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Where Are We, and Where to Next? 'Neurodiversity' in Engineering Education Research

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Introduction

The term 'neurodiversity' is seeing increased attention in popular discourse as more and more people become aware of the challenges neurodivergent people face in their day-to-day lives. These challenges range from individual experiences of discrimination to the inherent inaccessibility of institutions (such as higher education) as they are currently constructed. In addition to popular discourse, many scholars are also engaging with neurodiversity, so much so that a field of neurodiversity studies has begun to emerge. Scholarship in neurodiversity studies, along with the activism of the neurodiversity movement, has developed in response to the widespread pathologizing of neurodivergent people that furthers discrimination and oppression. Prominent neurodiversity studies scholar Nick Walker [1] calls the cultural paradigm underlying this oppression the 'pathology paradigm' and notes that it is the dominant paradigm in the world today. As an alternative, Walker has introduced the 'neurodiversity paradigm,' which has the potential to radically alter the way we view neurodiversity (especially with respect to neurodivergence) in engineering education as well as broader society.

In this study, I leverage Walker's work to examine how neurodiversity and related ideas are being approached in engineering education research (EER) by exploring the following questions through qualitative analysis:

> **RQ1:** How have neurodiversity-related terms been used in engineering education research?
>
> **RQ2:** How (in)consistent is engineering education research literature that uses neurodiversity-related terms with the principles of the neurodiversity paradigm?

Background

In this paper, I introduce definitions for the following terms: neurodiversity, neurodiverse, neurodivergent/neurodivergence, neurotypical, neurominority, the pathology paradigm, and the neurodiversity paradigm. In neurodiversity studies as well as in broader discourse, there exists considerable differences in definitions of core terminology. I have chosen to use primarily Nick Walker's [1] definitions, for four reasons. First, Walker's work is widely accessible: her basic definitions can be accessed online for free [6], as well as several of her essays on neurodiversity and related topics. Second, her work is widely influential in neurodiversity studies and critical autism studies (among other areas) and has been cited in many academic works (see, e.g. [3]–[5]). Third, Walker's definitions are clear and precise without sacrificing nuance. Others have described her work as "the most nuanced account (in both the academic and lay person literature)" of "key concepts and arguments of neurodiversity theory as it currently stands" [3, p. 372]. Finally, Walker's definitions have the approval of the terms' originators, where a specific originator can be ascertained. For some terms, Walker herself was the originator: she was the first person to coin the term 'neurodiversity paradigm' and explicitly define its principles in [2], and she is also attributed with coining the term 'neurominority.' Other terms with originator-approved definitions include 'neurodiversity,' generally attributed to Judy Singer in 1998 (see [7, p. 9]), and the terms 'neurodivergent' and 'neurodivergence', coined by Kassiane Asasumasu in 2000 [1, p. 48]. I present an abbreviated version of Walker's definitions here as an introduction:[1]

Neurodiversity – "the diversity of human minds, the infinite variation in neurocognitive functioning within our species." Rather than a belief or political movement, neurodiversity is "the phenomenon of human neurological diversity" [pp. 25, 34-35].

Neurodiverse – an attribute that a group of people can possess "if one or more members of the group differ substantially from other members, in terms of their neurocognitive functioning." In other words, a "neurodiverse group is a group in which multiple neurocognitive styles are represented" [pp. 42-46].

Neurodivergent – "having a mind that functions in ways which diverge significantly from the dominant societal standards of 'normal'." It is a broad term that encompasses forms of *neurodivergence* (the state of being neurodivergent) that are innate, produced through brain-altering experiences, or some combination of the two. Examples of innate forms of neurodivergence include autism and ADHD. Examples of potentially brain-altering experiences include trauma and long-term meditation practice. A person can be *multiply neurodivergent* if their "neurocognitive functioning diverges from dominant social norms in multiple ways – for instance, a person who is autistic, dyslexic, and epileptic" [pp. 38-40].

Neurotypical – "having a style of neurocognitive functioning that falls within the dominant social standards of 'normal'." It is the opposite of neurodivergent. *Neurotypicality* (the state of being neurotypical) "is the way-of-being from which neurodivergent people diverge" [pp. 40-41]

Neurominority – "a population of neurodivergent people about whom all of the following are true:

1. "They all share a similar form of neurodivergence.
2. "The form of neurodivergence they share is one of those forms that is largely innate and that is inseparable from who they are, constituting an intrinsic and pervasive factor in their psyches, personalities, and fundamental ways of relating to the world.
3. "The form of neurodivergence they share is one to which the neurotypical majority tends to respond with some degree of prejudice, misunderstanding, discrimination, and/or oppression (generally facilitated by classifying that form of neurodivergence as a medical pathology" [pp. 41-42].

Autistic people and people with Down Syndrome are examples of neurominority groups.

Pathology paradigm - Walker's term for the current dominant paradigm in the world today with respect to human neurodiversity. It is defined by two fundamental assumptions:

1. "There is one 'right,' 'normal,' or 'healthy' way for human brains and human minds to be configured and to function (or one relatively narrow 'normal' range into which the configuration and functioning of human brains and minds ought to fall.
2. "If your neurological configuration and functioning (and, as a result, your ways of thinking and behaving) diverge substantially from the dominant standard of 'normal', then there is Something Wrong With You" [p. 18].

Neurodiversity paradigm – "a specific perspective on neurodiversity" with three fundamental principles:

1. "Neurodiversity – the diversity among minds – is a natural, healthy, and valuable form of human diversity.

2. “There is no ‘normal’ or ‘right’ style of human mind, any more than there is one ‘normal’ or ‘right’ ethnicity, gender, or culture.
3. “The social dynamics that manifest in regard to neurodiversity are similar to the social dynamics that manifest in regard to other forms of human diversity (e.g., diversity of race, culture, gender, or sexual orientation). These dynamics include the dynamics of social power relations – the dynamics of social inequality, privilege, and oppression – as well as the dynamics by which diversity, when embraced, acts as a source of creative potential within a group or society” [pp. 36-37].

It is worth emphasizing that the neurodiversity paradigm and the pathology paradigm are fundamentally incompatible approaches. As Walker explains,

> “In terms of discourse, research, and policy, the pathology paradigm asks, in essence, ‘What do we do about the problem of these people not being normal,’ while the neurodiversity paradigm asks, ‘What do we do about the problem of these people being oppressed, marginalized, and/or poorly served and poorly accommodated by the prevailing culture?’” [p. 29]

Neurodiversity in educational research

While previous work [8] has considered neurodiversity in higher education research, it has focused on building a narrative synthesis of the literature rather than analyzing engagement with the neurodiversity paradigm or its terminology. In addition, its frequent misuse of basic terminology, coupled with its questionable reference practices[2], draw the validity of the work into question. Other work (see, e.g. [10]–[12]) has similarly conducted extended literature reviews in various educational contexts, but these reviews have also focused on compiling best practices as indicated in the literature, rather than critically examining practices in the literature itself. As a part of this current study, I have extensively reviewed relevant literature across major journals and conference proceedings in engineering education, as I describe in more detail in the following section. I have found no articles that investigate engagement with the neurodiversity paradigm or its terminology within engineering education, nor any that conducted systematic reviews like those published in other educational contexts.

Methods

To identify articles for analysis, I searched five different journals and proceedings from seven recurring conferences focused on EER for articles published in any year prior to 2023. I summarize the results of this search in Table 1.

Table 1
Number of papers identified, included in study per publication, organized by number of included articles

Publication	Full Text Search (Y/N)	Number of articles	
		Search Results	Included in Study
Conference proceedings			
ASEE Annual Conference and Exposition	Y	57	38
Frontiers in Education (FIE)	Y	5	5
International Conference on Inclusive Technologies and Education (CONTIE)	Y	2	2
IEEE Global Engineering Education Conference (EDUCON)	Y	2	2
Collaborative Network for Engineering and Computing Diversity (CoNECD) Conference	Y	3	1
SEFI Annual Conference	N	2	1
AAEE Annual Conference	N	0	0
Total		71	49
Journals			
Journal of Engineering Education	Y	2	2
International Journal of Engineering Education	Y[a]	2	1
European Journal of Engineering Education	N	0	0
Australasian Journal of Engineering Education	N	0	0
Studies in Engineering Education	N	0	0
Total		4	3

[a]I performed this search using the search function on ijee.ie. It is unclear whether this is a full-text search, but its successful identification of an 'incidental' article indicates it may be.

I conducted a search of articles using the keyword 'neurodiv*'. The asterisk represents a wildcard to capture key terms related to the neurodiversity paradigm (e.g. neurodiversity, neurodivergent, neurodiverse) while also allowing for typos or other unanticipated variants on the root phrase, which may be more likely with relatively new terminology. In this paper, I use neurodiv* to refer to all possible terms with the root 'neurodiv.' While neurodiv* does not include all of the paradigm's core terminology, the terms not included (e.g. neurominority) are less popular even by proponents of the paradigm [1] and thus are unlikely to be used independently of the included terms.

Rather than a title- or abstract-only search, I used a full-text search when available to capture the widest range of engagement possible, which yielded a total of 75 papers. I removed two that were related to workshops and were not standalone. In addition, I removed one Work-In-

Progress article because it was replaced by a full version of the work the following year. With the remaining 72 articles, I used a holistic coding method [13] to characterize entire articles based on frequency of term use, topic relevance, and potential to be distressing.[3] Through this process, I identified 20 articles as having exclusively 'incidental' term use, meaning neurodiv* was used outside the core text of the article (e.g. in an author bio) only. I did not code these articles further. Of the remaining 52 articles, I identified a subset of 16 articles to serve as a 'pilot' group and coded them inductively, focusing on explicit claims about neurodiv* terms or other indicators of authors' perspectives.

Informed by Walker [1], I refined the initial inductive codes, identifying five primary categories: *basic terminology misuse, structural use, values, attitudes,* and *beliefs*. These categories acted as foci for future coding passes. The latter three (values, attitudes, beliefs) I used by following the Values Coding method Saldaña describes [13], informed by paradigmatic indicators described by Walker [1]. After checking for consistency across the original 16 articles, I then extended coding to the remaining 36 articles. While I continued to inductively generate subcodes as relevant, the five categories remained unchanged. Finally, I generated themes through comparison of the resulting codes with the beliefs of both the neurodiversity and pathology paradigms.

Results and Discussion

In this section, I first present the structural use of neurodiv* across the analyzed texts. Then, I discuss three further key findings: a need for clarity on basic terminology, the continued presence of the pathology paradigm, and steps towards the neurodiversity paradigm.

In my discussion, I have chosen to include direct quotations from analyzed texts for the sake of clarity and transparency. Additionally, avoiding direct quotations could encourage a lack of accountability for problematic research practices. At the same time, I recognize including quotations could distract the reader from the paper's true concern, that of the research practices, by instead drawing attention to the researchers themselves. To mitigate these risks, I have implemented two measures. First, I have avoided multiple quotations from the same article whenever possible, to avoid overemphasizing a particular author or authors. Second, I have modified my reference style for articles that serve as data as opposed to traditional references. I have placed the reference list for articles-as-data in the Appendix. I follow the standard *IEEE* numbering format, but with the addition of an 'A' before the number to differentiate from sources in my normal reference list (e.g. [A27] instead of [27]). For in-text citations, I only use the generic term 'authors' when referring to the writers of a text, never the author's or authors' last name(s). Finally, for the few articles quoted twice, I have assigned them a unique number for each quote. While this does introduce redundancy to the reference list, it avoids drawing additional attention to the articles in-text.

Structural use

The structural use category characterizes articles based on how neurodiv* was used relative to the article's purpose. In other words, it describes what role neurodiv* played in the article. This category consists of four usage groups: *casual, minor context, major context,* and *focus*. I assigned each article to one and only one usage group. In the *casual* usage group, articles used neurodiv* infrequently and without any explicit, unique theorization or definition. Authors did not use the term(s) to directly claim influence on any aspect of the work. Examples include texts

where neurodiv* was used once in a list of marginalized identities or as one of multiple examples to showcase a broader result and is not discussed further. The latter can be seen in [A1], which includes the only instance of neurodiv* in the article:

> "Furthermore, all of the participants demonstrated an interest in social justice, and felt empowered to encourage change – whether this was through encouraging more females to engage with science and technology, working with indigenous youth, or promoting inclusivity from the perspective of neurodiversity." [A1]

For the *focus* usage group, neurodiv* played a central role in the paper. In more traditional studies, this meant that the research question(s) included neurodiv*. In other articles, the authors proposed a framework or other strategies for curricular reform where the primary motivation was to increase course accessibility to neurodivergent students. These articles only introduced strategies; they did not report results of their application. However, this is not to say that the focus usage group excludes all articles that present results of applying curricular reform strategies. Such articles could have been included if they discussed outcomes for neurodivergent students specifically (as in, disaggregated from larger groups with both neurodivergent and neurotypical students). However, I found no such articles.

Between the casual and focus usage groups are the *major* and *minor context* usage groups. In these groups, authors used neurodiv* to claim some degree of influence on their work, but it was not part of the work's primary focus. I categorized articles in the *major context* group if the authors made a direct, substantial connection between neurodiv* and the main purpose of the paper; otherwise, I categorized the article as *minor context*. For example, an article that connects their work focused on a neurominority group (e.g. ADHDers[4]) with the broader goal of making engineering more accessible for all neurodivergent people would be considered a major context article. In comparison, an article where neurodiv* is used only to justify a minor curricular decision (such as the format of a handout) is part of the minor context group. Table 2 shows the resulting total number of papers in each usage group.

Table 2
Number of articles in each usage group

Usage Group	Total Number of Articles
Focus	4
Major context	7
Minor context	11
Casual	30

From Table 2, we can see that while neurodiv* use has gained some prevalence, few works focus on neurodiversity.

A need for clarity on basic terminology

Of the articles reviewed, a substantial number included clear misuse of basic terminology. By far the most frequently misused term (in terms of both total number of misuses and number of

articles including a misuse) was neurodiverse, which is consistent with trends Walker has informally noted in other contexts [1, p. 50]. Consider the following excerpts:

> "Several neurodiverse students discussed how…" [A2]
>
> "… of students minoritized (i.e. women, students of color, neurodiverse, LGBTQ+, and students with disabilities) in engineering." [A3]

In both examples, the authors use 'neurodiverse' to mean non-neurotypical individuals. This use of neurodiverse is incorrect because, in the same way an individual cannot be diverse, an individual cannot be *neuro*diverse. Rather than using 'diverse' appropriately to mean "made up of multiple different types," the authors in both examples use 'neurodiverse' to mean "different from the majority" [1, p. 43]. In addition to being grammatically incorrect, Walker argues this usage also "reinforces an ableist mindset in which neurotypical people are seen as intrinsically separate from the rest of humanity, rather than just another part of the spectrum of human diversity" [1, p. 44]. This usage reinforces the idea of neurotypical as the 'default' or 'normal' neurocognitive style, which is fundamentally at odds with the principles of the neurodiversity paradigm. 'Neurodivergent' and 'neurodivergent students' would have been more appropriate terminology for [A2] and [A3], respectively.

Other analyzed texts used 'neurodiverse' in grammatically correct but still problematic ways.

> "The ECE student population is a *neurodiverse* group of individuals. Some students arrive on campus with diagnoses of ADHD, dyslexia, and autism spectrum disorder; others possess similar strengths and weaknesses but do not have an official diagnosis... The neurodiversity of the ECE student population is broad enough that instructors should generally assume students with 'invisible' disabilities are present in their courses." [A4]

The authors in [A4] use neurodiverse to describe a group of individuals (the ECE student population) where multiple neurocognitive styles are present (ADHD, dyslexia, and autism) and the focus is on the existence of multiple different types of being, which is a grammatically correct usage. At the same time, only forms of neurodivergence are listed, and in the final sentence, the authors equate broad neurodiversity with the presence of 'invisibly' disabled students. With this context, we can infer neurodiverse is being used to mean the student population includes neurodivergent individuals. Just as with [A2] and [A3], this usage subtly reinforces the idea that neurotypical people are a special group, so 'normal' that their presence need not even be articulated. Correcting this use is more complex than with [A2] and [A3], as it requires restructuring the text.

Neurodiversity

Misuse of the term 'neurodiversity' was more varied. Several misuses (e.g. erroneous hyphenation, confusing neurodiversity as, itself, a perspective) only occurred once each and were relatively straightforward, not warranting individual attention in this paper. With respect to recurrent misuses, consider the following excerpts:

> "One such type of neurodiversity shown to be associated with innovation and creativity is Attention Deficit Hyperactivity Disorder (ADHD)." [A5]

> "Within the context of this paper neurodiversity is more broadly defined as the neurological variations present in human populations... A few examples of the many expressions of neurodiversity include ADHD, autism spectrum, dyslexia, and anxiety." [A6]

In [A5], the authors describe neurodiversity as having forms – but Walker argues "there's no such thing as a 'form of neurodiversity'" [1, p. 36]. ADHD is a form of neurodiver*gence*, not neurodiver*sity*. [A6] shows the same type of issue, though the word 'forms' is swapped with 'expressions.' These examples point towards a broader trend of (mis)conceptualizing neurodiversity as the collection of all forms of neurodivergence. Though neither text directly excludes it, the fact that only neurodivergent identities are listed indicates neurotypicality falls outside the bounds of neurodiversity. Others have bounded neurodiversity in a similar manner by treating it in the same grammatical fashion as the term 'disability':

> "… students having mathematical difficulties due to dyslexia or another neurodiversity" [A7]

> "The pathological model for disability and neurodiversity assumes such conditions can be and should be cured or eradicated." [A8]

By treating neurodiversity as synonymous with forms of neurodivergence, this practice runs afoul of the same reinforcement of the 'norm' as we have seen with misuses of neurodiverse.

Other authors have explicitly included neurotypicality in their definitions of neurodiversity, as seen in the following examples:

> "Neurodiversity refers to the entire population of both neurotypical and neurodivergent people." [A9]

> "Neurodiversity - Variation in neurocognitive functioning. This includes both those who are Neurodivergent and Neurotypical." [A10]

While these definitions importantly move beyond the problematic reinforcement of a neurotypical norm, they still imply neurodiversity is a collection of variations, rather than the existence of variation itself. The issue here is one of theoretical clarity. Allowing neurodiversity to refer to both the existence of variation as well as the collection of all variations would reduce linguistic precision (and therefore increase the risk of confusion). I argue the former, which is consistent with Walker's definition, is more suitable than the latter because it parallels the meaning of 'diversity,' which serves as the base of the term 'neurodiversity.' The collection of all forms of neurocognitive functioning can instead be referred to as the spectrum of human neurodiversity. That is to say, the spectrum of human neurodiversity encompasses both neurodivergent and neurotypical people.

The continued presence of the pathology paradigm

Despite using the language of the neurodiversity paradigm, many articles showed evidence of using the pathology paradigm. Some of this can be seen in earlier discussion of terminology use within the discipline, where certain linguistic choices reinforced the belief of one 'normal' form of neurocognitive function – but this is only the tip of the iceberg. Other practices reinforced the idea that neurodivergent people have Something Wrong With Us. Often these practices were centered on neurominority groups, though no authors directly used the term 'neurominority.' In more overt cases, authors defined one or more neurominorities in purely deficit terms and exclusively used deficit framing in the paper. These texts showed virtually no attempts to move beyond the pathology paradigm and generally included little neurodiversity terminology. Similarly, while we would not expect to find papers focused on 'curing' members of neurominority groups in engineering education, we can still see evidence of support for such work. See, for instance:

> "Learning difficulties such as dyscalculia remain through life, although with early diagnosis and the appropriate intervention, students can show significant improvement." [A11]

In other texts, we can see the beginnings of authors moving towards the neurodiversity paradigm, but they struggle to make the paradigmatic shift:

> "Neurodiversity… refers to the process of investigating the positive dimensions of people with negative disorders." [A12]

In addition to incorrectly defining neurodiversity as a process, [A12] points to a problematic mindset I found in many texts. I informally characterized this mindset thusly: there is still Something Wrong with neurodivergent people, but They Might Not Be Totally Useless, Actually. Texts that appeared to be engaged in this mindset typically started with the base assumption that neurodivergence was Wrong (using a deficit-based medical definition, for example), then reframed a pathologized trait as potentially useful in engineering. The impact of the framing was often limited, however, and more than one text also subtly drew into question whether autistic people or members of other neurominorities were even capable of doing engineering (or some aspect thereof). Though these works may appear to take a more positive stance towards neurodivergence than those that only acknowledged deficits, they are ultimately still using the pathology paradigm.

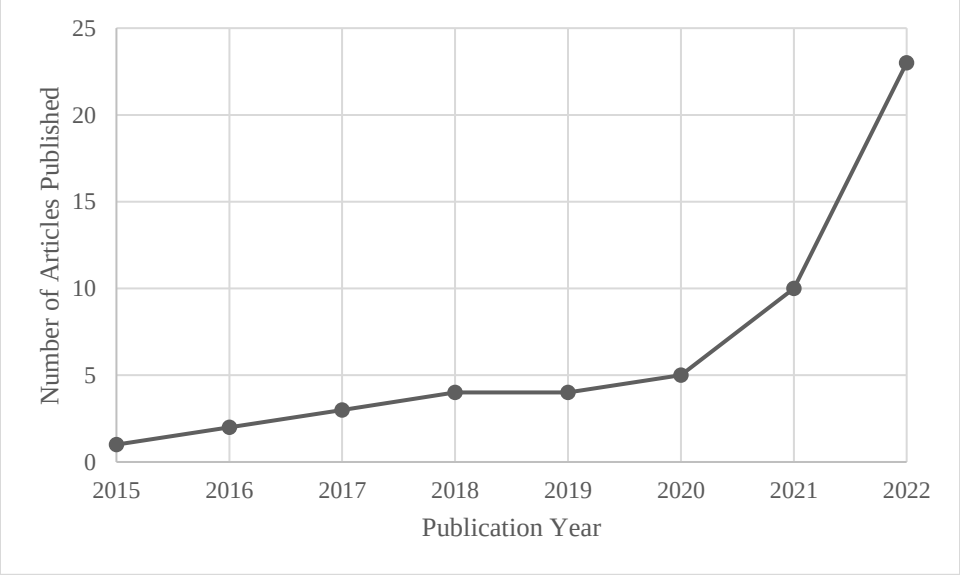
Across a wide range of texts, including even some that advocate for various neurominority groups, the language of the pathology paradigm was still present. In some cases, authors described largely innate forms of neurodivergence (as in, those shared by neurominorities) in terms of severity or defined them as disorders. In addition, the use of 'person-first' language (e.g. "person with autism") to describe members of neurominority groups with an 'identity-first' alternative (e.g. "an autistic person") was pervasive. Walker presents a thorough discussion of how this language is problematic is in her chapter "Person-First Language is the Language of Autistiphobic Bigots" [1, pp. 91–103], which I greatly encourage readers to review. Though she discusses autism specifically, I argue her reasoning is applicable to other, similarly innate forms

of neurodivergence. For example, Walker argues that person-first language promotes the autistiphobic fantasy that "an autistic person can be somehow 'separated from the autism'" [1, p. 95]. I argue this can be extended to similarly innate forms of neurodivergence, thusly: by situating similarly these forms of neurodivergence as something one can 'have,' person-first language perpetuates the idea that neurodivergence can always be separated from the self – and therefore removed or 'cured.'

Steps towards the neurodiversity paradigm

The earliest instance of neurodiv* term use I found in the EER literature was in an article published in 2015, three years after Walker first introduced the neurodiversity paradigm in published writing [2] and one year after she first posted "Neurodiversity: Some Basic Terms & Definitions" online [6]. Though all analyzed articles were published after these important works, none directly referenced Walker, and none were entirely consistent with the neurodiversity paradigm. At the same time, there were noteworthy steps in this direction. First, consider the rising trend in term usage, as shown in Fig. 1.

Figure 1
Number of articles using "neurodiv*" term in EER vs. publication year



In the past two years especially, there has been a sharp increase in the number of articles engaging with neurodiv* terminology in some fashion. It is important to note that, as I have explored in the previous theme, using the terminology does not necessarily mean that one is operating from the neurodiversity paradigm. Still, the rising trend could indicate a genuine interest in reshaping how EER views neurodiversity, particularly with respect to neurodivergence. This interpretation seems especially likely when we consider behaviors exemplified by the following excerpts:

> "Commonly regarded 'disorders' that contribute to thinking outside of the neurotypical 'norm,' such as ADHD, autism, mood disorders, dyslexia, and anxiety, are unfortunately often considered deficits, rather than a healthy part of the diverse spectrum of human cognition." [A13]

> "Societal power structures derive from what is deemed as 'acceptable' within a capitalist society, including concepts like gender norms, heteronormativity, and neurotypicality." [A14]

> "The themes highlighted in [the authors'] narratives connect to the need for systemic change in higher education, particularly in three areas: accessible pedagogy, student voices in research, and paradigm shifts in how we view and discuss neurodiversity." [A15]

In the [A13] example, we can see the authors challenging the pathology paradigm's belief that there is Something Wrong With neurodivergent people, stepping instead towards the neurodiversity paradigm's first principle. By their use of quotes around the word 'norm,' the authors also nod to the neurodiversity paradigm's second principle – that there is no such thing as a 'normal' mind. While most steps authors took towards the third principle focused on (neuro)diversity as a source of creative potential, [A14] shows recognition of how the dynamics of social power inequalities impact neurodiversity in a similar fashion as other forms of human diversity. Finally, the excerpt from [A15] shows authors openly calling for paradigmatic shift, with more extended discussion present in later sections of the article. Together, these examples show that not only is there increasing interest in neurodiversity, some researchers are already beginning to challenge the pathology paradigm's assumptions and recognize a need for systemic change – not just in how we teach, but in how we approach our research.

Conclusions

Through this exploration of the use of neurodiversity terminology in engineering education research, I have identified concerning patterns of misuse, pathologizing language, and relatively limited work focused on neurodiversity in the EER literature. At the same time, neurodiv* use is becoming increasingly popular, and researchers in engineering education are beginning to recognize the need for a major shift in how we approach neurodivergence.

I have also introduced Walker's work [1] through which to interpret the EER literature because I believe it is an excellent tool for both challenging the problematic practices noted here as well as enabling the paradigmatic shift researchers are beginning to call for. Moving beyond the pathology paradigm will require us to first be clear that it is "nothing more than institutionalized bigotry masquerading as science" [1, p. 129]. We must learn to recognize the many ways the pathology paradigm can manifest, and we must be prepared to draw the line that such bigotry is unacceptable. As reviewers and program officers, this can mean expecting and enforcing a higher standard for neurodiversity-related writings. As researchers and educators, this can mean challenging the pathology paradigm when we see it manifest in ourselves and in our colleagues.

I hope reading this paper encourages readers to engage with the emerging field of neurodiversity studies, especially Walker's work [1]. On my part, I hope to develop this work further by exploring the relationships between neurodivergence, disability, and mental illness in engineering education research – both how they are currently defined and how they could be. I hope my fellow neurodivergent people in engineering begin to explore the radical idea that perhaps we are exactly who we ought to be – "and that maybe you are, in fact, a thing of beauty" [1, p. 28].

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Appendix

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Endnotes

1. For the sake of readability, I have not repeated the source [1] for each definition. Instead, I have included the corresponding page numbers at the end of each definition.
2. Among other concerns, the authors uncritically cite Autism Speaks, an organization considered by many autistic activists to be a hate group due to Autism Speaks' main goal of finding a 'cure' for autism (see, e.g. [9]).
3. With respect to characterizing distress, this code served as a way for me to be "ethically responsible to myself, through acknowledging the importance of looking after my emotional safety" [14, p. 817]. The pathologizing content of some articles, combined with my own painful experiences as a neurodivergent person in engineering education, meant that reviewing articles could be especially emotionally taxing. By having an indicator for each article, I could proactively manage my work based on my capacity on a given day. I describe this practice here to both give context to this work as well as to encourage further engagement with the methodology Pearce proposes in [14].
4. I use 'ADHDers' as an identity-first alternative to 'people with ADHD.'