to a hegemonic masculinity that is based in part in bodily size, they cite one informant as saying (p. 8):

There are no pants that can fit lengthwise for me. They all get hemmed, but I think that I just accept the reality, and also in terms of the waist sizes, I find what works the best for me but it's still too big.

Conversely, very tall young adults in United Kingdom also struggle with “things that are set up for normal people [sic]”, including clothes, showers, gym equipment, and the overall built environment (Booth et al., 2019, p. 237).

From the entirely different field of universal design, Hamraie (2012) similarly calls attention to the inequalities brought about a built environment based on normative bodies, but actually inhabited by people of “diverse body types, sizes, and abilities” (n.p.). Criticizing the positivist epistemology of anthropometry, Hamraie calls for “challenging this norm through designs that include a range of bodies” in what she calls a ‘new materialist practice’ (n.p.). As the range of scholarship shows in this section shows, such efforts will have to attend to the ways in which height is simultaneously a symbolic attribute and a “socio-spatial” experience (Pritchard, 2021).

4 | HEIGHT, RACE, AND COLONIALISM

Aside from accounts of the materiality of height and height differences in the everyday lives of individuals and families, another branch of the scholarship has sought to trace the associations between height, race, and colonialism, in the process highlighting their intersectionality. For instance, Lasco (2018) traced traces how the meanings and materialities of height manifested and resonated in the Philippines, from the institutionalizing of height requirements in the nascent American colonial bureaucracy to figurations of height in contemporary Philippine society. By dramatizing height differences between Americans and Filipinos through juxtapositional photography and discourse, among practices, colonial officials “infantilized” the latter and legitimized their rule (see also Lasco, 2020).

This argument is seconded by Núñez Casal and de Lima Hutchison (2002), who use height differences as an example of ‘embodied inequalities’ (p. 19):

Anthropometry ‘discovered’ correlations between a priori racial prejudices and differences in bodily dimensions, typically of non-Europeans, and those they deemed ‘criminals’ or of ‘lower’ classes which they believe justified their exclusionary, discriminatory and often violent imperial and national policies. (citations omitted)

While ethnic height differences can be used to justify colonialism, indigenous peoples can also invoke these differences in demanding for their bodies to be evaluated in their own terms. As Casal and Hutchison quote one of their Mbya informants as saying (p. 17):

Just because we are small doesn't mean we are ill...culturally, our growth and stature are different from Jurua. It is not that comparing is bad, it is just that it shouldn't be done like this... It would be better to do it with our growth.

A similar sentiment is documented by Lasco (2023b) in his historical account of pediatric anthropometry in the Philippines. Lasco documents the ambivalence among Filipino nutritionists, who vacillated between commissioning national reference standards that can be “used with confidence because they are Filipino and because they are accurate and recent” (p. 44) and adopting international standards that “[challenge] the Filipino child to compete globally” (p. 45).

In yet another example of how height figures in popular discourse on race, Hilker (2009) documents “everyday ethnicities” among young people in post-genocide Rwanda. While the reality of “race” is complicated, “stereotypical physical traits” like the height differences between Hutus and Tutsis persist as sources of people's collective identities, although some young people are also skeptical of their accuracy (p. 88):

People say that Hutus are short with big noses and Tutsis are tall and lean, but in reality, there have been many mixes and people can easily make mistakes... there are also Hutus that look completely like Tutsis and Tutsis like Hutus.

Such limited accounts (see also Purdeková & Mwambari, 2022; Schraml, 2014) suggest that meanings of tallness and shortness based on racial and colonial ideologies can persist to the present-day. Among Black men in the US, for instance, tallness can actually increase the risk of being judged as a threat and stopped by police officers (Hester & Gray, 2018). Lending ethnographic texture to the linkages between height and race, Nakamura (2005) writes of the “intersection of heightism and racial discrimination as an Asian American” (p. 64), discussing the “the subtleties of heightism in everyday comments and the unintentional insensitivity that people had in regards to short stature”, like “head-patting and other condescending behavior” (Ibid: 66) and hearing remarks about shortness of Asian American men. Despite the diversity of these works, they all implicate height as a physical framework that inform, and is informed by, the logics of racism and colonialism.

5 | HEIGHT AND GENDER

Various works have also foregrounded how height intersects with gender ideologies as well as gendered experiences. In his ethnography of the Mehinaku in the 1960s, Gregor (1979) writes of how short men, pejoratively referred to as “pertisi”, are unattractive to women while tall men are “respectfully described” as “wekepei” and usually have more girlfriends. Brandes (1980) identifies height as a key ‘metaphor of masculinity’ in Andalusia, finding that, in ritual and folklore, “there exists an implicit analogy between height and supremacy; parents and monarchs, the power-holders, are taller than children and subjects” (p. 205–206); an analogy that also manifests itself in gender ideologies. Brandes attributes these notions to the way children are socialized, observing that “men who are immersed from childhood in the same cultural milieu learn to think and act on the basis of shared assumptions.” (p. 10). Referencing Brandes’ attention to the semiotics of human stature, Gilmore (1996) writes of the “transformation of sex into dimensional space” and how spatial opposites such as above/below, up/down, and tall/short reify social (including gender) hierarchies.

Taking a more explicitly intersectional approach, Butera (2008) shows how the “cultural mythology of tallness... intersects in particular ways with gender/patriarchy” (p.3). She uses the “grotesqueness” of the “tall woman” and the feminization of the “short man” as illustrative examples of how this patriarchal ideology imposes gender normativities that are based on the body (see also O’Leary, 2016 for a similar analysis of the ‘tall woman’ on television). In similar vein, Smith (2017) such an ideology, which is based on a normative sexual dimorphism, leads to the ‘queering’ of heterosexual bodies. Murano et al. (2020) show how people themselves enact and subscribe to “a relation between masculinity and tallness and between femininity and being ‘petite’; reporting that “while men say that they prefer their female partner to be the same height or shorter than them, interviewed women say that they do not find short men attractive.”

Using semiotic analysis, Cameron (2012) extends these insights to the realm of sports, which reflects and reinforces both the “mythology of tallness” (p. 27) and an ideology of masculinity that is largely based on physical dominance and size. Analyzing two major sporting events in 2010 – the World Cup and the Winter Olympics – he found that “taller bodies were often glorified while smaller bodies were usually pathologized” (p. 83). Echoing Butera and O’Leary, Cameron also observed how tall female athletes were presented as ‘grotesque’ while short male athletes like Lionel Messi are often infantilized and represented as “as weaker, more childlike, and as subordinate to taller players” (p. 60).

In light of the above findings, it is not surprising that height figures prominently in male body image (Talbot & Mahlberg, 2023) and that body image studies among men with short stature report an association between masculinity and dissatisfaction with their height (O’Gorman et al., 2019; O’Gorman et al., 2020). For their part, however, women have been documented to face stigma for being tall (Salska et al., 2008) as well as for being short (Kruse, 2003; Rott, 2013) and consequently face body image issues as well (Perkins et al., 2021).

Beyond heteronormative analyses, other scholars have also analyzed sexual minorities in relation to height. Some studies suggest that among gay men, those who prefer to have a dominant or active role tend to be taller and prefer shorter partners, while those who prefer to a passive role tend to be shorter and prefer taller partners (Valentova

et al., 2014). Likewise, height differences can influence one's decision to be 'top' or 'bottom' (Carballo-Diéguez et al., 2004). Griffiths et al. (2017) find an association between height dissatisfaction and actual height, identifying "175–176 cm" as the neutral point where their cohort of sexual minority men from Australian and New Zealand reported negative and positive treatment equally. Megna (2012) reports that heterosexual-identifying men involved in LGBTQ activism acknowledge that their physical stature made people listen to them in that particularly-gendered space.

Most of the above studies support the idea of tallness as preferable, particularly for males, across various contexts (e.g. Taduran, 2021). However, notions around height and gender (specifically on partner preferences) are not universal. Among the Mehinaku, Gregor (1979) identify exceptions to his claim that taller men enjoy higher status. An investigation of the Datoga in Tanzania, for instance, found that women did not necessarily prefer taller men (Sorokowski & Butovskaya, 2012); a similar conclusion was reached by Sear and Marlowe (2009) of Hadza in the same country, and by Sorokowski and Sorokowska (2012) among the Yali in Papua, Indonesia. Acaba (2013) found that among gay men in the Philippines, height did not necessarily determine position preference; Sohn (2015) finds that there is no evidence for a strong "male taller norm" in Indonesia. Further refining in spatial terms what counts as 'tall' with respect to gender relations, Tao (2016) proposes the existence of a "not-too-tall" norm for males in Taiwan: an observation that resonates with Nettle's (2002) findings that extremely tall British men have less partners. Taken together, these studies hint at a partial coproduction between the meanings of height and gender which are situated in specific (sub)cultural contexts.

6 | HEIGHT, INCOME, AND LABOR

Beyond studies on labor and employment that either presume or confirm the existence of a height premium, a few works investigate possible mechanisms for why taller individuals earn more or have better well-being in specific economic contexts. Haddad and Bouis (1991) suggest that good nutrition and greater physical capacity – using height as measure – translate to higher wages among agricultural laborers in the Philippines, concluding that "the most likely productivity-increasing effect of height is increased strength which allows taller individuals to perform more work per unit of time for tasks which require strength (e.g. ploughing with a carabao or cutting and loading sugarcane which are often paid on a piece-rate basis)" (p. 64).

Dinda et al. (2006) make similar observations among coalminers in India. On the other hand, Sohn (2015) finds that in Indonesia, better physical performance and productivity does not fully explain the 8% and 13% earnings increase for taller men and women; he proposes height discrimination as a major factor in the disparity, suggesting that Indonesia's anthropometric profile (i.e. having a short population) makes tallness even more desirable.

Further interrogating the idea of a height premium are works that challenge its universality. Drawing on a survey of Tsimane', a foraging–farming society of native Amazonians in Bolivia, Godoy et al. (2010) found no evidence of stunting impacting outcomes like wealth, income, access to credit, and schooling (see also Undurraga et al., 2012).

Alongside such interrogations of the 'height premium' in the realm of labor, a few works have elucidated their legal and social mechanisms. Lasco (2018), documented how American colonial-era laws in the Philippines favored the tall by imposing height requirements for certain jobs. A "First-class patrolman", for instance, must be at least 5'8 (173 cm) and earned 900 dollars a year; a "Third-class patrolman" must be 5'4 (163 cm) and only earned 300 dollars a year (Lasco, 2018). Despite some of these requirements being removed (for instance, the height requirement for military recruits), others have persisted; on the basis of a 1969 law that's still in effect, a security guard must be at least 5'4 (Lasco, 2023a). Lasco ethnographically demonstrates how these explicit and implicit rules shape the choices of young people in choosing their careers, effectively making height a form of 'body capital'. Other works have articulated the relevance of height qua capital for particular economic opportunities, from playing football in Brazil (Boehl et al., 2022) to participating in the US fashion industry (Mears & Finlay, 2005).

The field of ergonomics also concerns itself with human height in the context of labor, underscoring how the built workplace environment is designed for a certain range of bodily dimensions. Of the US army, Friedl (1990:35) writes that “the best rationale for current height standards is practical: to limit the range of sizes for uniforms, protective ensembles, and workspace dimensions”; occupational health scholars have called for ergonomics to reflect changing anthropometrics, whether in the workspace (Gordon & Bradtmiller, 2012; Pheasant & Haslegrave, 2005), airplane cabins (Porta et al., 2019), hospitals (Islam et al., 2013), or classrooms (Kahya, 2019; Tunay & Melemez, 2008). As a consequence of the unevenness of the global capitalist economy, some countries are more affected than others; using anthropometric measurements of manufacturing workers in the Philippines, Del Prado-Lu (2007, p. 502) cites “mismatches in anthropometric dimensions” as a barrier to occupational health, implicitly critiquing how foreign-built and -designed equipment are not suited for Filipino workers. Overall, height emerges in these studies not just as a ‘premium’ for employment or income but as a physical, material, attribute not just of the workers themselves but also their environments.

7 | GROWTH, PEDIATRICS, AND PUBLIC HEALTH

Height also figures as an important attribute in nutrition, pediatrics, and public health, where it is seen as a measure of the health of both individuals (especially children) and populations. Informing this field are biomedical understandings of the different factors that influence growth (Eveleth & Tanner, 1990; Perkins et al., 2016; Roediger et al., 2020), including physiologic and biochemical mechanisms like the role of growth hormone and sex hormones such as estrogen and testosterone (Allen & Fost, 1990). Beyond simplistic nature/nurture, genetics/environment binaries, recent works have acknowledged complex ‘gene-environment interactions’ and epigenetic influences (see Thompson, 2021).

Such is the importance of height for individuals and populations that the prevention of stunting is enshrined as one of the Sustainable Development Goals (Baye, 2017). In the case of children, it is not just their heights that are of interest, but also their *rates* of growth; hence, alongside the measuring stick, *growth charts* are used to measure them.

These charts and their making as a normative tool have been the subject of critical analyses (see Machado, 2018 for a case study of Colombia). Morrison (2019:505) for instance, using a valuographic perspective to argue that “comparison with the mean produces shortness as a deficit, giving the statistical average normative value as the standard for what is appropriate, desirable and healthy.” Invoking Canguilhem’s critiques about the creation of the ‘normal’ in biomedicine, and tracing growth charts to Quetelet’s notion of *l’homme moyen*, Lasco (2023:38) likewise viewed growth charts as a normative instrument: “While stunting is a diagnosis based on an “objective” quantitative measure, embedded in the practice of measuring children’s heights is a comparative paradigm in which they are measured against a normative reference standard.” Beyond these sociological concerns, Hruschka (2021) has warned that “one size fits all” measurements do not accurately capture the health of some populations, noting that “anthropology and medicine have a long history of incorrectly and unethically interpreting observed population differences in terms of superiority, inferiority, and deficiency” (p. 9). Situating anthropometric practices and global development goals in rural Guatemala, Yates-Doerr (2020, p. 388) finds height to be an “unruly” attribute, noting that “[w]hile public health workers treat height as an outcome of upstream determinants, height also becomes the determinant.” (See also Yates-Doerr, 2017).

Further illuminating this tension between the ‘normal’ and the pathological’ are ethnographic works that focus on, or reference, child growth perceptions and practices. Drawing on fieldwork in southeastern Tanzania, for instance, Mchome and others (2019) found that *kudumaa* (stunting) is viewed by mothers as different from *ufupi* (normal short stature). Mirroring previous scholarship from Mexico (Turnbull et al., 2009), Indonesia (Launer & Habicht, 1989), Guatemala (Reifsnider et al., 2000), and Bangladesh (Hossain et al., 2018), other cues like facial appearance and physical activity are used to make an assessment of a healthy child, and heredity figures as a major explanation for growth differences (see also Mchome et al., 2018). In terms of growth patterns, Mori (2017:22) alludes to the Japanese belief

chiisaku unde, okiku sodateru (small at birth but raise it grow big) to raise the importance of late childhood nutrition. Lasco (2023a) describes 'hugot-laki' (literally 'pull up-growth') as a local concept that expresses the sudden and often idiosyncratic nature of growth spurts among adolescents. "While distinct from both the global health and human biology models of growth and child size," Thompson (2021:7) concludes, "these widely shared parental models of growth and child size are also important for understanding how parents view normal growth and how they interpret and act on variability."

8 | HEIGHT-MAKING AND HEIGHT-ALTERING PROJECTS

Finally, some works have centered on attempts to *modify* one's height - partly in response to some of the meanings of height identified above as well as the impacts of short stature in psychosocial development (Martel & Biller, 1987; Sandberg & Voss, 2002). These 'body projects' include indigenous and local practices described in some of the works above, for instance, sexual abstinence and cotton ligatures around calves (Gregor, 1979), the use of *dawa* (traditional medicine) (Mchome et al., 2018) and the resort to certain foods like milk and margarine as well as vitamins and supplements (Lasco, 2023a). They also include practices that tap into biomedical technologies, the most practiced (and studied) of which is hormone therapy (Cohen & Cosgrove, 2010; Rayner et al., 2010).

In an indictment of the "medical-pharmaceutical complex", Cohen and Cosgrove (2009), wrote of estrogen being used to suppress girls' growth in the 1950s, and expensive growth hormone shots being administered in the United States and France from the 1960s to the 1980s, initially to children with growth hormone deficiency but eventually also to those whose parents are concerned about their children's short stature. Recognizing the enduring nature of these practices, Lee and Howell (2006) implicate "changing societal norms regarding girls, women, and height" in both the rise and decline of estrogen therapy for tall girls America, but warned that "GH treatment of short stature in boys could be considered [its 21st-century counterpart]" (see also Medeiros, 2016; Morrison, 2015).

Driven by similar concerns, Murano (2019) calls for a "critical pediatric bioethics", which is especially relevant given how the pediatric and medical communities continue to be divided whether idiopathic short stature is normal or pathological (Allen & Fost, 1990; Ambler et al., 2013), and in light of retrospective studies that find widespread dissatisfaction among those who actually received such treatment (Pyett et al., 2005). From the perspective of medical ethics, Louhiala (2007, p. 50) acknowledges that height-altering treatments are more about the psychosocial rather than the medical consequences of being too tall or too short: "As in the case of human growth hormone treatment for constitutionally short children or surgery for children with big ears, pharmacological treatment to prevent psychosocial harm among healthy tall girls is, in a way, treating the victims of the attitudes of families and society." (see also Kin, 1996).

Regardless of what doctors feel about growth augmentation, however, parents have their own motives and reasons for pursuing these practices, calling attention to their own decision-making processes and perceptions about height (Conrad & Potter, 2004; Grimberg et al., 2015). Locating height practices within "body projects" that are inexorably tied to socio-economic aspirations, Lasco (2023a) writes about parents who buy growth supplements for their Philippines, seeing these products as an "investment".

At some point in early adulthood, vertical growth stops, but the making of height does not end there, as the growing practice of leg-lengthening surgery shows (Hosny, 2020; see Shukla, 2009 for a personal account). Beyond the body itself, moreover, height can be 'performed': women and men in the Philippines, for instance, wear high-heeled shoes in a diverse range of settings to look taller (Lasco, 2023a), while tall young adults in the UK end up slouching (Booth et al., 2019). Such practices resonate with works that look at the moral and social underpinning of posture, finding it to be closely linked to, and often just as important as stature (Gilman, 2014, 2018).

9 | CONCLUSION: THE FUTURE OF HUMAN STATURE

Though they are scattered in various field, the numerous works that examine height not as a physical given or simply a social construct but as a biosocial attribute of the body indicate that Feldman's call for a sociology of stature, though largely unassembled, has not been unanswered. Crucially, while this body of work largely confirms heightism and the height premium as social realities, it also challenges their universality, emphasizing the situatedness of the meanings of materialities of human stature.

Directions for future research are manifold. In the first place, researchers should explore whether the very scholarship that has established the height premium has helped perpetuate it, given how this scholarship gets amplified in the media (Feldman's concept of heightism gained traction because of his original 1971 presentation got featured in *Time Magazine*), and that people "evaluate bodily differences in the context of media representations of the U.S. cultural ideal of the body beautiful" (Shuttleworth & Kasnitz, 2004, p. 151).

Conversely, it is worth asking how the scholarship can contribute towards ending height discrimination. Arguably, the very act of interrogating the given-ness of heightism can pave the way for efforts to address it, but some scholars – many of whom identify with their interlocutors in terms of their own stature – have put forward more explicit calls that can inform or inspire a more engaged scholarship, such as embracing more inclusive design (Pritchard, 2021), holding biomedical actors accountable (Cohen & Cosgrove, 2009), pursuing legal remedies (Rosenberg, 2009), or raising awareness and representation (Kimhi, 2020; Osensky, 2017).

The fact that most of the works were conducted in Western settings (Feldman's essay begins with the "the American male"), and most have used people with below average stature – mostly males – as interlocutors – call for expanding the range of the literature. What of very tall and 'not-too-tall' individuals, and height in non-western settings, where, as broader scholarship shows (Harris & Robb, 2012) and as this review suggests, there might be different ways of looking at the body?

The sociology and anthropology of height should also continue to account for diverse (including more-than-human) biosocialities (Goodman, 2013) as well as the existence of new technologies that is increasing the 'temptation of biomedical enhancement' (Conrad & Potter, 2004). Leg-lengthening (or limb-lengthening) surgery with its steep costs and risks raises bioethical dilemmas (Guerreschi & Tsibidakis, 2016), while Vorostide and other novel therapeutics for short stature (Saroufim & Eugster, 2021) reanimate questions about what counts as "pathological" (and thus needful of treatment). Similarly freighted with bioethical concerns is the emergence of genetic testing for stature (Wojcik & Wu, 2023), along with other diagnostic and prognostic technologies.

Moreover, the awareness that the ways we engage with the world are structured by our very corporeality and physicality (Grosz, 2017; Imrie, 2012) can be pushed further to imbue human-animal and human-environment relations in studying the spatiality of humans; as Lasco (2023a) has suggested, verticality (e.g. high-rise buildings, elevators, taller humans) can be viewed as a hallmark of modernity itself. Just as relevantly, future scholarship can consider the role of height in virtual worlds in which people are not limited by their physical bodies, but are nonetheless embodied spaces (Kiltner et al., 2012).

Finally, this scholarship will also have to contend with and make sense of a world in which growth and development – held up as the *raison d'être* for studying height in the first place (e.g. Eveleth & Tanner, 1990) – may no longer be desirable or sustainable. Can the 'degrowth' movement (see Demaria et al., 2013) see corporeal downsizing as a 'body project' in itself? Provocatively, Liao et al. (2012) called for the reduction of human height through genetic engineering, hormonal treatment, and reducing birth weight as a solution to our ecological crises. While largely speculative, such calls for self-imposed stunting evoke – if obliquely – paleontological accounts of how hominids may have acquired short stature as an adaptation to limited resources in small islands (Migliano et al., 2007; Tucci et al., 2018).

The fluidity and diversity of the how the human body is perceived, idealized, embodied, tinkered with, measured, and performed should animate further work on human stature and its making, meanings, and materialities.

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CONFLICT OF INTEREST STATEMENT

None declared.

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