



12-2023

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Recommended Citation

Burr, William; Everitt, Judson G.; and Johnson, James. “The debt is suffocating to be honest”: Student loan debt, prospective sensemaking, and the social psychology of precarity in an allopathic medical school. *SSM - Qualitative Research in Health*, 4, : , 2023. Retrieved from Loyola eCommons, Sociology: Faculty Publications and Other Works, <http://dx.doi.org/10.1016/j.ssmqr.2023.100304>

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“The debt is suffocating to be honest”: Student loan debt, prospective sensemaking, and the social psychology of precarity in an allopathic medical school

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ARTICLE INFO

Keywords:

Medical education
Professional socialization
Student loan debt
Economic precarity

ABSTRACT

Confronted with soaring medical school costs and intensifying disparities in physician compensation by specialty, medical students are forced to make sense of medical education debt during the nascent stages of their careers in medicine. Few studies, however, have examined exactly how medical students make sense of these constraints or how this process might influence decisions about which specialty to pursue or affect doctors' wellbeing. Leveraging qualitative data collected from current students across all four years of medical education at a Mid-western allopathic medical school, we document how medical students collectively engage in prospective sensemaking about their debt and how it may affect their futures. We find that debt creates a palpable sense of financial precarity for people entering a high-status profession. We frame our analysis within a burgeoning new literature in organizational sociology and the professions known as inhabited institutionalism, which draws attention to the reciprocal relationships between local interaction and sensemaking with wider institutional pressures. We conclude with discussion of the implications our findings have for the supply of physicians across specialties as well as for the wellbeing of physicians across their careers.

1. Introduction

Medical school cost of attendance (COA), and the student loan debt that often follows, are significant sources of stress affecting medical students in recent years. Median medical school COA surpassed \$275,000 in 2020 (Youngclaus & Fresne, 2020). The dramatic increase in medical school COA since the turn of the century has reduced cumulative financial earning power in even historically lucrative medical specialties. A recent investigation found that the internal rate of return of a career in orthopedic surgery, one of the highest-paying medical specialties, decreased 40% from 1989 to 2019, with the “exorbitant” cost of medical education being the primary factor driving the decline (Mody et al., 2021). Health services researchers characterize the continued increase in medical school COA as “unsustainable” and speculate that high debt burdens may deter some students from entering the field altogether (Gil et al., 2015). Moreover, the Biden Administration's recent student loan debt cancellation policy has little ameliorative effect for doctors, as in most instances their income is too high to qualify and for many, their total debt far exceeds the \$10,000 maximum for cancellation allowed by the policy (Federal Student Aid, 2022).

The advent of education financing in the mid-1980s as a way to meet rapidly increasing medical school COA engendered a major institutional shift in medical education away from independent tuition payment to student loan dependence (Greysen et al., 2011; Jolly, 2005). At the same time, salary disparities between primary care providers and specialists continue to increase (Leigh et al., 2012; Bodenheimer et al., 2007), driven in part by the declining number of procedures that can be performed in primary care (Wigton & Alguire, 2007) and the concentration of physicians within medical centers that has occurred steadily over time (Sandy et al., 2009). Indeed, measured in lifetime earnings, “primary care specialties earned roughly \$1–3 million less than other specialties” (Leigh et al., 2012).

Following the implementation of the Affordable Care Act, the average annual salary for primary care physicians climbed to nearly \$250,000, while average salaries for specialists approached \$400,000 (Hsiang et al., 2020). Existing research demonstrates that comparatively low compensation is among the factors discouraging medical students from pursuing some specialties (Catenaccio et al., 2021). The declining number of U.S. medical school graduates who pursue careers in less financially

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<https://doi.org/10.1016/j.ssmqr.2023.100304>

Received 29 September 2022; Received in revised form 24 February 2023; Accepted 27 June 2023

Available online 28 June 2023

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rewarding specialties has contributed to critical shortages in those fields (Vinci & Robert, 2021). Some major medical organizations, like the American Academy of Pediatrics, have begun to raise alarm about the widespread shift in medical trainees' career goals as well as the financial contingencies likely driving it. While noting in a monthly newsletter to its members that pediatricians generally have high job satisfaction, the American Academy of Pediatrics revealed only about one-third of graduating pediatric residents planned to pursue a career in primary care in 2020, down from over two-thirds in 1997 (AAP News 2021). The same newsletter reported that the average educational debt of graduating pediatric residents had doubled during that period, while average starting salaries barely kept pace with inflation.

Confronted with soaring medical school COA and intensifying disparities in physician compensation by specialty, medical students are forced to make sense of medical education debt during the nascent stages of their careers. Few studies, however, have examined exactly how medical students make sense of these constraints or how this process might influence decisions about which specialty to pursue. Leveraging qualitative data collected from current students across all four years of medical school, we document how medical students collectively engage in prospective sensemaking to delineate when it is acceptable to consider educational debt in decision making and how they direct their efforts during medical school using these shared meanings. We also find that debt creates a palpable sense of financial precarity for people entering this high-status profession, and it is likely aggravating shortages in the number of prospective doctors who enter primary care and pediatrics.

While our empirical focus in this article is on medical student debt and their sensemaking about it, we situate this analysis within a broader context of institutional change in medicine and healthcare (Scott et al., 2000; Timmermans & Berg, 2003; Timmermans & Oh, 2010). Indeed, the patterns among medical students' perspectives about debt emerged out of our efforts to study institutional change in medicine and its impact on medical student culture. We began this project with a revisit of the classic text in medical sociology, *Boys in White*, by Becker et al. (1961). We then used pithy excerpts from *Boys in White* in qualitative interviews with current medical students, asking them to react to some of the key findings of Becker et al. (1961). Our goal was to compare the perspectives of medical students in two different historical eras as a way to reveal the local impact of institutional change on medical student experience. Using this elicitation interview technique, as we will show in the coming pages, we find that the institutional change of higher education costs and financing have profound influence on medical students' perspectives about their own professional socialization and career planning.

We frame our analysis within a burgeoning new literature in organizational sociology and the professions known as inhabited institutionalism (Hallett & Ventresca, 2006; Hallett & Hawbaker, 2021; Scully & Creed, 1997). Inhabited institutionalism is well suited for our analysis as it draws attention to the reciprocal relationships between local interaction and sensemaking with wider institutional pressures (Hallett & Hawbaker, 2021). As we will show, medical students make sense of their cumulative debt via interactions and experiences they have over time, as well as how they anticipate their debt will affect them in the future, and this is in response to the institutional pressure caused by costs in higher education. While medical students report that a career in medicine is primarily motivated by their pursuit of their passion (Cech, 2021), the amount of debt they face weighs heavily on their minds about their prospective careers. We conclude with discussion of the implications our findings have for the supply of physicians across specialties as well as for the wellbeing of physicians across their careers.

2. Theory and literature

2.1. Professional socialization, inhabited institutions, and health professions

There has been a recent reinvigoration of scholarship on medical

education and professional socialization more broadly (Everitt, 2018; Everitt, Johnson, & Burr, 2022; Guhin, Calarco, and Miller-Idriss 2021; Hafferty & O'Donnell, 2015; Jenkins, Underman, Vinson, Olsen, and Hirshfield 2021; Vinson & Underman, 2020). In their recent article appraising this renewed interest in health professions education, Jenkins et al. (2021) identify several promising areas where future research could make fruitful contributions, including new research on "socialization across the life course and new institutional forms of gatekeeping" (263). We situate our analysis within this call for more attention to how socialization unfolds over the life course, and how medical students make sense of the conditions of their professional socialization in ways that are both temporally and institutionally situated (Everitt & Tefft, 2019). Specifically, we examine medical students' prospective sensemaking (Everitt, 2013) as they think about the impact of their cumulative student loan debt and what it means for the future stages of their careers both near-term and long-term.

A slice of the resurgence in research on professional socialization has been informed by a relatively new theoretical framework known as inhabited institutionalism. Inhabited institutionalism emerged from an effort to bring symbolic interactionist traditions attentive to local interaction and sensemaking into dialogue with new institutional theories of organizational structure and functioning (Hallett, 2010; Hallett & Ventresca, 2006; Scully & Creed 1997). In its framing of the study of professional socialization, inhabited institutionalism focuses attention on the reciprocal relationship between institutional arrangements and training processes at the local level. From this perspective, "institutions function from the ground up *and* [sic] the top down, as people actively construct the meaning of legitimate action via local interactions in ways that are enabled and constrained by the structured conditions of their environment" (Everitt, 2018, p. 12). All formal professional training programs across professions operate within institutional constraints, but the pathways through which people become a member of a profession are active, dynamic meaning-making processes (Everitt, 2013, 2018; Everitt, Johnson, & Burr, 2022; Hallett & Gougherty, 2018; Jenkins, 2018, 2020; Olsen, 2019; Underman & Hirshfield, 2016; Vinson, 2019). Indeed, from the standpoint of inhabited institutionalism, there is equal attention to interrelationships between institutions, organizations, and local interaction (Hallett & Hawbaker, 2021). Inhabited institutionalism also advances a rich tradition in the sociology of health professions education informed by symbolic interactionist studies of work and professional socialization (Cahill, 1999; Haas & Shaffir, 1977; Light, 1980; Smith & Kleinman, 1989; Vinson, 2019).

In the case of medical education, recent scholarship finds that student cultures drive medical student sensemaking about key institutional arrangements in medicine, especially licensure exams (Everitt, Johnson, Burr, et al., 2022; Everitt, Johnson, & Burr, 2022), and this is consistent with seminal work on the importance of student culture in medical education (Becker et al., 1961). Likewise, a key way medical students inhabit the educational institutions that structure their academic careers is by viewing them as processes of "playing the game" (Jenkins, 2020). Beginning long before medical school, students are socialized to believe that if they just hit certain academic performance metrics at each stage – or "check the boxes" – then future opportunities will be abundant, including entrance into medical school, matching to desirable residencies, and subsequent career opportunities (Jenkins, 2020). Moreover, there is a contractual nature to this form of medical student sensemaking. The work of medical school and residency is challenging, and medical students and residents – especially students in allopathic U.S. medical schools – often develop the strong sense that they have earned their relative high status in this elite profession, including the patronage of more senior physicians (Jenkins, 2020). There is the shared sense that there is a social contract at work in medicine, and this is driven by the informal interpretive processes through which future doctors come to understand the profession.

2.2. Institutional change, prospective sensemaking, and the meaning of precarious work

A lot has changed in both educational and healthcare institutions since Becker et al.'s (1961) classic text *Boys in White*, including a broad shift toward standardization and “evidence-based medicine,” (Timmermans & Berg, 2003), ongoing tensions between managerial and professional authority (Scott et al., 2000; Starr, 1982), even changes to limits on the number of hours physicians can work (Kellogg, 2011). But the cost of higher education and medical education specifically is felt very keenly in the experience of medical students. In the 1950's, it was more expensive to attend some private high schools in the United States than it was to attend public universities and medical schools. Not so anymore. As we noted in the introduction, the average median cost of attendance for allopathic medical schools exceeds \$275,000 total. Not only do many medical students have to finance most or all of the cost of medical school, many of them bring substantial amounts of student loan debt with them to medical school that they accrued to finance their undergraduate education. Of course, this does not make medical students unique, as student loan debt has proliferated across fields (Houle, 2014) while disproportionately affecting students of color (Cottom, 2017).

As we will show in the subsequent analysis, cumulative debt weighs heavily on medical student prospective sensemaking (Everitt, 2013) as they look ahead to their residencies and later careers saddled with such debt. This experience with the institutional constraint of cost and debt informs how they make sense of the “social contract” that Jenkins (2020) identifies. They view the cumulative debt as an additional sacrifice they have taken on in their pursuit of medicine. They also feel a keen sense of financial precarity as they bear down on the completion of medical school, precisely because of the debt they know they will have to begin repaying while receiving their relatively modest salaries during residency. This sense of precarity informs how they make sense of their career plans, including their choice of specialty. As we note in the introduction, physicians command a level of income and job security that protects them from what scholars characterize as “precarious work” (Kalleberg & Vallas, 2018). But a hallmark of precarious work is the uncertainty it entails, and for medical students, copious amounts of debt introduces a sense of uncertainty in their level of financial comfort in their prospective sensemaking about their careers. While the problem of debt is well-known in medical education and medical sociology, to our knowledge few studies have directly examined how medical students make sense of debt prospectively, or how it influences their career decision-making processes as they plan to leave medical school for residency.

In examining their prospective sensemaking, we draw from several key pieces of scholarship to complement our framing within inhabited institutionalism. Weick's (1995) work on sensemaking is relevant to our analysis as medical students necessarily draw upon prior experience and interactions as they make sense of present situations. But they are also thinking forwardly toward the future, and this is consistent with Emirbayer and Mische's (1998) conceptualization of agency, which includes:

... a projective element in which actors imaginatively generate possible future trajectories of action through the creative reconfiguration of present structures of thought and action in relation to their hopes, fears, and desires for the future; and a practical-evaluative element in which actors make practical and normative judgments among possible trajectories of action in response to emerging demands, dilemmas, and ambiguities in presently evolving situations (971).

Finally, Everitt's (2013) work explicitly draws on these pieces of scholarship to examine the prospective sensemaking of pre-service teachers as an empirical example of how people inhabit institutions through their professional socialization. Indeed, attention to prospective sensemaking aligns neatly with inhabited institutionalism as it

foregrounds active meaning-making through interaction in the symbolic interaction tradition (Blumer, 1969) while attending to institutional pressures from the environment in the neo-institutional tradition (Meyer & Brian, 1977). Examination of prospective sensemaking adds a temporal element to how we can understand inhabited institutions (Everitt, 2013; Everitt & Tefft, 2019), and our analysis of medical students' prospective sensemaking reveals how their concerns about the future in “presently evolving situations” is a key way they actively inhabit medical education.

3. Data and methods

Our analysis began with the primary goal of revisiting the content of Becker et al.'s (1961) *Boys in White*. Inspired by prior work based on revisits of classic texts (Hallett & Ventresca, 2006), we wanted to subject the content of *Boys in White* to fresh analytic scrutiny while drawing upon more contemporary theoretical tools and engaging with more recent empirical findings in medical sociology and the professions. Early in the project's development, however, our research team collectively agreed that sharing pithy excerpts from *Boys in White* with current medical students could produce a very useful elicitation technique in our qualitative interviews (Nordstrom, 2013).

We then collected 33 in-depth qualitative interviews with current medical students at an allopathic medical school in the Midwest, which we call Trinity School of Medicine (all names, including those of respondents, are pseudonyms). Trinity is a highly selective, allopathic medical school with an acceptance rate under 5% and a total cost of attendance well over \$250,000. It has a multinational, racially diverse student body, with slightly more women students than men, and a disproportionately high number of Deferred Action for Childhood Arrivals (DACA) recipients enrolled. The interviews we conducted at Trinity document students' perspectives on their training, the challenges endemic to physicians working in current healthcare institutions, and how they define their professional responsibilities. At the conclusion of each interview, we shared the excerpts from *Boys in White* with them, and asked them to tell us what aspects of the perspectives expressed in the excerpts resonated with their experience, which aspects did not resonate with their experience, and why or why not. In this way, we were able to document from the perspective of current medical students how various elements of the medical education experience has changed – or not – relative to the experiences of physicians from a prior generation. This elicitation interview technique also allowed us to examine how these changes and consistencies in medical education over time are linked with changes in the institutional environment of medical education and how it is structured.

While we sampled students from across all four years of medical school, we oversampled students in years three and four. This was strategic. We certainly wanted to include students in the early years of medical school to document their experiences in their own terms. But we also wanted as much data as possible from students who were in years three and four who could both discuss their experiences in clinical rotations (which occur in years three and four) and reflect back on their recent experiences with the more academic elements of medical education (which are front loaded in years one and two). Among our 33 respondents, 19 are women and 8 are people of color. This represents a demographic difference from the respondents in *Boys in White*, who were overwhelmingly men and white, and also reflects a clear change in the overall gender and racial composition of medicine over time. Importantly, however, the patterns of sensemaking about debt, income, and financial precarity did not vary in any meaningful way across gender or race-ethnicity (see Table 1).

The interviews were semi-structured and focused on medical students' experiences in their own terms. Herein lies one of the great strengths of qualitative sociology in that it emphasizes the need to document and engage first with respondents' meanings, perspectives, and experiences, rather than testing for confirmation or elaboration of existing theories or concepts (Emerson et al., 2011). Interview questions

Table 1
Medical students by medical school year, trinity school of medicine (N = 33).

M1 Students	M2 Students	M3 Students	M4 Students
Brianna	Garrett	Betsy	Chris
David	Irene	Bianca	Diana
Ingrid	Savina	Brittany	Edward
Tasha	Will	Charlie	Iman
		Evelyn	Kerry
		Erica	Kevin
		Faye	Kieran
		Henry	Kyle
		Lance	Melissa
		Mark	Steven
		Olivia	Tina
		Oscar	
		Teresa	
		Tiffany	

Note: All names are pseudonyms.

addressed students' challenges while enrolled in coursework, dilemmas they confronted during clinical experiences, how they think prospectively about transitioning into the status of physician, and finally, how they view key excerpts from the medical students studied in *Boys in White*. This final portion of the interview protocol took the form of an elicitation interview, using excerpts from *Boys in White* as sociological artifacts to evoke responses. The total number of interviews were conducted roughly evenly among the three authors; in other words, we each conducted 10 to 12 interviews. We began analysis using NVivo for open and axial coding of the data and then began writing analytic memos through which we elaborated on patterns that emerged from the data. We shared, reviewed, and revised these memos collectively as a research team, and their content along with linked excerpts from the data formed the basis for early drafts of findings. Importantly, the issue of debt emerged from our medical students' responses in the elicitation interviews and thereby reflect their meanings about their lives on their own terms (Emerson et al., 2011).

4. The looming specter of debt

Early in our data collection, the elicitation interviews quickly revealed that our medical students were preoccupied with cumulative debt burden. In fact, as we will discuss throughout the remainder of the article, there was a palpable anxiety about debt among our medical students, along with other emotions, and our elicitation interviews drew out expressions of these emotions that medical students often keep under wraps. Many (though not all) brought six-figures of debt with them to medical school from their undergraduate education, and in some cases from other graduate programs they completed before medical school. As we will show in this section, even medical students without debt were keenly aware of the problem this posed to their classmates, and they were sensitive to it. This all came up when we elicited student responses to Excerpt #1 from the *Boys in White* excerpts:

Yesterday some of the guys were talking about their ideas of a successful physician. "Have you got any ideas about that?" Phil said, "That is a good question." Dick said, "I haven't thought about that. I don't think it's the money though. I don't think that is the only thing." Phil said, "I don't think money has anything to do with it." Dick said, "I think it's more a matter of whether you can use all your knowledge, your medical knowledge, in your practice." Phil said, "Well, I think being in the position to help people is important too (Becker et al., 1961:75).

When our medical students read this excerpt, their responses followed a "yeah, but ..." pattern of meaning making. They agree that "money... isn't the only thing," not even the primary thing, about what it means to be a "successful physician." But it became quite clear that medical students are very concerned about money primarily because of the amount

of debt many of them accumulate to finance their expensive educational careers. Diana (M4) discusses her reaction to this excerpt and how money influences her sensemaking about her prospective career:

Okay so, the first question, it resonates with me. That money [makes] a successful physician. I don't think that that's true. I wouldn't think about that at all as part of the success of being a physician these days. I think that it's a misconception that people go into medicine for money. I think that people like to say, "Oh, someday you're going to make great money." And it's like sure, after \$500,000 in debt and then after being paid basically minimum wage, if you add up the hours and the salary you get as a resident. Then sure, maybe you'll make good money. No one goes into it now thinking they're going to make great money.

Much like her predecessors from *Boys in White*, Diana downplays the role that prospective income plays in attracting people to medicine. But she immediately points to the issue of debt – six figures of debt – as the reason money is not a motivating factor for medical students, a reality that was not part of the experience for doctors of a prior generation when higher education costs were much lower.

Kevin (M4) shares a similar sentiment, and explains how debt – and the expected compensation one can receive in different subspecialties – weighs on his mind:

For me, I came in with undergrad debt that I still have. Federal and private, and incurred now three-hundred-whatever-thousand dollars of debt for medical school. So, it's huge. You would be foolish to not consider it. What it really did is just push me away from [primary care] because there's just no way that I can make a living to pay back my debt and have a good quality of life and be a family medicine doctor. And that, again, this is the way our system's set up. Now, family medicine doctors just don't make enough money.

Kevin was headed for residency in emergency medicine after medical school, a higher-earning specialty relative to family medicine. While certainly not the only factor affecting his choice of specialty, his total debt and expected income were explicit parts of his decision-making process. As Emirbayer and Mische (1998) theorize, he is thinking prospectively as he confronts "presently evolving" situations and decision-making. As Kevin put it, the debt is so substantial in his case, "you would be foolish not to consider it." Despite the prospect of making a six-figure annual income as a family medicine doctor, debt obligations in excess of \$300,000 made him feel that there was "no way" he could expect "a good quality of life" practicing family medicine. The debt creates a relative sense of potential financial precarity even in a high-status profession within which virtually no one makes less than \$100,000 per year. In addition, Kevin explicitly notes the structural source of this problem: "this is the way our system's setup." Just as inhabited institutionalism predicts, people's sensemaking is shaped concomitantly by biographical timing and institutional pressures (Everitt, 2013; Everitt & Tefft, 2019; Hallett, 2010; Hallett & Ventresca, 2006).

Tiffany (M3) echoes this looming sense of precarity created by debt, and how it informs decision-making processes for specialties. Her response was also elicited after she read the excerpt about money from *Boys in White*:

I've had experiences where my friends that originally really wanted to do something like family medicine or something else. But then later on they're like, "Oh my God, like I'm going to have so many debts. I think I should do anesthesiology." So I think that money doesn't have to do with everything, but it does matter a little bit.

Even though they would rather it not be a factor in their decision-making process, medical students have a glaring fear of their cumulative debt (e.g., "oh my God") and the precarity they feel about that debt informs how they think about the next phase of the training and careers (anesthesiology instead of family medicine). Even though the choice

between family medicine and anesthesiology in neither way risks the same kind of precarious work that people in other sectors of the labor market experience (Kalleberg & Vallas, 2018), medical students' cumulative debt makes them feel that family medicine is a riskier option for them relative to more lucrative specialties.

The anxiety induced by cumulative debt can even inform medical students' decision-making processes concerning choices within the same specialty area. Evelyn (M3) decided on a specialty early on (hematology), but even within this specialty, debt influences her decision-making and she discusses a similar sense of precarity that the debt creates for her prospective sensemaking about her career (Everitt, 2013; Everitt & Tefft, 2019):

The debt is suffocating to be honest. And then it's also really frustrating because, so I knew I wanted to do hema [hematology], right? And so for the past several months I've been saying, "Okay, I need to decide between adults or kids because they're two completely different." Like you have to pick, you can't really do both... And when I made my list of pros and cons, one of the things that I put towards the bottom of the list, but still on the list is that adult pays way more money. Adults pay about \$150,000 a year more... It's not worth making your entire decision on money. But I do think realistically you should make it a factor.

Evelyn told us earlier in her interview that she estimated she had roughly \$600,000 dollars in cumulative student loan debt combined from her undergraduate education, a graduate degree, and medical school. She was committed to specializing in hematology, but the debt lurked in the background of her thought process. Within hematology, there are significant income differences depending upon the age of the patients ("adults or kids"). Much like her predecessors from *Boys in White*, she downplays the role that money plays in her career decisions, but she does it for entirely different reasons. She notes that debt and income are "at the bottom of the list," but they still made the list. Moreover, she emphasizes the sense of precarity many medical students feel: "the debt is suffocating to be honest." This kind of language suggests that the anxiety induced for medical students by their cumulative debt can be intense and salient in their prospective sensemaking (Everitt, 2013).

Not only does debt create a sense of precarity that affects medical students' decision-making about specialty, it may even affect students' decision to become physicians in the first place. In addition, as we noted above, the specter of debt is prominent in the sensemaking of medical students who are fortunate enough to avoid debt because they know their classmates are dealing with this problem. Both issues came up in Bianca's (M3) interview:

Bianca: Um, so I am actually- please don't share this, [nervous laugh] but like_

Interviewer: Oh, this is confidential. None of this is going to be linked back to you.

Bianca: Okay. Uh, I am very fortunate where my parents are helping me out with med school and I truly think that if they weren't, I don't know if I could have gone into medicine because the thought of having \$200-\$300,000 in debt is very scary to me. Um, so I was very fortunate in that I didn't really have to worry about that in my decision-making.

Just broaching the topic of debt – even for someone who doesn't have any – was stressful for Bianca, and she was very cautious to make sure that no one would know she is debt free thanks to her parents' underwriting of her education. Moreover, she suggests that had she not had her education paid for, she may have foregone medical school altogether because "the thought of having \$200–\$300,000 in debt is very scary to me." While we do not have the data to examine the impact that prospective debt has on steering potential medical students away from medicine, it could very well be a factor in deterring otherwise capable

physicians from even attempting to enter the profession. In one way or another, either because they were facing the debt themselves or they knew their classmates were, the specter of debt weighed heavily on our medical students' minds and decision-making as they thought prospectively about the careers ahead of them. And while we do not have data that directly measure the social class status of our medical students and their families, social class inequality clearly shapes these sensemaking processes and experiences. While many medical students report enormous debt, others like Bianca report that their families have the resources to pay in full so they can avoid the debt so many of their peers shoulder to complete their education.

5. "There are easier ways to make money"

At the same time, medical students point to the career opportunities they have foregone and the potentially high salaries they could have secured without incurring additional student debt from medical education as a way of both justifying their future salaries as physicians and clarifying their own motivations to pursue careers in medicine. Iman (M4) offers this observation: "Um, I've heard a lot of people nowadays who are like, 'Look, if-if you're really bright and you wanna make money, medicine is not the way to do it anymore.' Like, I feel like a lot of people were saying, the financial sector is the way to do that right now." Tiffany (M3) agrees, explaining, "there's other incomes that make more money." However, she continues, "but like being a doctor, like you're doing something good and still making money." Medical student cultures thus combine the sacrifices imposed by additional schooling and its attendant high debt burden with the sense of altruism associated with healthcare professions to make sense of the decision to begin medical education in the first place and career earning potential once complete. Tiffany explains, "you know, you're not like making money by like [trading] stocks or something. You're making money by helping people." Oscar (M3), elaborates on the sacrifices future doctors must make both in terms of time and debt:

Say you go into pediatrics, that's at least seven years after undergraduate. That's \$500,000 in student loans. I mean you could make- Go into some of these other jobs and you can make way more money than that. I mean, I know people that went out of undergrad and made over \$100,000. And they have way less debt. They have a lot of things going for them. Heck, my brother makes \$80,000 a year and same thing. So, I don't know. I think people have misconceptions... Societal misconceptions that all doctors are loaded and rich. And that's not true.

Medical students choose to pursue medical education despite widely publicized and widespread increases in tuition costs and mounting student loan debt. Their motivations for doing so are varied, but rarely driven by making money, similar to the sentiment expressed by medical students in *Boys in White*. Moreover, medical students tend to point to the debt they take on as evidence that they are not motivated by money, but rather by a desire to "help people." Not only do they emphasize that they are not motivated by money, they characterize the debt as an additional sacrifice they make in their effort to "help people."

Lance (M3) explains his perspective on the varied motivations students have for pursuing medicine, downplaying the role of money and emphasizing that if he wanted to make money there are easier careers to do it:

People still have different motivations for going into medicine, but generally speaking, I don't think most people are motivated solely by money. In general, you can make way more money in other fields. Like you could have went (*sic*) into business or go into somewhere, somewhere else and make more money easier and earlier on in your life. You don't have to wait until you're in your mid-thirties to finally get out of debt from eight years of schooling to make money.

Student loan debt and earning potential can be a factor in deciding which kind of doctor to become, as Lance later reveals, “I think like some people do want certain specialties because they know it makes more money.” For the students we interviewed, the decision to become a physician rarely seems to be motivated by money even though it often requires incurring enormous amounts of debt. This could be because when deciding to pursue medical education that debt is still intangible. Yet, when the time comes to choose a specialty, the amount of debt has become very real and can weigh heavily on students' career aspirations as they deliberate on what kind of doctor to become at a point in their educational careers when they are bearing down on the reality of beginning to repay that debt. Debt becomes a form of what Weick (1995) calls an “interrupting event” altering the ways medical students think prospectively about their careers. The apparent action taken in response to this interruption is to avoid primary care (unless they are fortunate enough to have no or little debt). We found no discussion of ways debt might be effectively managed while engaging in a career in primary care, or similar lines of reasoning. Medical students' attention becomes focused in part on debt in a manner quite different from the ways students seemed to make sense of debt earlier in their educational careers. Medical students maintain their aspirations to help others when it comes time to choose a specialty, but an entire set of potential specialties are eliminated as they make sense of how debt will affect their future. Lance is looking down the road at what life will be like in his “mid-thirties,” and how that prospective experience is situated in both the timing of his career and the institutional arrangements that have created the need for many medical students to finance their education. In this way, his sensemaking is embedded both temporally and institutionally (Everitt & Tefft, 2019).

Medical students also hear from more senior physicians that medicine is not a pathway to financial prosperity, and if money is a motivating force for them, they should enter a different field. Iman (M4) describes what she has heard from other doctors:

You talk to physicians and be like, “I'm applying to med school. Do you have some advice?” And people would be like, “Don't do medicine. It sucks. Leave while you can.” I hear a lot of people nowadays who are like, “Unless you really love medicine and really love taking care of people, don't do it.” A lot of the private physicians like private clinics are no longer sustainable financially. You're getting major conglomerate medical institutions that are now your bosses. You're no longer your own boss as a doctor. I've heard a lot of people nowadays who are like, “Look, if- if you wanna make money, medicine is not the way to do it anymore.” I feel like a lot of people are saying the financial sector is the way to do that right now.

Pointing to institutional change in the management of healthcare organizations over time (Scott et al., 2000; Timmermans & Berg, 2003), Iman echoes the notion that “medicine is not the way to do it” if your goal is to make money. But she also emphasizes other challenges physicians face thanks to institutional change. Specifically, she cites a loss of professional autonomy (“you're no longer your own boss as a doctor”) that senior physicians have communicated to her has made practicing medicine less desirable than it perhaps once was. Interactions with more senior members of the profession like the one Iman describes add another element to medical students' prospective sensemaking. In fact, it became a consistent theme across many of the interviews we conducted. For David (M1), the advice from a former employer was even more abrupt, as he reports, “So the retinal surgeon I worked for, he said straight up to me like, ‘Don't go into medicine, David. Just don't do it.’” By passing along this kind of advice to potential newcomers to medicine, senior physicians are engaging in the kind of retrospection (i.e., it's not like it used to be) that Weick (1995) emphasizes is important to sensemaking processes. But it also informs medical students' prospective sensemaking via the same interactions as they look forward and envision their own experience and careers (Emirbayer & Mische, 1998; Everitt, 2013). In this way,

medical students' prospective grappling with the retrospective advice of senior physicians serves a dual purpose. It is an imaginative exercise, allowing students to plan for what their future careers might be like, and it is a concrete example of the challenges of the profession, enabling students to leverage the past experiences of others to legitimize their own reasons for entering the profession.

6. Money, precarity, and the “social contract” for doctors

Students put in an enormous amount of time and effort, over the course of their academic careers that span many years, to become a medical doctor. Moreover, many of the hurdles they must clear in the process, or “boxes” they must check (Jenkins, 2020), are academically challenging and emotionally taxing. Much like *Boys in White* medical students (Becker et al., 1961), our medical students certainly prioritize helping others as their primary motivation in pursuing such a challenging professional enterprise and lengthy career path. But they also feel deeply that their years of effort and the challenges they have overcome have rightfully earned them a certain level of compensation. The fact that many of them have also borrowed large sums to finance their education only adds to this sense of entitlement. Indeed, their sense of relative financial precarity reinforces this sense of entitlement that many doctors feel (Jenkins, 2020). Kieran (M4) discusses this:

So, during undergrad when I was asking one of my professors for a letter of recommendation for medical school, I was meeting with him and he asked me, you know, “Why do you want to go into medicine?” Then he asked me, “Well, what do you think about the money now?” I was like, “Oh, I mean obviously like if doctors made sh*t money, I probably wouldn't go into it.” Because why would I take out all these loans – which thankfully I don't have because someone is paying for it – but why would I go through four years of med school, four to five years of residency, half a million dollars in debt with like a \$40,000 salary during residency for a year? Nobody would do that for financial reasons. But attendings make good money, surgeons make good money. And I told him, “I'd be lying if I said that money wasn't part of it. Then we had a conversation about that, and he said that one thing that really turns him off is when people tell him it's not about the money. Which is interesting because he was like, “of course it's about the money!” Cause you would never pursue a job like that if you didn't want to have a good salary in the long run. So I think, you know, looking to help people is huge because that's all you're going to be doing is helping people in some capacity. But I think you also have to be realistic. Are you going to make enough money to pay off your debt, be comfortable, make up for the fact that you went through all this training and these loans?”

From Kieran's perspective, of course the primary professional goal is to serve others, so much so that it is an obvious point to him (“that's all you're going to be doing is helping people”), consistent with the professional logic of caring that has long been seen as legitimate in medicine (Dunn & Jones, 2010). But concern with compensation is also perfectly reasonable to him. The path is too long, too arduous, and too costly for prospective doctors not to consider a lucrative salary as part of the professional bargain. That does not negate the fact that physicians' primary contribution is “helping people.” In fact, precisely because their professional enterprise is so important in helping others, and medical students take on so much work and debt to become doctors, this is all the more reason they are due lucrative salaries from their perspective.

Henry (M3) discusses the mental calculus that medical students go through and how cumulative debt and relative income both factor into their decision-making. Here is part of Henry's reaction:

Yes and no. It's not about the money. It's about what you can do with your skills. Nowadays though, with tuition increasing every single year by 2–4 percent, the compensation for physicians decreasing over time. With the rise in student debt that everyone has, a medical

student or no medical student, it's very hard to stick with those values that brought you into medicine in the first place. I need to pay off my debt. How am I going to do that? Make more money. What specialties make more money? And I feel like over time, money has become more of an issue for students. And some students might not go into the specialty they like the most or they feel like they belong to. But they go into something else because the compensation is better. And I think that leads to some unhappy doctors.

Henry expresses what we find to be a shared ambivalence about how money does, and should, affect medical students' career decision-making. On the one hand, Henry feels a deep resonance with his *Boys in White* predecessors in the idea that his primary professional motivation is not money but service to others in the use of his expertise. On the other hand, the debt is inescapable for many prospective doctors, and it forces a series of questions that Henry walks us through: "I need to pay my debt. How am I going to do that? Make more money. What specialties make more money?" Indeed, because of skyrocketing costs of higher education, compared to prior generations, "money has become more of an issue" for doctors because of cumulative debt, according to Henry. Interestingly, Henry confirms his agreement with *Boys in White* medical students that money should not be a primary motivating factor in the way he characterizes the effects of debt on medical students' decision-making. Because more medical students are driven by concern over debt, they are choosing specialties they otherwise would not, resulting in "some unhappy doctors."

Jenkins (2020) finds that prospective physicians (especially U.S. born and trained physicians) develop the shared understanding that as long as they "check the boxes" along the way of their medical education, they can expect professional opportunities to be available to them, a "social contract" of sorts. Our medical students confirm and elaborate these findings, adding some detail to their sources of entitlement in terms of how they make sense of their work, their education, and the burdens they feel they have had to bear as students, and those they will have to bear as physicians. Diana (M4) offers her perspective:

I mean the amount of debt is insane that people have to take on to be a medical student and get through it. And then you really don't always get compensated as much as you want to. And especially for going back to like primary care, it's really hard to be compensated as much as I think some doctors deserve. In the field of family practice sometimes you have pediatric and what not. Um, so I know a lot of people have factored that in their decision making and that certain specialties are going to earn them more, and they'll be debt free faster. Personally, I was able to get a lot of help from my parents, which was really nice and I'm very grateful for that. So I will come out with less debt than like the average, [med student] which is wonderful. So I try not to factor it in too much, but there is something to be said about: you work for nine years, you do want a fair compensation, especially when you can be up to like \$500,000 in debt.

For Diana, it is not just that doctors help people. It is not just that they worked really hard to complete their training and become a doctor. These factors combined with the amount of debt they take on to finance their education all coalesce into a multifaceted justification for why doctors should be compensated in a way they "deserve." And while medicine is not "precarious work" relative to other sectors of the labor market, the massive amounts of debt that many medical students accumulate introduces a degree of financial uncertainty into their prospective sense-making about their careers as physicians. Feelings of uncertainty are a hallmark of precarious work (Kalleberg & Vallas, 2018), but medical students define it on their own terms relative to their experiences with institutional constraints, a process that is a hallmark of inhabited institutionalism (Binder, 2007; Everitt, 2018; Hallett, 2010).

David (M1) elaborates a similar perspective, and laments the precarity that many doctors feel due to their debt precisely because physicians do so much in service to others.

Unless you're getting your medical education paid for, it's a little bit different because like you're asking the people who are going to be taking care of our country to pay back \$500,000 for their medical education, which, which isn't unfair, but because it costs a lot to train a doctor. I'm not saying it doesn't, but it's kind of. It's just a very skewed perception of, you know, these same people who are working so hard to do things to take care of other people, but ultimately we're going to have to owe so much money back to whoever's giving us our loans... It just_ Part of that sometimes is frustrating.

For David, doctors do not deserve the financial strain that they feel given that their entire professional enterprise is "to take care of people." This is "frustrating" to him, as it represents a perversion of the social contract that many doctors expect since they are "taking care of our country."

Henry (M3) discusses the stress that debt burdens create for medical students, stress that is compounded by what he describes as the difficulty in even talking about the precarity they feel.

I think it's on pretty much most people's minds, but it's a little bit taboo to talk about. Because we need to be all for the patient. We need to do what we're good at and we're not here for the money. We're here to help people. But I think it's definitely a concern for a lot of people. You feel like you do what you belong to. And the money is just a benefit. But people are coming out of school with hundreds of thousands of dollars in debt, and they're worried about that debt, you know. So I think that money comes up in conversation, but usually only with good friends or people that you trust.

Precisely because he believes so deeply that his primary professional motivation is "to be all for the patient," Henry is uncomfortable even talking about a concern with money. But medical students "are worried about that debt," and feel a degree of precarity because of it. Moreover, their anxiety is amplified by the fact that "it's a little bit taboo to talk about," and they feel compelled to keep that anxiety under wraps.

Finally, Evelyn (M3) discusses how the debt many medical students accumulate is a sacrifice that prospective doctors make in addition to other sacrifices they make to become members of the field:

It's [the debt] overwhelming. And that's the thing is you go into so much debt, you sacrifice the best years of your life. Like we're giving away our twenties. Like all my other friends, they're out traveling, drinking, and like, I just don't have the luxury of doing that because I've committed to this field.

Evelyn situates her sensemaking about debt and precarity in biographical context as she thinks about all the sacrifices she has made to become a doctor. While they are in medical school, medical students are "giving away our twenties." From her perspective, "going into so much debt" is the insult added to the injuries medical students already incur through the challenging process of becoming a physician. She implies a similar sentiment that many of our medical students describe: Doctors work hard to do important work in service to others, they have earned a certain quality of life, and their debt is an unfortunate additional sacrifice they must endure.

7. Discussion and conclusion

Cumulative debt, especially at the point of exiting medical education, looms large for many medical students. Facing debt totals well into the six figures (our medical students consistently cited totals between \$300–\$500K), a feeling of financial precarity emerges for medical students during their time in medical school even though they are entering what remains an elite profession. It explicitly factors into their decision-making about specialty selection, though they explicitly wish it did not, as their primary career focus is on the notion that "all we're going to be doing is helping people," as Kieran (M4) put it (Dunn & Jones, 2010). As prior research on other professions finds, medical students inhabit their

professional socialization via sensemaking about debt that is both temporally and institutionally situated (Everitt & Tefft, 2019). They are keenly aware that their debt burdens are a product of “the way our system's set up,” and the debt is made particularly intimidating to them when they think prospectively about the next phases of their careers (Everitt, 2013). In other words, medical students look ahead at their future incomes and future debt obligations, and what many of them see worries them deeply. They feel precarious, and they are uncertain when it will end: as Lance (M3) put it, “they're worried about that debt.” Moreover, their sensemaking about the debt informs their decision-making about specialty. While no one likely intended rising higher education costs to affect prospective physicians' choice of specialty, our medical students indicate that it does because of how they interpretively respond to these institutional constraints, how they inhabit them. Though we do not have complete data on where all of our medical students ultimately ended up in their specialties, the issue of debt came up routinely in our interviews as a key factor in their decision-making processes as they were unfolding.

But there is more nuance to medical students' prospective sensemaking about their debt, compensation, and professional status, and it is informed by the cultural myth of meritocracy that so deeply undergirds the “social contract” for prospective doctors (Jenkins, 2020). Our medical students are quite candid in their beliefs that doctors “deserve” a certain level of compensation, as Diana (M4) put it, one they feel many doctors are increasingly less likely to receive, especially those entering pediatrics and primary care. In their responses to the *Boys in White* excerpt about money in our elicitation interviews, they commonly cite three things about their experience that they feel justify the “quality of life” they expect. First, becoming a doctor is a challenging process, one that requires hard work and sacrifice (e.g., “we're giving up our twenties”). Second, they made the conscious choice to sacrifice more lucrative careers in other fields in order to serve people's healthcare needs through medical practice. Third, their debt burdens constitute an additional sacrifice because their future payments on that debt will hollow out significant chunks of their future income. Moreover, the debt problem is rooted in structures of educational institutions beyond their control (Houle, 2014).

In many ways, our medical students' prospective sensemaking about their professional enterprise in the context of their debt and expected compensation is an interesting take on what Cech (2021) identifies as the “passion principle” in people's educational and professional trajectories. Cech (2021:4) defines the passion principle as: “... a morally laden cultural schema that elevates self-expression and fulfillment – in the form of intellectual, emotional, and personal connections to an occupational field – as the central guiding principle for career decisions, especially but not exclusively among the college-educated.” Medical students are adamantly wedded to the passion principle in how they describe their pursuit of medicine based on their “intellectual, emotional, and personal connections” to the field. Also consistent with the passion principle, people across professional fields who are wedded to it routinely downplay the importance of money or financial stability in career choices (Cech, 2021), just as our medical students do. Rather, medical students emphasize that they work hard, they complete challenging tasks, they forgo easier and more lucrative fields, and they do it all in their effort to serve others' medical needs (Dunn & Jones, 2010). To medical students, debt burdens are a perversion of the passion principle, one that forces them to consider money when they feel like they should not have to. Future research on professional socialization in medicine as well as other fields would be well served to explore the role the passion principle plays in people's sensemaking about a range of institutional constraints relevant to their respective professions.

We argue that examining institutional change through a lens of inhabited institutionalism offers insights into the interconnections between institutional environments and the social psychology of people's sense of wellness (Jenkins et al., 2018), in medicine and beyond. There was a palpable sense of fear and anxiety – of precarity – among our

medical students when the issues of debt and their future careers came up. Anxiety even emerged in interviews with medical students who had no debt themselves. Recall Bianca (M3) who desperately wanted to make sure none of her peers would know that she was largely debt free, which serves as a powerful example of how all forms of sensemaking are driven by interaction in response to formal constraints and local group dynamics (Becker et al., 1961; Blumer, 1969; Hallett & Hawbaker, 2021; Hallett & Ventresca, 2006). The institutional change brought to bear on students' lives by rising costs and increased financialization is deeply distressing to people as they look forward to their futures – “the debt is suffocating,” as Evelyn (M3) admitted. As our data signal but cannot confirm definitively, it may well be an institutional constraint that is reshaping the profession in ways that drive people away from pediatrics and primary care. Our findings build upon prior work in the symbolic interactionist tradition in the sociology of health professions by attending to these types of institutional constraints and how people inhabit them. In this sense, inhabited institutionalism seeks to extend beyond the micro-level focus of many prior studies on health professions informed by symbolic interaction (Becker et al., 1961; Cahill, 1999; Haas & Shaffir, 1977; Light, 1980; Smith & Kleinman, 1989) by examining how people understand “the way our system is setup,” as Kevin put it.

Our data also sound an alarm for the medical profession in terms of long-term wellness and commitment to the field among physicians. As Henry (M3) put it, the pressure of debt compels many medical students to choose fields that might not be their primary passion due to financial concerns about debt, and that can produce some “unhappy doctors.” Not only may this phenomenon steer medical students away from specialties in which they feel passion (Cech, 2021), it could lead to burnout over time as they advance through careers doing work they don't like while servicing an amount of debt that is stressful to manage. In addition, as Bianca (M3) signals but our data cannot address directly, the specter of debt may steer some students away from medicine prior to the point of entering medical school, as the fear of financial precarity may drive them away. In either case, our data warn of potential cracks in multiple stages of the pipeline of creating physicians, driven by the active ways people at various stages of their academic and professional careers make sense of institutional pressures in medicine.

Declaration of competing interest

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

Acknowledgements

We thank Jason L. Cummings for his comments and feedback on earlier drafts of this paper. We also thank Chistine Breit for the work she contributed to data collection for this project. This research was supported by the Faculty Summer Research Stipend, Office of the Provost, Loyola University Chicago.

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