RESEARCH

Hierarchy and the Case of Indian Academia

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Abstract

Universities and research institutions perpetuate rigid academic hierarchies for a variety of reasons, including tradition, the need for clear lines of authority, and the belief that it is necessary for efficient functioning. However, organizational structure and culture are known to have a huge impact on productivity. Traditional academic hierarchical structures in academic institutions can have negative effects, such as hindering the free flow of ideas, limiting opportunities for junior faculty, and creating a culture of competition rather than collaboration. Here, we discuss the consequences of a rigid hierarchical system on academic research, particularly in the Indian context.

Keywords: Academic Hierarchy; Organizational Structure; Organizational Culture; Academic Bullying; Authorship Abuse; Work Environment

Introduction

Academia is hierarchical and, consequently, can be shackled by unbalanced power structures. A few individuals often have more decision-making powers and exert more influence over others. This power imbalance is a product of organizational structures. Such hierarchical structures within academia are a deterrent to the academic progress, research and creativity of researchers.

The academic sector, primarily research, requires creativity and years of dedicated hard work from academics. Creativity is the stepping stone to innovation and impact, which are often seen to be the ultimate goal of research pursuits. While teaching is an integral part of academia, research publications and patents are often seen as the main output of this creative pursuit. In a meritocratic environment, academic outputs often become the lone measure to offer jobs and promotions. However, in the Indian context, meritocracy needs to be defined and designed more broadly by considering the socio-economic conditions of certain marginal groups. Yet academia is highly exclusive and in particular in Indian academia, considerations from the social hierarchy, such as gender and caste-based bias, often impede the progress of socially disadvantaged researchers (Amin, 2021; Sabharwal et al., 2020). While a lot has been said and discussed about the influence of social hierarchy in Indian academia, often missing from the discussion is the impact of hierarchical organizational culture and structures within academia. In simple words, those who are at the top of the ladder typically have more prestige, resources, and decision-making power, as well as influence over the career and research prospects of their juniors. Those who are at the bottom of the ladder are often the most impacted by the unjust balance of power, often exacerbated by considerations of their gender, caste, community and social status.

Understanding Hierarchy from an Organizational Standpoint

Hierarchy in an organization is thought to be inevitable and to promote a sense of structure for smooth functioning. It is a result of the organization's growth beyond a very small size. As more people join the organization, there are more specialized tasks, and effective coordination to achieve the goals of the organization becomes harder. Thus, having different levels in the hierarchy allows the organization to have clear checkpoints for direct and effective supervision and task coordination. It can also help an individual understand their role within an organization, promote cooperation and pacify aggression (Paltogolu, 2021).

There are different kinds of hierarchical structures that an organization can adopt, which affect the overall effectiveness of an organization in diverse ways. Organizational theory suggests specific hierarchy structures to support the organization's goals and objectives (Jones, 2013). These structures are outlined in Table 1. The other factors, which are largely shaped and informed by organizational structures, and affect an organization's effectiveness include rigidity and organizational culture.

The rigidity in organizations stems from the separation of decision-makers from the specialized knowledge workers through different hierarchical levels. The number of hierarchical levels is related to the size of the organization. If an organization has a few levels compared to its size, it is called a flat structure. If it has many levels relative to its size, it is termed a traditional (or tall) structure. According to the principle of minimum chain of command, organizations should select the minimum levels of hierarchy for optimum performance (Jones, 2013).

Another key factor is organizational culture, or how hierarchy is practised in the organization. Organizational culture refers to shared values, based on the desired outcome for an organization, and

Table 1: Different organizational structures, and their pros and cons (based on content in Jones, 2013).

Organizational hierarchical structures	**Description**	**Pros**	**Cons**	**Typical organizations that use the structure**
Functional Hierarchy	Organization members are grouped based on their specialized functions or roles within the organization. Common in large organizations where departments are divided by functions.	Clear lines of authority and specialization. Efficient use of expertise within functional areas.	Limited communication between departments. Slow decision-making due to multiple layers of management.	Large corporations with distinct functional areas like marketing, finance, and operations.
Divisional Hierarchy	The organization is divided into divisions based on products, services, and geographic locations. Each division operates somewhat autonomously.	Flexibility and responsiveness in each division. Better focus on specific products or markets.	Duplication of functions across divisions. Coordination challenges between divisions.	Organizations with diverse products/services or operating in multiple geographic regions.
Matrix Hierarchy	Combination of functional and divisional hierarchy to provide a blend of specialization and cross-functional teamwork.	We have increased communication and collaboration. Flexibility in resource allocation for projects.	Confusion and potential conflicts with dual reporting. Time-consuming decision-making due to the need for coordination.	Project-based organizations or those with complex, interdisciplinary projects.
Flat Hierarchy	Few or no levels of middle management between staff, supervisors and decision-makers.	Quick decision-making and responsiveness. Enhanced communication and collaboration.	Limited career advancement opportunities. Potential for overburdened managers.	Small startups, creative agencies, or organizations emphasizing innovation.
Traditional (or Tall) Hierarchy	Traditional pyramid-shaped structure with multiple levels of management with clear lines of authority and responsibility.	A clear chain of command that increases efficiency. Assigned responsibility, helps establish accountability.	Slow decision-making and communication. Potential for information distortion as it moves up the hierarchy.	Traditional or large corporations with established structures and processes.

Holacracy	Non-traditional, self-organizing structure that distributes authority among small, autonomous teams. Focuses on roles and responsibilities subject to the demand of a project, over fixed responsibilities as assigned in traditional hierarchy.	Agility and adaptability. Distributed decision-making and autonomy.	Requires a cultural shift and may face resistance.	Startups, tech companies, and organizations focused on agility and innovation.

norms shared by the members of an organization. The founders or leaders at the top of the hierarchy exert substantial influence over an organization's culture, as they bring to the job their values and beliefs, which are often shaped by cultural and societal values (Jones, 2013). This is an important aspect in management studies as some societies have more power distance, that is acceptance that power is unequally distributed. In cultures with a high power distance, such as India, there is a significant level of inequality, and people generally accept the authority and decisions made by those in positions of power without much question (Hofstede et al., 2010). On the other hand, in cultures with a low power distance, there is an expectation of equality and individuals may challenge authority or hierarchy. In the Indian context, it is crucial to grasp cultural dynamics to understand how leaders use their power in hierarchies. This can help determine if the organizational culture will be positive.

A positive organizational culture emphasizes the well-being of its members, open communication, strong shared values, empowering members of the organization through positive assessment and autonomy, fostering collaboration, and encouraging innovation and creativity (Jones, 2013; Kohll, 2018). Studies have suggested that openness, a collaborative environment, sufficient resources (including time and finance), positive assessment, and organizational/supervisory encouragement are crucial to fostering creativity (Amabile et al., 1996; Walter, 2012). Conversely, bureaucratic, controlling and authoritative work cultures that promote unhealthy competition, create unnecessary time pressure, are strife with biased and overtly critical assessments, and do not give autonomy and encouragement to individuals to fulfil the tasks in their role, can kill individual creativity within an organization (Amabile, 1998; Amabile et al., 1996).

Academic Hierarchy

Inherently, hierarchy is not damaging to organizations or individual creativity. However, the kind of hierarchy, its structure, culture and rigidity, play a critical role (Morgan, 2015) and should be defined by the expected outcomes from an organization. For instance, traditional and rigid hierarchical structures that follow a pyramidical approach, impede creative work but are more suited to linear work that does not require that much creative intellectual input (Morgan, 2015).

An academic institution, like a university, typically follows a functional and traditional hierarchical pattern. Distinctively categorized by administrative functions and academic disciplines, a tall structure

in a large organization such as a university is unavoidable as it effectively facilitates centralized control and coordination and allows for standardized processes and procedures to ensure consistency and quality across different functions. The structure may differ slightly in different countries and institutions, but universities are typically governed by a board of trustees and government bodies. At the top of the pyramid are the administrators, such as vice-chancellors and deans; followed by the heads of departments, academic staff, non-academic staff, such as librarians or office management or contractual project staff, and at the bottom of the hierarchical structure are the students. The contractual project staff, postdocs and students are usually the main workforce in the academic research enterprise led by professors. Typically, the goals of an academic institution are to impart specialized knowledge and generate knowledge through research. Hence, innovation and creativity become essential terminal values for such organizations. In a university or academic institution setup, the values are fostered by vice-chancellors, deans, and heads of departments. However, for research, at the most basic level, the culture is fostered by the professors within their lab groups.

Traditional hierarchical structures that follow a rigid chain of command have more layers and increased bureaucracy from bottom to top. Meanwhile, communication usually flows from top to bottom and causes impediments to engagement and collaboration. Furthermore, this system can also breed prejudices among people at the top, which then percolates to the bottom. Also, as has often been seen, this system encourages respect for an individual and his opinion by their position in the chain of command, rather than their expertise or creative input.

Some Consequences of Academic Hierarchy

Academic hierarchy, the structure, culture, and organization of roles within educational institutions, can significantly influence both research and teaching in various ways. For instance, senior academics often have greater access to resources, funding, and research opportunities, and often play a significant role in shaping the research and teaching agenda. In this article, we focus on how some malpractices owing to academic hierarchy seep through academia. The focus is on malpractices that affect individuals negatively, and stifle creativity and innovation in the long-term. It is important to acknowledge that these effects can be amplified in societies with higher power distance, such as India. Therefore, we will mostly focus on examples of the consequences of academic hierarchy in India, drawing primarily from available data.

Let us further examine how the hierarchical academic system can create an impediment to academic progress:

Negative Work Environment

Academic hierarchy can lead to a negative work environment or a toxic work culture. An open, flexible and low-stress work environment encourages work-life balance, and tends to promote creativity and productivity (Kinman, 2014). The work culture in academia has historically been perceived to be low-stress with flexible work timings (Kinman, 2014). However, academics nowadays undertake a huge workload that includes administrative tasks, teaching responsibilities, mentoring and research (Ghosh, 2022; Wellcome Trust, 2020). At the lower end are early career researchers, especially those on short-term contractual employment, who get disproportionately affected due to the constraining culture and management styles of their laboratories, supervisors or PIs (or seniors in the hierarchy) and institutions (Bartlett et al., 2021). Several studies have further indicated that women academics face even more work-life conflicts as they are traditionally perceived to be primary caregivers and thus have a greater workload at home (e.g., Kurup et al., 2010; Kurup & Raj, 2022; Mukhopadhyay, 2023). Furthermore, in a 2019 survey of PhD students by *Nature*, 49% of respondents felt that their

organisational culture demands long working hours with 76% of the respondents specifying that they routinely work more than 41 hours per week (Woolston, 2019). Findings from a survey at top institutions in Bangalore and Pune suggest a similar trend in India (Samhita, 2019). The implicit message from the superiors that "more work is better work" has made working over weekends and public holidays a norm among early career researchers (Samhita, 2019). Anecdotally, it is common for several PIs to organise their weekly group meetings over weekends. The recent controversial statement of renowned industrialist and founder of Infosys Narayan Murthy about working 70 hours a week again reflects the mentality of "more work is better work", which possibly is the viewpoint of an entire generation to which Mr. Murthy belongs. A considerable number of PIs also belong to this generation who either have retired recently or still are in the academic circles in various mentorship capacities, thus creating and carrying forward a particular cultural trait. Early career researchers often find themselves, therefore, overworked to survive the hypercompetitive academic environment and meet the unrealistic expectations of their PIs. Institutions further prioritise productivity over the well-being of academics, hence, there are usually little to no institutional policies to curb such practices by academic oligarchs in the research/university organisations. Several studies indicate that such prolonged long working hours, lack of work-life balance and work stress lead to a lack of productivity and creativity, burnout, and may potentially cause more severe long-term mental health issues (Bartlett et al., 2021; Kinman, 2014). It must also be said, however, that working styles vary among individuals, and a good academic system should allow for such variation without being coercive.

Authorship Abuse

A major academic output is academic publishing. Therefore, acknowledgement of contribution towards a project in the form of authorship is a major currency for academics which weighs in during hiring and promotions. Consequently, academics, at times, resort to tactics that can gain

Table 2: Types of authorship abuse

Authorship abuse	Description
Coercion authorship	Use of coercion tactics to gain authorship on research publications without making any intellectual contribution; generally practised by hierarchical seniors such as PIs or Heads of Department.
Honorary, guest or gift authorship	Authorship is awarded to a hierarchical senior to gain favours or an established academic in a field to further the prospect of getting the paper published.
Mutual support authorship	An arrangement by two (or more) academics to give each other authorship to mutually increase each other's publication contributions.
Duplication authorship	Publishing the same content with different titles in different journals.
Forged authorship	Awarding authorship to authors unaware of being on the author list. Usually, the names of established Western authors have been used by academics in non-English speaking countries to give credibility to their manuscripts in international journals.
Ghost authorship	The omission of the names of authors who have contributed substantially to the work or manuscript writing from the authors' list.
Denial of authorship	Also considered to be a form of plagiarism, this form of abuse entails the publication of work done by others without giving them authorship or formal credits.

them more publications during their research careers, including authorship abuse. In the literature, multiple types of authorship abuse have been identified (Sharma & Verma, 2018; Strange, 2008), and are summarized in Table 2.

Multiple reasons, such as the "publish or perish" hypercompetitive structure of academia may be cited for authorship abuse (Khalifa, 2022). Hierarchical structures can further perpetuate such abuse. For example, in some cultures automatically awarding authorship to PIs or Heads of Department is considered a norm (Grieger, 2005). This practice of honorary authorship to hierarchical seniors also appears to be the most common authorship abuse within the Indian context (Dhingra & Mishra, 2014; Shah *et al.*, 2018). The second most common abuse is the omission of authors (Dhingra & Mishra, 2014). The common victims of such abuse are generally project interns, visiting students, research assistants and lab technicians, and the workforce at the hierarchical bottom in a research group. Arguably, authors should have contributed significantly to research work or manuscript drafting to be credited with authorship. However, a survey suggests that there may be a difference in opinions on what constitutes a "significant contribution" (Guglielmi, 2018), and such guidelines are something that needs to be established via consensus, and delineated and disseminated within the academic community. In addition, there is a wealth of literature that suggests that despite making important contributions to scientific findings, graduate students and technicians often fall under invisible labour and may get overlooked during the attribution of authorship (Jabbehdari & Walsh, 2017). In today's era of multidisciplinary investigations and big data studies, collaborations across cohorts and research consortia have become common. However, authorship guidelines often lack clarity on what constitutes a significant contribution, making this workforce further vulnerable to being overlooked (Fontanarosa *et al.*, 2017). Students are often hesitant to speak up against such practices as they will later require reference letters and career help from their PIs (Martin, 1998). Also, many times it is difficult to gather sufficient evidence to back any allegation. Scholarly journals have taken into notice of such malpractices and many journals nowadays ask to list down specific contributions of each author listed in a research paper.

Limitation on Individual Autonomy

Hierarchy has an immense impact on academic autonomy. The concept of autonomy has been used for both institutions and individuals, and both institutional and individual autonomy are acknowledged to be interconnected (Sancheti & Pillai, 2020). Institutional autonomy refers to the autonomy of a public institute in terms of administration and governance, including its ability to make decisions on financial and academic matters without external influence. Individual autonomy refers to intellectual freedom and academic autonomy to select research topics and decide on research objectives, methods, and execution. It has largely been recognized that institutional autonomy greatly influences individual autonomy (Sancheti & Pillai, 2020). However, for the purpose and the scope of this article, we will focus solely on individual autonomy. Academic institutions like universities are perceived as organizations with a top-down management model (Carvalho & Diogo, 2018), in which academics who occupy management positions or have good relationships with the management exert their authority at the organisational level by influencing decision-making on institutional goals, administration, academic and other activities. At a lower level, PIs exert their authority on their graduate students and postdocs through autocratic delegation of tasks, including academic tasks. Anecdotally, independent or creative ideas are often shelved in favour of low-risk ideas that ensure research papers, and the tasks are hence allocated accordingly. Lack of intellectual freedom was cited as one of the major reasons for dissatisfaction among the scientific workforce in a survey conducted among PhDs and postdocs in academic institutions in Pune and Bengaluru (Samhita, 2019). Such practices inevitably lead to a lack of originality and discontent among independent thinkers.

Academic Bullying

Workplace bullying is a global phenomenon that involves abrasive and hostile behaviour and physical, psychological and emotional domination over the victim by the perpetrator (Ahmad *et al.*, 2017; Gupta *et al.*, 2017). It is characterised by power differences between the victim and the perpetrator, which may or may not be due to hierarchy. Workplace bullying has dire consequences for both individuals and organisations (Ahmad *et al.*, 2017; Gupta *et al.*, 2017). For individuals, it has been linked to burnout and mental health problems; for organisations, an increase in absenteeism, lower engagement, lesser commitment and a decline in productivity of staff have been observed (Ahmad *et al.*, 2017; Newsome, 2008).

A growing number of studies suggest workplace bullying is pervasive in academia. Academic bullying manifests in the form of micromanagement, unnecessary negative criticism or remarks, harassment, discriminatory and exclusionary behaviour, causing intentional delays in projects, and lack of acknowledgement of contributions (Ahmad *et al.*, 2017; Newsome, 2008), and has been linked to adverse effects on an individual's health, lesser engagement and intellectual contribution, and lack of retention in academia (Newsome, 2008). Factors such as work pressure, bureaucracy, lack of diversity in leadership positions, and inequalities in contracts, have been argued to contribute to the phenomenon (Simpson & Cohen, 2004), and downward (hierarchical) bullying has been seen to be the predominant phenomenon in most countries (Ahmad *et al.*, 2017; Keashly & Neuman, 2013). However, most studies on academic bullying have been in Western contexts (Keashly & Neuman, 2010). There has been little discussion in non-Western contexts, especially in cultures wherein social hierarchy and wide power differences in society percolate into the work environment. Ahmad *et al.*, (2017) argued that the social hierarchy in Pakistani society exacerbates the problem of hierarchical bullying in academia. The study further showed that nearly half of academics in Pakistan experience workplace bullying regularly (Ahmad *et al.*, 2017). There is a paucity of data in this regard in the Indian context. However, our cultural similarity with Pakistan and anecdotal data only indicate the severity of the issue. Over the years, Indian media has captured several cases of academic bullying (Chaudhari, 2022; Ramakrishnan, 2018; Singh, 2016; The Hindu, 2019), some of which had dire ends resulting in deaths by suicide. Such reports of academic bullying only further stress the need to have a concerted academic study on the matter.

Compromise on Research Integrity and Ethics

Science needs a system of transparency and openness to thrive. If there is a fear of being judged, ridiculed, criticized and corrected, people are less open to proposing their ideas. This creates a very nuanced problem because critiquing is also central to the scientific method. In hierarchical systems, moreover, individuals may be disincentivized to point out flaws in the work and methodologies of their hierarchical seniors. There is ample research to demonstrate how authoritarian leadership exacerbated by traditional hierarchical structures stifles creativity and innovation in the research ecosystem (Amabile, 1988; Rajan & Lamba, 2023).

The effects of a rigid academic hierarchy and consequent culture are well-studied globally and can be observed easily around us (Martin, 1998). Arguably, such hierarchical structures and practices may have long-term implications for academia and contribute to issues including leaky pipeline (attrition of women or under-represented minorities at various stages of their career progression in academia), brain drain, and a dearth of original and innovative research. However, to substantiate these claims and assess the extent of influence academic hierarchy has on Indian academia, further studies in the Indian context are required.

Possible Solutions

Arguably, academic institutions should have autonomy in setting up their organizational structure and culture. Therefore, we recommend a few possible solutions that can be implemented at the institutional policy level:

1. While hierarchy in a big organization such as a university is necessary for a clear line of authority, supervision, accountability and effective functioning, a flatter or holacratic organizational structure could be promoted at the faculty/departmental level. Shared governance models would encourage all members of the academic community to have the opportunity to participate in decision-making and have a say in the direction of the university. Holacratic structures may be more functional for short-term projects, with smaller teams, with definitive goals; for example, projects within a lab, or for an event. However, flatter structures, with inclusion at different levels, may be more relevant for long-term decisions to address institutional policies. Universities and institutions have deployed student-faculty committees (for example, at Jawaharlal Nehru University) for such community governance models. These models are only suggestive and the same model cannot be suggested for all institutions. Each institution has its own constraints and governance system. It is recommended that institutions adopt practices that allow for efficient community governance. However, exact models, structures, and policies should be decided and evaluated by them.

2. Universities and institutions would need to review and revise policies and procedures that may perpetuate hierarchy, such as those related to faculty hiring, promotion and tenure. For example, the criteria for promotion often prioritize research productivity. As discussed above, due to unequal allocation of resources or malpractices like authorship abuse, a few individuals might have an unfair advantage further perpetuating the hierarchy. The policies that foster a culture that values and rewards contributions – such as teaching, service, or societal engagement – regardless of rank or tenure status need to be promoted.

Similarly, universities and institutions can also take steps to ensure that the distribution of resources and opportunities is more equitable, such as by implementing policies that promote diversity and inclusion in hiring and promotions. For example, affirmative action in hiring staff or forming diverse and inclusive committees to regularly evaluate and monitor resource allocation and prioritize equity and inclusivity in resource allocation or redistribution according to institutional mission and goals.

3. On similar lines, universities and institutions need to promote policies that uphold individual autonomy. Institutionally, several policies or procedures such as cumbersome administrative processes like bureaucratic approval procedures excessive paperwork requirements, or stringent student conduct codes, limit individual autonomy. The management should critically monitor and evaluate such policies and procedures that could be creating barriers to efficient decision-making and academic innovation by stifling individual academic and professional goals.

4. Instead of competition, universities can further inspire collaboration by encouraging mentorship programs for early career researchers and junior faculty, and senior faculty may be incentivized to participate as mentors in the program.

5. Most faculty members have received technical training in their respective fields. However, teaching and mentorship are taken as "learn on the job" skills. As an academic moves up the ladder, mentorship roles and management responsibilities increase. An empathetic, efficient and ethical management is necessary to promote creativity and morale among the junior colleagues and students. Therefore, universities and institutions should provide guidelines and training on skills such as human and resources management to early career researchers, and junior and senior faculty members alike to be prepared for the upcoming roles and responsibilities.

6. Institutions should enforce minimum and maximum work hours for students and employees while retaining discretionary flexibility to accommodate different working styles. A culture that promotes work-life balance should be encouraged.

In addition to the above, at the national level, inclusivity, and diversity in hiring and promotion should be encouraged. For example, at the moment, the Indian government has launched several programs to encourage women in STEM (Mendiratta, 2022). In addition, review and reform of promotion and tenure processes are required to ensure they are fair and transparent and recognize contributions beyond traditional publication-based metrics. Furthermore, the grievance and redressal system for students, early career researchers and junior faculty members should be made easier and strengthened by UGC (India Today Education Desk, 2023).

The Long Road Ahead

Ideally, the primary motivation for academic learning and research should be the pursuit of knowledge and to help society. However, the academic hierarchy tends to give a different motivation for the actions of students and academics, instead of individual advancement. The rigid hierarchical power system breeds and rewards individuals who mould into the hierarchy to secure their future career prospects, thus becoming part of the system and further propagating it, reinforcing a rigid hierarchy. Therefore, bringing about changes in the system is also difficult and a time-consuming process.

Lastly, organizational hierarchy is necessary for huge institutions such as universities. However, we need to learn to function within such organizational structures while respecting people for their opinions and contributions over positions. In our view, as a society, we further need a paradigm shift and evolution in how we view and practise hierarchy in professional and social spaces.

Limitations

To reiterate, organizational structures, policies and procedures, and culture should aid the organization's mission and goals within its operational constraints. While universities and research organizations may share overarching goals of knowledge generation and dissemination, they can vary greatly at a granular level. Similarly, the constraints, structures, and policies among India's numerous universities, colleges, and standalone institutions differ widely. We can't offer generalized solutions for all institutions, and doing so would be counterproductive. Additionally, we have merely touched on various themes, such as responsible research assessment beyond traditional metrics, which we believe are interconnected but beyond the scope of this article.

Through this article, we aim to provide general directional solutions and initiate a dialogue on academic hierarchy and its impact on Indian academia.

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