



Viewpoints: **Deposit-Based Housing Selection: Gentrification of University Residential Opportunities in Higher Education**

Viewpoints essays offer critical analysis of an issue in housing and residence life that is of considerable interest to the readership. These essays provide a scholarly summary and subsequent examination of the topic with attention to implications for practice.

Authors



CODY T. HUEBNER

Success Advisor,
College of Business
Ohio University
huebner@ohio.edu



KAILYN M. LAMM

Assistant Director for
Off Campus Living and
Commuter Initiatives
Ohio University
lamm@ohio.edu



JAK R. KOETT

Resident Director
Ohio University
koett@ohio.edu



TONY N. TYLER

Associate Dean of Students
Lake Forest College
tyler@lakeforest.edu

HOUSING SELECTION PRIORITY based on monetary deposit is a practice that colleges and universities across the United States utilize to manage student housing assignment processes. However, this system perpetuates racial, socioeconomic, and other historically oppressive ideological institutions. The prioritization of deposits ranging from \$50 USD to \$800 USD for the purpose of securing placement in a campus housing selection queue fosters gentrification and segregates those with the ability to select into spaces that are newly renovated and held in higher regard and those who must choose from fewer, often unrenovated or undesirable rooms or find themselves with no housing at all. Within the context of higher education, all practices and systems must fall under the universal mission of learning and development. Therefore, institutions that require students to reside on campus for any number of years and emphasize their residential experiences as central to students' holistic development and sense of belonging must consider the significant negative impact of prioritizing placement based on a monetary value. It is the responsibility of college and university administration to scrutinize how the means of addressing lack of funding for higher education, resulting in harmful practices born from monetary need and neoliberal pressure, perpetuate systems of oppression rather than interrupting or challenging the status quo. Critical examination and intentional reimagination of current practices can develop new systems to maintain the financial well-being of the institution as well as serve students equitably.

Many institutions of higher education throughout the United States rely on housing deposits as a way of prioritizing housing selection times for their on-campus students. This deposit-based housing selection (DBHS) model requires a student to pay an often non-refundable deposit before they are eligible for room selection. Essentially, the earlier a student submits their payment, the earlier they can select a space on campus. Based on anecdotal university site research, these deposit amounts vary considerably at institutions across the nation, ranging from \$50 USD to \$800 USD. Because the DBHS housing selection model allows a student with the ability to pay a housing deposit earlier—and thus obtain an earlier place in the queue for room selection—these students often select the popular choices: newly renovated halls or those with better amenities. However, a student who pays later for any number of reasons is left to select from spaces in often unrenovated or undesirable spaces or, in some cases, to get no room assignment at all.

Thus, the DBHS model actively rewards a student who can afford to submit this payment sooner, which is almost always due significantly prior to the disbursement of

financial aid. This prioritization based on monetary value has social ramifications, as it directly impacts those from lower socioeconomic backgrounds and people of color and encourages the development of gentrified spaces. To conceptualize suggestions for improvement, it is imperative that the DBHS selection model be intentionally analyzed from bioecological, economical, and critical perspectives and with an operational understanding of gentrification.

THEORETICAL FRAMEWORKS

Frameworks such as the bioecological model of human development (Bronfenbrenner & Morris, 2006), neoliberalization (Foste, 2021; Saunders & Blanco Ramirez, 2017), and Critical Race Theory (CRT; Delgado & Stefancic, 2000; Hernandez, 2016) are integral to providing practical insight into the negative outcomes associated with the DBHS system. By approaching DBHS processes through the lens of these three frameworks, it will be evident that this system is not sustainable when it pertains to students' sense of belonging and overall success.

Bioecological Model

The bioecological model of human development is a theoretical framework that describes how both individuals and groups of people develop in response to their environments over time (Bronfenbrenner & Morris, 2006). For the purpose of analyzing the DBHS model, the environments within the microsystem and the macrosystem are the most prevalent. These environments are defined as follows:

- **Microsystem:** *This consists of the activities and intersectionality of social roles experienced by the developing person in a setting with features that might inhibit or altogether prevent that person from engaging with their systemic environment (Wozniak & Fischer, 1993). The physical space in which a student lives on campus directly impacts their microsystem (Bronfenbrenner & Morris, 2006), as their residence hall setting can affect who they most frequently interact with and how they get involved in student organizations, both of which are known to contribute to their sense of belonging.*
- **Macrosystem:** *This consists of the traits and characteristics of a culture or other greater social context, with consideration given to systems such as beliefs and values, lifestyles, availability of opportunities and life course options, and social patterns that influence identity development (Härkönen, 2007). All residence halls on a college or university campus make up a macrosystem, as students from various cultures and belief systems coexist within these spaces (Bronfenbrenner & Morris, 2006).*

Neoliberalization

Neoliberalization is the "active process through which neoliberal ideology in particular, and capitalism in general, comes to shape our social, cultural, and political worlds" (Saunders & Blanco Ramirez, 2017, pp. 189–190). Neoliberal ideology, which is centered on generating revenue and viewing students as consumers of a service, has directly influenced the structure of higher education in the last four decades (Saunders, 2014).

Because the DBHS housing selection model allows a student with the ability to pay a housing deposit earlier—and thus obtain an earlier place in the queue for room selection—these students often select the popular choices: newly renovated halls or those with better amenities.

The utilization of a DBHS system clearly exemplifies neoliberal practices in action. For example, a student, otherwise thought of as a consumer, who can put down a monetary deposit earlier has disproportionate access to choose from better residential facilities. This prioritization of revenue generation results in an “intrusion of businesslike practices” and posits relationships between universities and students as transactional, which can negatively impact students’ sense of belonging and retention (Foste, 2021, p. 172).

Critical Race Theory

Critical Race Theory was designed to consider the relationship between race, racism, and power (Delgado & Stefancic, 2001). Emphasis on the analysis and discussion of race as central to the human experience, while simultaneously engaging in a critique of the existing power structures and dynamics regarding race, makes up the thought behind CRT (Delgado & Stefancic, 2001). This theoretical framework is therefore integral to the intentional reimagination of student housing processes. While it is important to acknowledge that there are many tenets that make up CRT, there are three that specifically contribute to the DBHS discussion:

- *Race as a social construct suggests that race has meaning based upon how cultural institutions, and society, give it meaning (Andersen & Collins, 2020; Delgado & Stefancic, 2001).*
- *Differential racialization suggests that the dominant social group in a societal institution racializes minority groups in accordance with the shifting societal needs at a given time (Delgado & Stefancic, 2012).*
- *Counter-storytelling suggests that a contrasting narrative can act as both a defense strategy as well as a mechanism to disconnect the individual from reality so that they might consider differing perceptions of the truth (Ladson-Billings, 2016). Counter-storytelling also offers itself as a tool for challenging harmful narratives that are driven by privileged social groups (Solórzano & Yosso, 2002).*

Gentrification

The term *gentrification* is complex and has shifting meaning (and context) throughout history. However, there is still common recognition that this concept includes themes related to an understanding that marginalized social groups are physically displaced to keep up with changing social environments driven by the privileged group (Lees et al., 2013). While there are examples of gentrification that manifest as physically violent displacement, not all instances of the concept take on this form. Indeed, structural violence—defined as economic or political systems influencing displacement—is also prevalent in circumstances when specific populations experience satisfaction deprivation systematically (Christie, 1997). In the context of higher education, gentrification is

not typically displayed in fervent acts of physical violence, but instead relies on various systems and structures to perpetuate it more covertly. Such a system, like DBHS, can then maintain its ability to segregate the marginalized from the privileged and is able to do so easily as common practice.

PERSPECTIVES

Living on campus and interacting with housing and residence life staff play integral roles in student development, sense of belonging, and retention. This emphasis on holistic student development within the residential setting did not become prevalent until the 1950s (Fassett et al., 2020; Palmer et al., 2008), and the residential housing model has shifted greatly in the last 50 years as student affairs professionals have moved away from viewing an on-campus student as a “parental responsibility” in favor of providing them with holistic development opportunities rooted in “humanistic psychology” and healthy relationships instead (Blimling, 2014, p. 14). For housing professionals, this emphasis on holistic development in a residential setting encourages more diverse microsystems for students as they are engaged in community-wide events intended to develop interpersonal relationships within their residence halls. To ensure that there is consistency in the programming that takes place in residence halls on any given campus, student affairs practitioners have developed residential curricula catered to the specific needs of a student, in alignment with institutional goals. Student affairs professionals prioritize these developmental opportunities because they allow students to “engage in significant out-of-class learning about themselves, society, and the roles of power and oppression in and beyond higher education” (Wagner et al., 2019, p. 10). This cohesive method of residential programming expands upon the idea that a college or university campus is a dynamic macrosystem of overarching cultures, belief systems, and resources.

Despite these expansive opportunities for student development, there are significant discrepancies in students’ ability to select the housing option that is best for them. The DBHS model fuels increasing dissatisfaction with campus facilities and amenities from students who feel they are not acceptable or consistent (Bronkema & Bowman, 2017). For example, the inventory of residential space an institution can offer differs in terms of floor plan layout, type of community, renovation status, bathroom ratios, and other living conditions. Bronkema and Bowman (2017) indicate that any person, regardless of student status, requires quality living arrangements and is more successful in favorable conditions. Therefore, if Institution A has some halls that are seen as more desirable by students in the given inventory of space, but many halls are considered average or in disrepair, more students feel disadvantaged by the process that prevents them from making a desirable choice (Bronkema & Bowman, 2017). However, if

This prioritization based on monetary value has social ramifications, as it directly impacts those from lower socioeconomic backgrounds and people of color and encourages the development of gentrified spaces.

The physical space in which a student lives on campus directly impacts their microsystem, as their residence hall setting can affect who they most frequently interact with and how they get involved in student organizations, both of which are known to contribute to their sense of belonging.

Institution B's inventory of residence halls is mostly renovated and considered desirable to students, the disparate impact of the DBHS model is reduced. While the system would still be in place, if all residential spaces were generally of equal quality, the chances of uplifting more marginalized identities rather than disadvantaging them would be increased exponentially (Bronkema & Bowman, 2017).

While it is important for student affairs professionals to focus on the development of the student, every institution does have an equally important operational need to focus on the development of physical spaces on campus. From a business operations perspective, a DBHS system can serve as a declared intent to enroll for incoming students, allowing both housing and residence life and admissions departments to have a better grasp on how many students will need a housing assignment. Having a more solid idea of how many students will need beds for an upcoming academic year also affects the financial aid packages of those who end up attending the institution. Because of the increase in costs due to inflation and the necessity to spend less per student, if a university states that there is a higher number of students who are planning to attend, the financial aid packages will be smaller for each individual student (Mitchell et al., 2019). For those who can afford to pay a housing deposit early, their housing placement can positively affect many of their developmental experiences, but there will be a disproportionately negative impact on students from lower socioeconomic backgrounds and students of color (Cheng, 2005; Pike, 2002; Strange & Banning, 2015). Given this inequity, a new form of declared intent to enroll for incoming students could be formed to alleviate this potentially negative impact.

Housing disparity between students of varying socioeconomic status also stems directly from the lack of funding provided to public higher education institutions. The decline in funding for higher education from both federal and state resources has in part fostered neoliberalization, which views students as consumers and residence halls as recruitment tools (Bronkema & Bowman, 2017; Brown et al., 2019; Cain & Reynolds, 2006). To counteract this lack of funding, college and university administrators are often tasked with identifying alternative sources for generating guaranteed revenue, and the DBHS system is one of those solutions. Though this system may benefit the operational need of a housing and residence life office, it does so at the expense of marginalized students. Students from a lower socioeconomic background are often left to pick from residence halls that are in disrepair, which segregates them from more affluent students who live in more recently renovated facilities (Paulson & Griswold, 2009). While unintentional, the DBHS system has direct social ramifications for students and hinders their development.

IMPLICATIONS

Day to day in this industry of student care, all practices and systems must fall under the universally understood mission of fostering intentional learning and holistic development (Davis, 2011). However, the cultural normalization of racism means that policies and procedures not specifically scrutinized through the lens of CRT often unintentionally perpetuate and maintain systems of race-based oppression in the college setting (Delgado & Stefancic, 2001). Universities across the nation champion their robust residential experiences as essential to a student's success on campus and their ultimate completion of a degree (Blimling, 2014). Therefore, it is of dire importance that these institutions consider the significant negative impact that DBHS has on a marginalized student's well-being and sense of belonging and then work to correct this.

As neoliberal ideologies have taken hold of higher education institutions (Saunders, 2014) and set in place processes based on chronological monetary commitment, they have also created the opportunity for gentrification of residential facilities. Macrosystems created by such practices affect the equity of residential housing opportunities by segregating students according to differences in socioeconomic status and in their generational understanding of the college experience, which has a disproportionate impact on racially marginalized identities (Foste, 2021). For example, first-generation students are less likely to have an operational understanding of the mechanics of universities and therefore may not be aware of the implications of submitting delayed deposits; in addition, people of color are more likely to be identified as first-generation students and are affected by poverty at a higher rate, which has an impact on their ability to pay a deposit without the financial aid necessary to secure their selection placement in the first place (Paulson & Griswold, 2009). This dynamic ultimately creates limited space for affected students, causing "gross disparities in housing options [to] reproduce a system in which certain students have significantly more agency over their educational experience than others" (Foste, 2021, p. 183). Well-meaning housing officers then unintentionally reinforce the idea of race as a social construct, as defined by CRT (Delgado & Stefancic, 2001), thus contributing to the maintenance of racist, classist, and other hierarchical systems and the sabotage of the overall educational objective of higher education.

LIMITATIONS

To support the claims stated in this article, the authors thoroughly searched for data to indicate which and how many institutions of higher education are utilizing a DBHS or CBHS (contract-based housing selection) model or a blend of the two; however, this review yielded no additional insight from what had been previously researched. The findings discussed in this article reveal that these practices are widespread, but not to what extent. This absence of data indicates a need for future research of a different scope than this article can address and for increased accessibility to institutional statistics. Similarly, it was also difficult to identify an exact or average figure for housing deposits from institution to institution without conducting a new study. Indeed, the

increased availability of this data will enable future researchers to refine the perceived and realized value and impacts of DBHS versus CBHS, as well as the cost of housing deposits, into a more equitable system.

SUGGESTIONS FOR MOVING FORWARD

Lack of funding in higher education is a harsh reality and a significant challenge that institutions across the nation face, and administrations across the field must address how the means of tackling this challenge perpetuates and reinforces systems of oppression. A critical reimagining of current practices would benefit marginalized students by illuminating undiscovered pathways that could allow for both institutional financial security and the revision of harmful systems perpetuating residential gentrification. Above all, the authors of this article emphasize that there is no one-size-fits-all answer to this dilemma because colleges and universities have varying needs and priorities based on a variety of factors, such as institutional size and status, state laws, housing requirements, and student population. Therefore, a solution to the puzzle requires a degree of creativity and intentional thought. By studying the methods of other institutions, an already established collection of practices is available for consideration as potential solutions.

One such solution would be to implement a CBHS system which, like the DBHS model, would rely on chronological submission of required materials; however, the signed housing contract, rather than a monetary deposit, would secure placement in the selection queue or confirm one's intent to enroll. This practice would allow an incoming student time to receive financial aid before requiring them to pay anything, making the system more equitable from a socioeconomic standpoint. CBHS does not, however, necessarily eliminate the potential effect of marginalizing a first-generation student. It would still require some level of operational understanding from parents or guardians who might be lacking when it comes to the general practices of higher education, the privilege of committing to an institution, or the decision to persist at an institution earlier without a financial aid package.

Perhaps, then, the only truly equitable solution to the DBHS issue would be a random lottery for housing selection. In this case, a student seeking on-campus housing would simply be assigned an entirely random number that would represent their placement in the housing selection queue. This practice would, in theory, eliminate any racial, socioeconomic, generational, and other privileges that might give a student an advantage in the process and contribute to the gentrification of space. A lottery-based system could allow for more genuinely diverse residence hall communities and altogether equalize students' residential experience, which is so often championed as the pinnacle of the college experience.

In the context of higher education, gentrification is not typically displayed in fervent acts of physical violence, but instead relies on various systems and structures to perpetuate it more covertly. Such a system, like DBHS, can then maintain its ability to segregate the marginalized from the privileged and is able to do so easily as common practice.

... if all residential spaces were generally of equal quality, the chances of uplifting more marginalized identities rather than disadvantaging them would be increased exponentially.

When opting for a random lottery process for housing selection, departments could also remove the ability for a student to select their own space or a specific building altogether. For example, while housing departments would generate a random lottery for a student seeking housing, staff would still consider special placement variables like academic program, class ranking, ADA accommodation, and identity groups. In theory, it would also create a more equitable experience for all students, as their housing assignment would be systematically tied to a finite program or identity rather than to the ability to pay. It would then be up to the institution to manage their portfolio of residence halls accordingly when determining hall configurations in order to avoid crowding marginalized students in housing considered less desirable.

It is also important to consider how the more equitable use of (or shift away from) DBHS and CBHS could be applied to populations other than first-year students, such as returning students, to prevent the same outcomes of a decreased sense of belonging, lower student success rates, lower retention, and more. The research and claims in this article suggest that the same frameworks apply to all students living on campus regardless of class standing. Therefore, it would be wise for colleges and universities to make a shift for those students that involves moving away from linking the order of housing selection to when a deposit was made. Even though it may seem obvious, the conditions of a student's residential space produce a real impact, positive or negative, and it is the duty of higher education administrators to continue to support a more healthy, equitable, and safe residential environment for all students.

In summary, while it is true that these suggestions do not solve the dilemma of funding scarcity and the neoliberal pressure that college and university administrators face to produce the means for financial maintenance at their institutions, they do address the multifaceted issues that housing deposits cause for the student population. When tied to a student's intent to enroll (or to continue) and the ability to participate in on-campus room selection, DBHS does not have to be the default option. It should be the responsibility of every institution to uphold their missions of facilitating learning and holistic, equitable development for all students while simultaneously balancing priorities to maintain healthy finances. Students at all levels of progress who are already marginalized face significant challenges in persisting to degree completion, and systems such as DBHS introduce yet another barrier when the practice of required campus housing is widespread. Therefore, higher education administrators of all specializations, but especially those in campus housing, must use their collective expertise to search for new solutions that are actively anti-discriminatory and provide an equitable launching pad and resources for their students. ■

REFERENCES

- Andersen, M. L., & Collins, H. P. (2020). *Race, class, and gender: Intersections and inequalities*. Cengage.
- Blimling, G. S. (2014). *Student learning in college residence halls: What works, what doesn't, and why*. Wiley.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793–828). John Wiley & Sons. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Bronkema, R., & Bowman, N. A. (2017). A residential paradox? Residence hall attributes and college student outcomes. *Journal of College Student Development*, 58(4), 624–630. <https://doi.org/10.1353/csd.2017.0047>
- Brown, J., Volk, F., & Spratto, E. M. (2019). The hidden structure: The influence of residence hall design on academic outcomes. *Journal of Student Affairs Research and Practice*, 56(3), 267–283. <https://doi.org/10.1080/19496591.2019.1611590>
- Cain, D., & Reynolds, G. L. (2006). The impact of facilities on recruitment and retention of students. *Facilities Manager*, 22(2), 54–60. <https://doi.org/10.1002/ir.223>
- Cheng, D. X. (2005, Spring). Assessing students' perceptions of campus community: A focus group approach. *Association for Institutional Research Professional File*, 95, 1–11. <https://files.eric.ed.gov/fulltext/ED512359.pdf>
- Christie, D. J. (1997). Reducing direct and structural violence: The human needs theory. *Peace and Conflict: Journal of Peace Psychology*, 3(4), 315–332. [Abstract]. https://doi.org/10.1207/s15327949pac0304_1
- Davis, T. L. (2011). Have it your way u. In P. M. Magolda & M. B. Baxter Magolda (Eds.), *Contested issues in student affairs: Diverse perspectives and respectful dialogue* (pp. 85–96). Stylus.
- Delgado, R., & Stefancic, J. (Eds.). (2000). *Critical Race Theory: The cutting edge*. Temple University Press.
- Delgado, R., & Stefancic, J. (2001). *Critical Race Theory: An introduction*. New York University Press.
- Delgado, R., & Stefancic, J. (2012). *Critical Race Theory: An introduction* (2nd ed.). New York University Press.
- Fassett, K. T., Fosnacht, K. J., Gonyea, R. M., & Graham, P. A. (2020, October 27). *Campus housing, student engagement and persistence* [PowerPoint slides]. ACUHO-I 2020 Virtual Summit. NSSE. <https://scholarworks.iu.edu/dspace/bitstream/handle/2022/25644/2020%20ACUHO-I%20Virtual%20Summit.pdf?sequence=1&isAllowed=y>
- Foste, Z. (2021). "Oh, that's the White dorm": The racialization of university housing and the policing of racial boundaries. *Journal of College Student Development*, 62(2), 169–185. <https://doi.org/10.1353/csd.2021.0015>
- Härkönen, U. (2007, October 17–21). The Bronfenbrenner ecological systems theory of human development. *Scientific Articles of V International Conference PERSON. COLOR. NATURE. MUSIC* (pp. 1–19). Daugavpils, Saule, Latvia.
- Hernandez, E. (2016). Utilizing Critical Race Theory to examine race/ethnicity, racism, and power in student development theory and research. *Journal of College Student Development*, 57(2), 168–180. <https://doi.org/10.1353/csd.2016.0020>
- Ladson-Billings, G. (2016). Critical Race Theory—What it is not! In E. Taylor, D. Gillborn, & G. Ladson-Billings (Eds.), *Foundations of Critical Race Theory in education* (2nd ed., pp. 345–356). Routledge.
- Lees, L., Slater, T., & Wyly, E. (2013). *Gentrification*. Taylor and Francis.

- Mitchell, M., Leachman, M., & Saenz, M. (2019). State higher education funding cuts have pushed costs to students, worsened inequality. *Center on Budget and Policy Priorities*, 24, 9–15.
- Palmer, C., Broido, E. M., & Campbell, J. (2008). A commentary on "The Educational Role in College Student Housing." *The Journal of College and University Student Housing*, 35(2), 86–99.
- Paulson, H., & Griswold, J. (2009). Understanding the impacts of socioeconomic status on first-generation students: A case study. In T. H. Housel & V. L. Harvey (Eds.), *The invisibility factor: Administrators and faculty reach out to first-generation college students* (pp. 77–89). BrownWalker Press.
- Pike, G. R. (2002). The differential effects of on- and off-campus living arrangements on students' openness to diversity. *NASPA Journal*, 39(4), 283–299. <https://doi.org/10.2202/1949-6605.1179>
- Saunders, D. B. (2014). Exploring a customer orientation: Free-market logic and college students. *The Review of Higher Education*, 37(2), 197–219. <http://rave.ohiolink.edu/ejournals/article/346768415>
- Saunders, D. B., & Blanco Ramirez, G. (2017). Resisting the neoliberalization of higher education: A challenge to commonsensical understandings of commodities and consumption. *Cultural Studies ↔ Critical Methodologies*, 17(3), 189–196. <https://doi.org/10.1177/1532708616669529>
- Solórzano, D., & Yosso, T. (2002). Critical race methodology: Counter-storytelling as an analytical framework for education research. *Qualitative Inquiry*, 8, 23–44. <https://doi.org/10.1177/107780040200800103>
- Strange, C. C., & Banning, J. H. (2015). *Designing for learning: Creating campus environments for student success* (2nd ed.). Jossey-Bass.
- Wagner, R., Boettcher, M. L., Howard, J. L., & Cawthon, T. W. (2019). Social justice in housing. In M. L. Boettcher, R. Wagner, J. L. Howard, & T. W. Cawthon (Eds.), *Social justice practice in residential communities* (New Directions for Student Services, 168, 9–16). Jossey-Bass. <https://doi.org/10.1002/ss.20327>
- Wozniak, R. H., & Fischer, K. W. (Eds.). (1993). *Development in context: Acting and thinking in specific environments* (1st ed.). Psychology Press. <https://doi.org/10.4324/9781315807379>

DISCUSSION QUESTIONS

1. What is the purpose of residential requirements for students? How important is variety in residential spaces (in terms of physical condition, cost, and/or amenities) as it relates to a residency requirement?
2. What are your institution's processes regarding housing selection? What implications might those processes have on your students?
3. The authors propose a random lottery for housing selection as the only truly equitable model. Do you think this model would work at your institution? Why or why not?
4. What role does assessment play in your institution's housing process? How can you determine if your housing selection process is equitable?
5. The research suggests that deposit-based housing selection could have a negative impact on sense of belonging. How could you combat this feeling once students are on campus?

Discussion questions developed by Kayley Carter, Virginia Tech