

7 India: The Knowledge Thief

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Hindi popular cinema has always been a barometer of the social, political, and economic concerns affecting India. It is therefore not surprising that movie pirates have had a fruitful presence in Hindi films, reflecting both the prominent place and contested status of movie piracy in the country. But it wasn't until 2011's *Shor in the City* (Krishna D.K. and Nidimoru 2011) that a book pirate became a central character in a Bollywood film. *Shor in the City* narrates the intertwined lives of three characters in Mumbai from very different class backgrounds. The film opens with one of them, Tilak, planning to kidnap a prominent author from a party. Unlike traditional kidnapers, Tilak is not after ransom but the electronic files of the author's latest novel, which he plans to publish and sell. Tilak, it turns out, is a book pirate—and a barely literate one. His method is to strike up conversations with customers at bookstores to find out which books are popular. He then buys these books, copies them, and wholesales them to children who sell them on the streets of Mumbai.

One of the books that Tilak picks up from the bookstore is *The Alchemist* by the Brazilian author Paulo Coelho. *The Alchemist* takes on an important role in the film, serving as Tilak's method of educating himself and as the means through which he and his newly wedded wife get to know each other better. Stumped by many of the words in the book, Tilak begins to read with an English-Hindi dictionary, educating himself while also developing a relationship to the book beyond its value to his trade. Coelho's *The Alchemist* is not an accidental choice in the film. The book was widely pirated in India and remains very popular, both in mainstream bookshops as well as among pirate sellers on the street.¹ When Coelho was alerted to the fact that *The Alchemist* was being sold by teenagers on the streets of India, he said that he was honored that his book was being sold in "the smallest bookstore in the world" (Bazzle 2015).

Coelho's position on Indian piracy was informed by his experience in Russia. Reportedly, the initial sales of *The Alchemist* in Russia were not encouraging. Sales picked up

after he posted a digital Russian copy on his website, however, and within two years he had sold 100,000 copies. Coelho has since uploaded others of his books to file sharing networks.

The juxtaposition of Tilak and Coelho in the film provides a brief sketch of one of the characteristic forms of Indian book piracy, marked by the small-scale organization of acquisition, copying, and street vending, and focused primarily on the biggest best-sellers. This is the type of piracy that has attracted the most attention from publishers, business groups, and the authorities. For example, a 2014 report issued by FICCI (Federation of Indian Chambers of Commerce), the largest business advocacy group in India, urged authors and publishers to “stand united and fight against the menace of piracy in publishing that was threatening the growth of the sector.”² In collaboration with Ernst and Young, FICCI has also sought to link intellectual property piracy with national security.³

Practices like those shown in the film *Shor in the City* have played an important role in the development of literacy and book culture in India, serving publics for whom the commercial market and the library system have failed to significantly expand access to literary works. As we will see, the intellectual biographies of many Indians pass through such networks. As we will also see, these forms of street and commercial piracy are distinct from the needs and forms of access associated with student life. Higher education creates a different set of challenges, structured by demand for more specialized materials and met by a different constellation of legal, illegal, and contested forms of access. Here, supply and demand relate primarily to the specialized textbooks, monographs, and journal articles required for participation in increasingly globalized fields of knowledge. This chapter explores both sides of this ecosystem—the popular and the academic—and their diverse points of contact in intellectual biographies and institutions that mediate the two spheres, such as public libraries. As in the other chapters in this book, we take a close look at how these issues play out in the lives of students in the social sciences, law, and medicine at several major universities.

As in other countries, this account of India is complicated by complex trajectories of policymaking and institution building, especially regarding libraries and copyright law, and by the rapidly changing environment around publishing and digitization. This chapter tries to distill some of the key histories, developments, and relationships that shape the larger problem of educational access and literacy in India, and the narrower question of how students get what they need.

Academic Libraries Real and Imagined

Let's stay with film references for a moment to look at another exemplary scene of piracy—here with respect to university journals. In 2013, as part of an effort to popularize its academic journal databases in India, Sage Publishing offered a week of unlimited access to students at a leading university in a south Indian city. This was a promotional arrangement intended to encourage the university to subscribe to the service. This taste of access, however, led to an unexpected gulp. Anticipating that the university might reject Sage's subscription costs, a group of students, led by a PhD candidate in literature, downloaded all of the important Sage journals into an offline archive. They called themselves "Pradeep's Eleven"—a reference to the U.S. heist film *Ocean's Eleven*. Within days, the university received a warning and free access was withdrawn. By then, however, the students had assembled a very large archive. This new archive, in turn, was combined with a still-larger unofficial library assembled from other clandestine copying, including material brought by students returning from abroad. This combined library now circulates widely within the university on portable hard drives and flash drives. As students acquire new materials, the collection slowly grows and new versions become canonical. As new students enter the university, the collection is passed on.

There are many ways to unpack this story: as an immature act of theft, as a noble act of sharing and resistance, as a response to a problem of inequitable access, or as a manifestation of a will to collect. Let's put the first two possibilities aside for now. Neither theft nor resistance helps much in understanding the context that produced Pradeep's Eleven or its many less ambitious (and occasionally more ambitious) analogs across the university system. The third and fourth possibilities, however, go to deeper issues that structure the intellectual lives of students. The immediate context for Pradeep's Eleven is the lack of database access at the university: few Indian universities can afford subscriptions to the major academic databases, even with the negotiated discounts that many publishers provide.⁴

Access to Databases in University Libraries

The potential of digital technologies to address the chronic lack of materials in university libraries was recognized early on in India. In 1991, the University Grants commission established INFLIBNET (Information and Library Network), a computer network for linking libraries and information centers in roughly two hundred fifty universities, colleges, and research institutions (Chand et al. 2007). INFLIBNET served as a framework for the creation of a national library catalog (IndCat), whose main purpose is to

make consortia-based access to electronic databases and journals available to researchers and students. Currently INFLIBNET provides electronic access to more than forty-five hundred full text electronic journals at a discounted price, including from leading databases such as JSTOR.

Yet such numbers do not yet begin to approach the scale of the need: in 2014, there were more than 677 universities, 37,204 colleges, and 11,443 other standalone educational institutions in India.⁵ INFLIBNET reaches fewer than 15 percent of the universities and a much smaller proportion of the other types of institution. And even these institutions are sorely oversubscribed.

Even among elite institutions, access remains a serious challenge. Arunachalam and Muthu (2011) noted that, in 2002, the largest academic library in India—the Indian Institute of Science (IISc)—subscribed to only 1,381 print journals (of which 200 were accessible online). The situation improved with the launch of the Indian National Digital Library in Engineering Sciences and Technology or “INDEST” launched in 2003, which enabled consortia-based access to electronic databases, and by 2009 the IISc subscription had access to more than nine thousand journals. While this is an undeniable improvement, in practice it still represents a small fraction of the number of journals typically received by U.S. universities. Columbia University, for example, received 133,831 serials (journal titles and book series) in 2007; Johns Hopkins University received 105,453 and Pennsylvania State University received 88,668. Even a smaller university like the University of Delaware received 29,246 serials. Such discrepancies mark what Padmanabhan Balaram, the director of the IISc, has described as the problem of asymmetry in publishing, which excludes poorer countries from participation in the circuits of global knowledge.⁶ India, in this context, is far from the worst positioned. Citing an example from the World Health Organization, Arunachalam notes that in the seventy-five countries with a GNP per-capita per year of less than \$1,000, fewer than half of medical institutions had *any* journal subscriptions. In countries with a GNP between \$1,000 and \$3,000, 34 percent had no subscriptions; a further 34 percent had an average of two subscriptions per year.

With electronic databases making universal access possible in principle, disparities of this kind are maintained through pricing. This is not the place for a deep dive into the political economy of journal and database publishing, which has seen the emergence of very large aggregators such as Reed-Elsevier and Springer. As in other countries, vendors negotiate prices with universities, leading to wide variation in pricing depending on ability to pay and nondisclosure agreements with regard to terms that preserve the opacity of these practices. Yet some institutional information escapes this secretive process. At the Institute of Mathematical Sciences in Chennai (IMSc), for example, the

total annual budget is around \$2 million, of which \$400,000 is spent on subscriptions to academic journals. Fifty-five percent of this amount is paid to Reed-Elsevier and Springer. In other words, these publishers account for more than 10 percent of the total budget of the school—and more than the entire budget for faculty salaries.⁷

Although this arrangement seems penurious, it is in fact highly privileged compared to the majority of Indian universities. Both the IISc and the IMSc are leading research institutions that benefit from grants from the government as well as private foundations. As V. S. Sunder of IMSc puts it, “barring a miniscule number of institutions (such as IMSc and Tata Institute of Fundamental Research), the majority of universities in India (and even some good research institutes ...) simply cannot afford to access many journals as they are priced today.”

This situation is not new, of course, but the increasing global connectedness of research and educational communities make disparities in access more visible and sharply felt. Indian students and faculty in particular, as peripheral participants in the dominant Anglophone research community, are routinely forced to find other ways to access materials that allow them to participate in global research conversations. Since the 1990s, one of the main imports of Indian students returning from abroad has been the digital archive, downloaded or copied while at U.S. or UK institutions. To a large extent, the Indian research world is still dependent on such trafficking. When Sage opened the gates to its journal database as a way of convincing the university to devote a large part of its budget to journal access, Pradeep’s Eleven was a logical outcome.

The Universal Library

Intellectual constraints of this kind are a fact of life in most Indian universities, and extend to other material conditions such as wireless access and data plans, which limit the use of online archives and favor downloading and local storage. Yet there are other, less material motivations for the types of archiving visible in such cases. What happens if we see Pradeep’s Eleven not in terms of stealing or even the expansion of access, but as a part of the longer history of bibliophilia that shapes libraries—a desire met by institutions in large parts of the West but left to individuals in many Indian contexts. This is the library as a more personal world of knowledge—as a collection shaped more by aspirations for participation in a wider culture than by immediate needs.

The imaginative leap from the personal to the universal archive is very much a part of the cultural history of the technology of books. Most of the important technological changes in publishing—from movable type to offset printing to paperbacks—have been aspirational in this sense. They all enabled more affordable and accessible books,

disseminating not only knowledge but also the desire for access to knowledge. As print grew cheaper, personal libraries became attainable—from bibles in every home to the prototypical “Everyman’s Classics,” which envisioned a 1,000-volume library of world literature “affordable for ... every kind of person, from students to the working classes to the cultural elite.”⁸

How should we think about the relationship between these personal collections and the more institutional history of libraries? This question gains significance in an era in which digital collections can grow far beyond the hundreds or thousands of books that until recently constituted the practical horizon of personal libraries—and that once marked a practical distinction between two types of collection. For students who perceive themselves at the periphery of a richer global system of higher education, the building of large personal libraries slides easily from the personal imaginary, marked by desire for participation in wider communities of knowledge, to a public imaginary shaped by solidarity with other students. The line between private archive and public library becomes very thin in this context, and easily crossed.

This effect is reinforced by the erosion of distinctions between the labor of learning or research and the creation of large archives. Unlike the print-era distinction between the formal archive of the library and the private labor of building personal archives by way of notebooks, private papers, and selected purchases, the rise of digital research blurs the two practices. Every researcher is simultaneously a librarian and archivist as they conduct their work. In India, this is often manifested in a physical process of translation, as researchers circulate in archives and libraries with digital cameras, hand-held scanners, pen drives, and computers drawing in media and texts. In other contexts, it is primarily digital, as the process of research becomes inseparable from the accumulation and management of large corpuses of digital work.

From Alexandria to Shadow Libraries

The idea of a universal library containing all the knowledge of the world has always been a powerful Utopian myth, running from Babel to Alexandria to the Google books project. Less prominent but arguably equally powerful is the idea of the failure of the library—its breakup and, in diminished form, the survival of its fragments. The story of the Library of Alexandria provides one of the most powerful examples of this dualism. No one knows what the Library looked like, or even what it contained. The process of building it began with King Ptolemy I, who sent letters “to all the sovereigns and governors on earth” beseeching them to send to him texts by “poets and prose-writers, rhetoricians and sophists, doctors and soothsayers, historians, and all others too.” Going a

step further, the king also decreed that any scrolls on ships passing through the port at Alexandria be turned over so that copies could be made. The king's scholars calculated that five hundred thousand scrolls would be required if they were to collect "all the books of all the peoples of the world" (Manguel 2011, 22).

What made the Library of Alexandria more than just a storehouse of knowledge was its relative accessibility to scholars and visitors—a degree of access that anchored an unprecedented concept of the reading public. Until that time, the libraries of the ancient world had no such public ambitions. They were either private collections or government archives where legal and literary documents were kept for official reference. By imagining a space where outsiders could have access to all the knowledge of the world, the library expressed a new idea of human culture.

While the Library of Alexandria is rightfully celebrated, it comes down to us primarily through the story of its loss. The destruction of the library was most likely the result of several disasters spread out over several centuries. But the most famous was the (possibly unintentional) burning of the building by Caesar in 48 BCE, during the Siege of Alexandria—a disaster that lives on as perhaps the iconic act of cultural destruction.

What is often forgotten in this story is that there was a "daughter" library whose location ensured that it survived Caesar's flames. According to the Sicilian historian Diodorus Siculus, writing in the first century BCE, this second library was intended for the use of scholars not affiliated with the Museion (the research institute that housed the main library). It was situated in a different part of Alexandria, close to the temple of Serapis, and was stocked with duplicate copies of the library's holdings. The daughter library survived the fire with its materials intact, though it never acquired the same renown as its larger "parent." The two libraries were built on the copying of text at several stages—some offered as gifts or tribute, some acquired through practices that at times resembled maritime (not copyright) piracy. The main library was the symbol of universal knowledge, and of the sovereign authority that built it; the daughter library acted primarily to disseminate and preserve. Many of the digital libraries discussed in this report—Pradeep's Eleven, or BiblioFyL, or LibGen—can be understood in this second register. As the archive circulates, students can claim some slight ownership of and place in wider traditions of knowledge and culture. When the Sage Publishing bills can no longer be paid, the shadow library survives. Reflecting on these shifting purposes and the affective investments they entail, the Argentine essayist Alberto Manguel (2011) writes:

Two monuments that, it could be said, stand for everything we are. The first, erected to reach the unreachable heavens, rose from our desire to conquer space, a desire punished by the plurality of tongues that even today lays daily obstacles against our attempts at making ourselves known to

one another. The second, built to assemble, from all over the world, what those tongues had tried to record, sprang from our hope to vanquish time, and ended in a legendary fire that consumed even the present. The Tower of Babel in space and the Library of Alexandria in time are the twin symbols of these ambitions. In their shadow, my small library is a reminder of both impossible yearnings—the desire to contain all the tongues of Babel and the longing to possess all the volumes of Alexandria.

Ekalavya

An Indian lineage for the shadow library would almost certainly pass through the story of Ekalavya, a minor character in the Mahabharata, the Indian epic with origins in the eighth or ninth century BCE. In the story, Ekalavya is a lower-caste tribal boy who wants to become the greatest archer in the world. In pursuit of this goal, he approaches Dronacharya, the famous warrior (and teacher of the Pandava princes whose story forms the center of the epic) for instruction. Dronacharya, however, refuses Ekalavya: his lower caste status excludes him from martial training. Ekalavya retreats to the jungle but does not give up his dream. Instead, he makes a clay statue of Dronacharya to guide his training. Months later, the princes are out hunting in the jungle. They hear a dog bark, then fall silent. When they find the dog, they discover that its mouth is held closed against a tree by arrows, shot so precisely that they left it uninjured. Of course the archer is Ekalavya. Amazed by this feat, the princes ask Ekalavya to name his teacher. Ekalavya replies that it is Dronacharya. This news is unwelcome because Dronacharya has promised one of the princes, Arjuna, that he would make him the best archer in the world. When Dronacharya confronts Ekalavya, the boy shows him the statue. Although touched by Ekalavya's devotion, Dronacharya feels bound by his promise to Arjuna. He tells Ekalavya that if he truly considers him a teacher, he must offer a *guru dakshina*—an offering that a student makes to a teacher. When Ekalavya agrees, Dronacharya demands the thumb from his bow hand. Ekalavya complies.

This cruel parable provides an interesting point of entry into the contemporary ecology of knowledge. Ekalavya is one of the first knowledge pirates, having created an unauthorized version of Dronacharya as a means of educating himself and establishing, in the process, an unofficial shadow library. He also joins the list of mythical figures punished for stealing knowledge or transgressing the boundaries set around it, from Eve to Prometheus to Pandora. One of the most violent avatars of this injunction can be found in the ancient Hindu text which dictates that “if a *shudra* [the lowest caste] intentionally listens to the vedas [hymns] in order to commit them to memory, then his ears should be filled with (molten) lead and lac; if he utters the veda, then his

tongue should be cut off; if he has mastered the veda his body should be cut to pieces.” (Manusmrithi n.d., XII.4)⁵

The Social and Political Life of Books

These kinds of injunctions are still with us, if in less gruesome form, and they continue to produce tragic avatars. The story of Aaron Swartz, a young man hounded to suicide by government prosecutors for the crime of downloading thousands of academic articles should remind us of their continuing force. Such punishments point to one of the major conflicts described in this study: law and interdiction on the side of the gatekeepers of knowledge, and the power of human curiosity and auto-didacticism among those outside the gates. In places where there are ample resources to mediate between the two, these relationships become very complex, passing through libraries, markets, and other formalized patterns of buying, lending, exchange, and access. Where resources are scarce, such curiosity is fulfilled haphazardly through a range of less formal channels and occasionally violent interdictions. Arul Mani—a teacher, amateur quiz hobbyist, and bibliophile in Bangalore—describes a typical path of discovery through this haphazard landscape:

Sometime in 1985, I was told about fabulous places in the Majestic neighborhood where you could get books really cheap. A relative took me to Upparpet where I saw books hanging like clothes from a clothes line. Looking back, I guess that was my first encounter with pirated books. This man also had second-hand books. I came across an author I’d encountered already by the simple accident of going to the local library. This was *A Bend in the Ganges* by Manohar Malgonkar, a partition-era narrative. It sounded completely thrilling. I looked around and I didn’t recognize any of the other authors. Then it started raining. That was a tragedy because I could see shop after shop of books. That was my first encounter with Bangalore’s second-hand bookshops.

The other way to encounter books was the Bangalore City Central Library. My father got me a life membership for fifteen rupees. It was subsidized by the government and they put energy and enthusiasm into it. They got new books regularly and there was a reference section, a magazine section, and a borrowers’ section which had books in English, Kannada, Tamil, Malayalam, Hindi and Telugu. Many of my discoveries as a young reader happened by accident simply because of this subsidized government service. I discovered Graham Greene and George Orwell and many guys I wouldn’t want to read now. But you read everything you got your hands on. The City Central Library was easily one of the kick-starters for the reading that I did at the time. You didn’t really read at that time by way of recommendations. I think that the way that most people read was in a sort of police state where children had to show their parents the sort of books they read and you listened to elders on what to borrow and what to read. My parents were quite busy with their own stuff so they didn’t really care about this. I read a whole bunch of authors much before I was supposed to.

The collecting thing started because of the Upparpet trip. Every time I had money I would go back and spend it there. The only things I could afford to buy were paperbacks. There was one place known as the Five Buck Joint. It had no signboard of any kind. It was in some basement. The owner sold remaindered books. Publishers would remainder books by splitting them into three and then they would mix all these sections up and sell them to second hand bookstores. So some enterprising soul thought that if you bought one lot and painstakingly found separate triplets and sewed them back together and then put newspaper wrapping them, you could sell them for five Rupees.

My father told me I must always bargain. Every time I went home with a book he asked me what I'd done to beat the price down. So this was part of the routine. I said I'll give you ten and we haggled and haggled. I walked away and then he called me back and gave it to me for twelve. At twelve rupees I could go home with three. Through my university years and to the present day, the Shivajinagar guy is one of the people I buy from. He is full of sorrow and indignation at how the trade has been taken over by Blossoms [a bookstore], which effectively dredged the bottom out of the business. All the small players, the ones who had stalls outside Cauvery Bhavan, or the City Civil Court, all these guys got out knocked out of business. Plus, in Upparpet those places began to be rebuilt in a big way. So all these holes in the walls where people did business disappeared.

In the '90s, Bangalore was full of bookshops. There was Fountainhead, Premier, Gangaram's, and Higginbothams. Strand came to Bangalore. They closed shop last year but when they came they were a big thing. On Ulsoor road there was a place called R 'n B which stood for Restaurant and Books. You could drink coffee there and look at the books, you could read them if you didn't smudge them. It was an experiment that lasted a year before they folded. It was replaced by another shop called the Bookery which lasted for about two years. The only ones still running are Higginbothams and Blossoms.

I began hearing about ebooks way back in '88 or '89. My first e-book actually was some Jasper Ford novel that someone mailed me a copy of. I had to download some software to read it on my computer. I found I quite liked it. I didn't really object to the experience. Then at some point my sister gave me a Kindle and I became a devotee. At one point I went slightly crazy—I remember when I saw the first episode of *Game of Thrones*. There was a moment where the zombies emerge from the snow and hunt some people down. I decided to read the books. But they were not available. Blossoms didn't have a copy. So I looked online and The Pirate Bay had all of them. I downloaded them onto my Kindle and went through five novels in about two weeks.

When you move from an economy of deficit to an economy of surplus, your energies go into stockpiling rather than reading. You're building surpluses with more energy than you're actually doing anything about it. In that sense, the physical book and the electronic book are roughly the same for me. At home I have very little space because I'm constantly piling up books that I think I will read at some point of time. There was a moment in my life, I think going back to the time when I was 28–29 when I could say I read about half the books I had. And with a little effort, that half became 60–75 percent. Then I lost control. The availability of books changed dramatically and I was buying more than I could read. The same happened with the e-books as well.

There's a purity to knowing with some certainty that you're never going to get to the end of the pile. You see a book, you see a possibility, you see a version of yourself and that version is

so pleasing to the eye that you buy the book. It's your way of being that person for those 3–4 seconds, and then you never return to it. The surplus confronts you in different ways, a room full of books that you haven't read is harder to ignore than a hard drive that you can just put away.

The Unfulfilled Public Library

Mani's story suggests the range of other infrastructures and forms of circulation that shape the world of the book in India, in relation to and sometimes in tension with the traditional library. Libraries are a complicated topic in India—a vessel for the hopes of reformers and educators but never one that enjoyed the sustained support that would allow them to meet Indian needs.

The history of modern libraries in India can be traced back to the colonial period with the establishment of the first public libraries in Calcutta, Bombay, and Madras (Kalia 1974). The use of the word “public” in this context was largely a misnomer. These early institutions were subscription libraries that charged fees for the use of books. Many were run as adjuncts to commercial enterprises by officers of the East India Company. The development of libraries within institutions of higher learning occurred in fits and starts, hindered by the fact that universities in India remained primarily “affiliating universities”⁹ in the colonial period, with no research role for many decades after their establishment. In 1902, a Universities Commission established by the colonial administration observed that “of the present University libraries, there is not much to be said. ... The library at Madras appears to be entirely neglected; Bombay has a good collection of oriental and other books; but the library is little used by graduates and hardly at all by students.”¹⁰

In an effort to remedy this neglect, the Universities Commission recommended making an accessible library a prerequisite for granting colleges university affiliations. For the most part, however, improvements in both the public and university-based library infrastructure were modest, with a few notable exceptions at the state level, such as the state of Baroda, where the Maharaja Sayajirao Gaekwad III pioneered the creation of a network of public libraries that collected in local languages and reached into rarely-served rural areas. Broader action on libraries did not emerge for several more decades. When it did, it was due largely to the work of S. R. Ranganathan, a mathematician-turned-librarian whose vision and advocacy on behalf of libraries helped define the institution in the post-Independence era. Ranganathan's Model Library Bill, passed in 1930, and Model Public Library Bill, passed in 1942, supported the establishment of public libraries and created a framework of public financing that went some way toward addressing the chronic weakness of the system. Both efforts were organized

around Ranganathan's "five laws" of library science, articulated in 1931, which committed the library to a democratic, open, and evolving mission:

1. Books are for use.
2. Books are for all.
3. To every book its reader.
4. Save the time of the reader.
5. The library is a growing organism.

The first law challenged the fetishized preservation of books that dominated the work of many Indian libraries. Instead, Ranganathan argued that the primary purpose of the library was to facilitate access—a broad concept that encompassed everything from location, to hours, to building architecture, to the skills of library staff. The second law laid out an egalitarian vision in which the library serves all users regardless of age, gender, class, location, or disability. The third law referenced the role of librarians to make connections between users and books. The fourth law reiterated the primacy of the library users in relation to forms of access, such as maintaining open shelves for browsing (in contrast to the common practice of making available only catalogs of books for order). The fifth law insisted that the library is an evolving institution that should change to accommodate new uses. For Ranganathan, this included fundamental matters such as the organization of the physical plant, classification systems, and administration. Above all, Ranganathan's "laws" placed positive obligations on librarians to maximize access at the level of reader services and in the curation of materials.

Post-Independence education policy strongly emphasized the role of public libraries. Many Indian independence activists were convinced that a strong library system was a prerequisite of mass literacy, which in turn was a foundation for national development. As the historians Sandhu and Sandhu characterized this view: "India could not make any progress with its plans of development ... unless the illiterate rural masses were given a certain amount of literacy. That created a new need for the village libraries, which could serve as centers of adult education and information" (Sandhu and Sandhu 1979, 269).¹¹

The post-Independence tone for university libraries was very similar. As the 1948–1949 Radhakrishnan Commission put it: "the library is the heart of all the university's work, directly so, as regards its research work and indirectly as regards its educational work, which derives its life from research." The current state of these institutions, however, was woeful: "ill housed, ill stocked and ill staffed."¹² Despite the strong rhetoric, plans for stronger official support continued to stall in the face of financial and political constraints. In 1948, Ranganathan drafted national legislation for libraries (the Union

Library Bill), but the bill was never introduced. Subsequent national-level attention to the issue was intermittent and generally attached to broader discussions about educational reform. These efforts produced some modest progress on the critical funding questions, but no large-scale campaigns or investments. In 1957, Ranganathan was called back to evaluate progress on university libraries. The resulting report led to new funding mechanisms based on the size of the student and faculty population served.¹³ A few years later, the Kothari Commission (1964–1966) made further recommendations, including a requirement that before establishing a new university, college, or department, provisions had to be made for an adequate library—a significant decision given the rapidly growing student population.

The stream of commissions, reports, and other official actions played a powerful role in shaping the public imagination regarding the role and importance of libraries. But significant national programs never emerged. After the failure of the Union Library Bill in 1948, library legislation was left to the states. Few made them a priority. As of 2006, only ten of India's twenty-nine states had enacted Public Libraries Acts, and these of varying quality. Among them, the Mysore Public Libraries Act of 1965 is generally viewed as "the most progressive and forward-looking of all the Library Acts," insofar as it established separate Library Authorities for every city with a population of 100,000 or more, levied a new tax (on the preexisting vehicle tax) to fund libraries, and declared library employees to be state employees, which allowed their salaries to be paid out of state funds instead of through civic or district authorities.¹⁴ Despite these efforts, some observers put India "a century behind in matters of library legislation," compared to Great Britain and the United States (Heitzman and Asundi 2000, 142–143).

The reliance on state-level policy for public libraries resulted, predictably, in haphazard development, a lack of entrenched political support, and broad scope for caprice and corruption at local levels. An illustrative example is the state of Karnataka's central library, which is one of the oldest public libraries in the country. In the 1960s, Karnataka passed what was widely viewed as a model Public Libraries Act (drafted by Ranganathan), under which the municipality of Bangalore was tasked with collecting a 6 percent surcharge on property taxes for improving its libraries—a step usually reserved in India for extraordinary expenses and emergencies. The infusion of funds successfully expanded the Bangalore library system, which was arguably India's best in the 1970s. But this support was not sustained. Bangalore's City Central Library abandoned public borrowing in 1985. Its card catalog was destroyed during a renovation project in the early 2000s, but officials waited for five years before starting work on a digital replacement. This catalog remains unfinished, making it very difficult to actually find books. The physical plant of the library is also in a shambles.

In the last few years the library has found itself stuck between various disputing local bodies. Approximately \$2 million is owed to the library by the local municipal body, which is suffering its own financial crisis.¹⁵ According to the deputy director of the City Central Library, the budgets for Bangalore's 120 public branches were cut by close to 50 percent in a single year (2012) even as the amount of money raised in the name of libraries increases as a result of the growth in real estate transactions.¹⁶

Stories like that of the Bangalore central library mark the decline of the public library in India as both a civic ideal and public infrastructure. Although the Internet has only barely begun to impact the book ecosystem in India, it has had a much faster and more powerful effect on other information services that were once among the library's primary functions, such as access to newspapers,¹⁷ which formerly drove a large portion of patron traffic. This larger challenge to the core purposes of the library as an institution is not unique to India: all libraries confront the question of the value they add beyond the expanding range of online information services. But it has given rise to a line of official Indian thinking on the subject.

In 2012, the Government of India established a National Mission on Libraries based on the recommendations of the National Knowledge Commission (NKC)—a group set up to advise the government on measures needed to make India competitive in the knowledge economy.¹⁸ The aim of the National Mission is to digitize and link the collections of the 9,000 public libraries in India. The significance of the Mission is that it is the first major public intervention in rethinking libraries since the mid-1980s.

The National Mission is complemented by semi-private efforts such as the Digital Empowerment Foundation (DEF) and the Developing Library Network (DELNET), which are supported by the Bill & Melinda Gates Foundation to upgrade public libraries in India. Currently, most of the public libraries are focused on digitizing collections. None of them provide access to electronic databases and journals.

Publishing Politics

By most accounts, there is no consistent or reliable data on the size and scale of the publishing industry in India.¹⁹ According to the Federation of Indian Publishers, however, there are more than sixteen thousand companies (some sources say 19,000),²⁰ responsible for around ninety thousand new titles a year in twenty-four languages. English and Hindi language titles account for around 50 percent of the market, with roughly equal shares for each language. All such estimates are complicated by the fact that perhaps as many as a third of these publishers do not register their titles with the national ISBN agency. According to the New Delhi-based German Book Office, total

revenues in the sector were around \$2 billion²¹ in 2012 with a growth rate of 15 percent per annum.²² Of this, the academic market is estimated to represent 40 percent, which would place its value at around \$800 million. Academic publishing is a heterogeneous market dominated by state publishers in the area of widely used textbooks and by foreign publishing firms (or their offices in India) for more specialized materials and monographs. Independent Indian publishers fill the wide range of niche markets, especially for non-English and non-Hindi materials.

Nationalization of the Textbook Market

Together with library advocacy, the establishment of a large government role in textbook publishing was one of the pillars of post-Independence educational policy. Compared to library advocacy, it was much more effectively implemented. Some of this change responded to (and was enabled by) the disruption in commercial publishing after Indian independence in 1947. Dominated for decades by UK publishers, these firms temporarily retreated from the market, creating an opening for indigenous firms. These grew in an ad hoc manner to meet the expanding demand. Because there were very few domestic publishing companies, many branched out from bookselling, wholesaling, and importing. The first major Indian publishing firm was the Asia Publishing House, which was also the first to implement editorial and production standards comparable to those of the international firms. But the overall quality of indigenous publishing during this period was low, resulting in a growing import market for textbooks, literature, and more specialized materials, initially from the United Kingdom and then the United States. The turning point in the consolidation of the import market was the U.S. Wheat Loan program.

Books for Wheat

In the early 1950s, the most pressing problem in India was not books but food shortages. To support the newly independent country, the United States passed a bill in 1951 to loan India \$19 million to buy two million tons of U.S. wheat. The repayment terms reflected a mix of altruism, interest group lobbying, and Cold War diplomacy: interest payments on the loan were directed to U.S. publishers for the purchase of American books, periodicals, and equipment for Indian libraries. Part of the money was also spent on the exchange of scholars and librarians between the two countries. Altogether, Indian libraries received around \$1.4 million in American books, \$160,000 in equipment, and \$115,000 on travel and study grants.²³ The backdrop to such assistance

was the Cold War competition between the United States and the USSR over ideas and culture—especially in the newly decolonized, “nonaligned” countries. This effort took many forms and involved many U.S. government agencies, including the United States Information Service, which was quite open about its goals:

The Agency promotes the translation and distribution abroad of American books which illustrate important aspects of American life and culture or which contribute significantly to the exposure of communist theory and practice. Most of these books are sold through existing or newly developed commercial channels. Many are used in schools or universities or are made available for supplementary reading.²⁴

The 1950s and early 1960s were the heyday of American Cold War book politics, resulting in the publication of roughly 80 million copies of 9,000 titles in fifty-one languages—almost all distributed in the Third World. In India, such programs accounted for around fifteen hundred titles in English and Indian languages between 1951 and 1972.²⁵

By the mid-1950s, this ideological competition had entered into Indian political conversations about the need for cultural and educational independence from the Cold War powers. By the late 1950s, the Ministry of Education was expressing concern that Indian textbooks should reflect a “national” approach and that the use of “irrelevant” foreign books should be ended. These arguments aligned with the interests of the emerging Indian publishers, who viewed the books for wheat program as putting them at a competitive disadvantage.²⁶ The main outcome of these debates was the creation of large, new publishing organizations at the national level, complemented by a wide array of parallel organizations and policies at the state level. The NCERT (National Council of Educational Research and Training) was the first of these national bodies, established in 1961 to develop “model” textbooks that would lend themselves to easy translation and printing. The national government also founded the National Book Trust,²⁷ the Publication and Information Directorate, Sahitya Akademi, Lalit Kala Akademi, the Children’s Book Trust, and publication wings of research institutions like the Indian Council of Social Science Research (ICSSR).²⁸

Many of these new organizations had complementary and sometimes overlapping missions. The National Book Trust (NBT), for example, was charged with encouraging the production of quality reading materials at moderate prices, and promoting vernacular editions. The Ministry of Education and Social Welfare established a separate division to promote books published by Indian publishers. A National Book Development Board was set up in 1967 to create guidelines for the development of Indian book publishing in the context of the development needs of the country. This period also saw a number of vernacular-language publishers enter English-language publishing.²⁹

Throughout, there were private publishers involved in the production of textbooks, guides, and supplementary materials, but they remained marginal compared to the role of the state.³⁰ Currently, the government is estimated to be responsible for 20 percent of the books produced in India.

As a result of these measures, secondary education and lower levels of higher education have been served mostly by standardized, publicly subsidized textbooks since the 1960s. In most states, the government is also the major purchaser of textbooks. Although the quality of these editions relative to imported materials has been regularly debated, government subsidies and lower domestic royalties introduce clear cost advantages, even relative to the lower-priced Indian editions of foreign textbooks.

The price of textbooks remains a highly political issue in India, with national-level efforts complemented by diverse state-level subsidies to ensure that prices do not rise.³¹ The price and availability of textbooks are also highly politicized at the local level. Kerala—the only state with a 100 percent literacy rate—saw riots in 2015 over delays in the printing of school textbooks.³² The controversy started with a decision by the state government to outsource the printing—a role traditionally reserved for the state-owned Kerala Books and Publications Society (KBPS).³³ According to the protestors, the new publishers delivered fewer than half the needed textbooks by the start of school (with a shortfall of around twelve million). Opposition parties argued that privatization would make textbooks much more expensive. In July, activists from the communist parties took to the streets in protest. The demonstration turned violent and the police resorted to tear gas shells and water cannons to disperse the protestors. After the riots, the chief minister launched a high-level investigation of the delay. The opposition, in turn, demanded the resignation of the education minister and a judicial probe.

Higher Education Publishing

The market for more specialized texts in higher education is organized differently than that for elementary and secondary school textbooks. Although basic and introductory university textbooks often remain subject to state subsidies and provision, public support plays little to no role in the market for professional or research materials. In these areas, private publishers and importers play the dominant role. This was not for lack of effort to expand the state model into these areas. For a period during the 1970s, the government attempted to replicate a nationalizing strategy that would curb the importation of foreign books. In 1973, the central government instructed university libraries to order imported books only via the State Trading Corporation (STC), which was responsible for imports and exports more generally. Critics denounced this measure as

a limitation on the freedom of information, since the STC could restrict books coming into the country. Libraries opposed the plan as well, based on pressure from publishers and because they feared that obtaining imported books would become more difficult. The initiative was abandoned before it was ever fully implemented, partially due to opposition from the publishing community, but also because the Indian Government was not adequately prepared for the complexity of managing book importation.

The influence of U.S.-sponsored book programs was also critical in this early period of contestation of the market. The American “Standard Textbook Program” placed 1,000 “low-cost” textbook titles on the market in India in fields where suitable Indian books were unavailable.³⁴ The U.S. Information Service also subsidized the production of hundreds of titles aimed at the general book market. These included biographies of Presidents Abraham Lincoln and Richard Nixon, accounts of the Vietcong, and other generally pro-American and/or anti-communist titles offered to Indian publishers, with production subsidies of up to 80 percent.³⁵ Although successful on its own terms, the book program made it difficult for Indian publishers to compete in unsubsidized areas, including in the high-value professional markets where Indian books were either available or could have been quickly produced. Because some Indian publishers benefited handsomely from the program, the initiative remained a source of considerable controversy.

This environment began to change in the 1970s. U.S. library and book subsidy programs waned and were ultimately defunded under the Reagan administration: formal ties between U.S. publishers and the U.S. Information Agency ended in 1980.³⁶ Indian efforts to replicate the foreign licensing model for textbooks in more specialized markets, moreover, proved challenging. As Mohan Primplani, managing director of Oxford-India Book House in the 1970s put it, foreign publishers were reluctant to lease out rights as “they would rather sell 100 copies of their own copy rather than 1,000 Indian copies.”³⁷ Even when reprinted, the price of foreign works without the subsidies was often exorbitant and unaffordable for Indian students.³⁸ According to Primplani, this is what motivated him to chase Indian authors “and gear them to write for the student market.”

Through this process of publisher-led market development, historian Ramachandra Guha argues, the Indian social sciences and humanities came of age in this period.³⁹ Scholars like M. N. Srinivas, Romila Thapar, Kaushik Basu, and Ashis Nandy were, who all went on to become distinguished global scholars, published their early works overseas—with Cambridge University Press, the University of Chicago Press, Blackwell, and other presses. But Indian editors, especially Ravi Dayal, then with the independent Oxford University Press–India,⁴⁰ had growing success in persuading them to publish

their subsequent books with Indian presses. By the end of 1970s, Dayal and Oxford University Press had shifted the locus of scholarly publishing on South Asian subjects out of the West.

Despite this process of local development, the academic publishing market remained a highly uneven one. Overall, Indian authors remained a small part of the market for specialized academic work in India. Publishing was, in effect, a “two-speed economy”⁴¹ with a small but highly developed foreign-owned or foreign-operated publishing sector running alongside a large but underdeveloped local sector—particularly in regard to journals. As Eric Antony Brotchie put it:

In the upper speed of this economy, the neo-colonial infrastructure for the production of English journals and monographs by foreign conglomerates dominates the visible output in papers, theses and monographs. As in many Western nations, the best and brightest scholars in large research institutes and universities usually approach, or are (rarely) approached by, these conglomerates seeking submissions for journals. Failing this, researchers simply publish through their research institute, a process usually funded by the Indian government.⁴²

With the emergence of digital technologies and the Internet, this market structure has come under further pressure—though to what eventual extent remains unclear. Smaller publishers, freed from the worst constraints of physical distribution and marketing across a large and diverse country, have made inroads into the secondary tier of the academic publishing market. Some of this growth is driven by the formalization of publishing requirements for academic promotion, which creates much greater publishing demand from Indian academics than the top academic journals can accommodate. Some of these publishers use open access models, simultaneously addressing the issues of cost and distribution that have been the first-order problems for the domestic market.

Book Piracy

Book piracy is widespread in India but has tended to remain confined to a narrow segment of bestsellers due to the small scale on which distribution is typically organized. The most visible form of this trade is carried out by street vendors, often children, who sell books at traffic signals.⁴³ Distribution also extends into more organized bookselling in street markets—sometimes indistinguishable from or mixed in with legitimate trade. As reproduction and printing technologies have grown more sophisticated, the organizational scale of this activity has tended to diminish rather than grow—no longer requiring large capital investments in printing presses or large print runs, and passing instead through figures like Tilak from *Shor in the City*.

Unlike DVD piracy in India, where limited legal availability and very low costs of reproduction resulted in a great diversification of the materials available on the market, the smaller-scale distribution structure of book piracy imposes tighter market discipline. As Nilanjana Roy argues, “The book pirates always get it right: they anoint a few (and only a few) literary writers (Amitav Ghosh, Jhumpa Lahiri, Vikram Seth), they know when the market shifts from an obsession with *The Secret* to books by Indian authors on diets” (Roy 2014). Such selection practices make commercial book piracy a particularly poor fit with the academic market, where mass appeal is rarely a factor. It is almost impossible, consequently, to find academic titles pirated and distributed in a mass scale. Copying in the academic market is ubiquitous, but passes primarily through copy shops located near university campuses, which cater to the on-demand, small runs required by classes and individual students and faculty.

How Students Get What They Need

As usual, students find ways to circumvent the limitations of the main institutional forms of access, from the weakness of the library system to the relatively high-cost commercial publishing market. Our exploration of these practices involved a survey of approximately three hundred students at Delhi University, Maulana Azad Medical College, and the national law schools (Kolkatta, Bhopal, Hyderabad, and New Delhi)⁴⁴ within three disciplines—law, medicine, and social sciences—in 2013. We also held six focus group discussions with approximately eight students in each.

As in the other country studies in this volume, we found relatively little student purchasing of new materials—though these results differed sharply by field. Nearly all of the medical students (91 percent) bought new editions of the major text and reference books—motivated, many reported, by the value of updates and the importance of high-quality color diagrams, which are expensive and difficult to reproduce.⁴⁵

Even within medicine, however, practices appear to vary significantly. Nearly all of the one hundred medical students in our survey were undergraduates. Several highlighted the difference between the undergraduate and postgraduate tracks with respect to the type and availability of materials. As one student put it: “Postgraduates use xeroxed copies of books much more frequently because the costs of the specialized books go up quite steeply and also because as postgraduates we have to read a variety of books, not just one or two books per subject, as is the case in undergrad. Otherwise, an average student would spend \$500 on just reading material.”

Law and humanities students, in contrast, who bought new materials much less frequently—28 percent and 27 percent, respectively, reported doing so for their

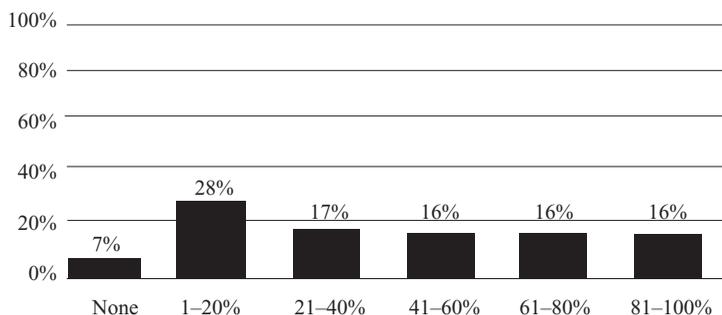


Figure 7.1

How much of your material is purchased new?

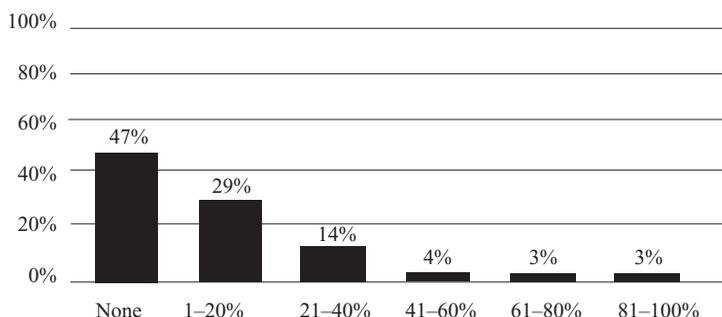


Figure 7.2

How much of your material is purchased used?

coursework. Among the law students, textbooks or statute books useful after graduation were among the most frequently cited “new” purchases. Sharing used textbooks within the student body is common, with significant numbers of respondents describing practices of borrowing from older students. But there is no well-organized market for used materials in India. Unlike the United States, which has an organized second-hand book market that works through commercial websites like Amazon and Chegg, the second-hand market in India is primarily a street-level operation within the book-buying neighborhoods.⁴⁶ Half of students had never purchased used materials. Only around 10 percent had purchased the majority of their materials used.

Photocopying is ubiquitous and, for many students, provides the majority or entirety of their access to materials. Among Delhi University students, 55 percent copied at least 40 percent of their materials; only 7 percent copied none of them.

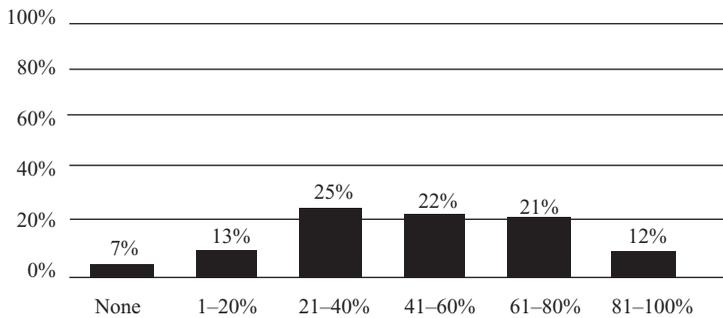


Figure 7.3

How much of your material is photocopied?

Students in the humanities and social sciences led the way in this category by a wide margin: over 50 percent reported copying at least 60 percent of their materials. Among law students, 29 percent did so. Medical students, in contrast, were far less reliant on photocopied material: none crossed the 60 percent threshold in the survey. A bit over half reported lower levels of copying, ranging between 20 percent and 60 percent of materials.

Differences in the types of materials used in the three curricula explain much of this difference. In the case of the social sciences and humanities, much of the curriculum—especially at the graduate level—consists of expensive theoretical or philosophical texts.⁴⁷ Because India is a common-law country that relies heavily on English and American precedents, many of the more analytical textbooks used by Indian law students are foreign books,⁴⁸ and these are absolutely unaffordable. Often students only need a few pages or, in some cases, chapters of the books.

Consistent with the stronger demand for new materials, the average spent on materials for medical school was significantly higher than in other fields. On average, medical students spent just over \$100 per semester on new materials. Law students reported spending around \$20 per semester; humanities and social science students about \$22. Reported expenses on photocopies were much lower and show less variation, averaging \$8–\$15 per semester in the three cohorts.

Differences in reported spending on new materials also closely track ability to pay across the three fields. Students in medicine come from wealthier families by a large margin. Seventy-three percent reported family incomes over \$1,200 per month—a level that places them in the 0.11 percent percentile in Indian family income.⁴⁹ None reported income under \$600 per month. Among law students, 54 percent met or surpassed the \$1,200 threshold. Among humanities and social science students, only 25

percent did. Humanities and social sciences also had the highest percentage of low-income students by a wide margin, with 32 percent reporting family income under \$600 month (vs. 18 percent in law and none in medicine).

Much of the motivation for photocopying over buying new has a clear economic basis. Materials are expensive and student (and family) resources are often highly constrained. It is worth noting, however, the social dimension of copying and text sharing identified by some of the students. As one observed, “texts prescribed in our class were not available for all students, so we had to photocopy and exchange texts amongst ourselves. I think, in hindsight, it was probably one of the major reasons why we as students of the same class hung out much more with each other, discussed the texts (among other things), and eventually became friends.” In this and many other examples throughout this study, the building of shadow libraries is a community practice.

Digital Access

Digital access has been slow to emerge in India, both in the commercial sector, where major vendors like Flipkart and Amazon have developed substantial e-book storefronts only in the past four years,⁵⁰ and in the library sector, where the pace of development has been glacial. This is true of scholarship in general, but particularly in regard to domestically authored work.

Although there have been periodic efforts to computerize libraries—generally in reference to creating catalogs and providing Internet access⁵¹—efforts to develop digital collections have been scarce and efforts to address the legal and market issues impeding digitization are nonexistent.⁵² Despite the obvious transition toward digital modalities of discovery and reading, and the chronic failures of the library system, there are no successful large-scale digitization efforts.⁵³ In contrast to intense independence-era advocacy for libraries, the challenge of expanding access in the digital era has fallen off political agendas. Local efforts remain small and lack coordination or even communication among them. As a result, the same lessons are learned, forgotten, and relearned. The same failures are experienced repeatedly.

Uneven economic growth has exacerbated this fragmentation. As Banerjee notes, “[at] one end of the spectrum the country can boast of a highly specialized information retrieval system”; at the other, many in the Indian populace lack access “even to basic reading material or advice,” much less to the databases or information networks available to better-funded libraries.

In our survey, students in both law and social sciences reported widespread use of online resources for their classes; in both cases over three quarters reported doing the

majority of their work this way. Law students, in particular, have become dependent on online access to case law. The majority of this access passes through subscription-based access provided by the university, including the legal databases Manupatra (100 percent), LexisNexis (71 percent), and HeinOnline (43 percent). Lower but still significant numbers of students also reported using databases to which the university *did not subscribe*, including Westlaw, Walter Kluwer Online, Halsbury's Laws of India, and Encyclopedia Britannica (14.28 percent). Survey responses and faculty interviews suggested that, in these cases, access was based primarily on passwords shared by members of other institutions. Even this level of access is limited to India's roughly ten elite law schools. The average law college across the country has no such access.

In the school of humanities and social sciences, curricular and research needs are organized differently and still highly dependent on books and articles. As we have discussed, there are no affordable legal frameworks for acquiring either outside the contested arena of photocopying. The digital book ecosystem for academic work is very poorly developed and the terms of access to many of the large scholarly databases, such as Sage, have yet to be worked out—even in universities as relatively well off as Delhi. The use of online resources for studies and research is high, but with much higher representation of illegal services. Over 30 percent of social science and humanities students indicated downloading most of their material from pirate sites, with nearly a quarter citing the defunct pirate Library.nu archive as a major source (compared to around 20 percent overall).

These practices are complemented across all three disciplines by copying and sharing among students. Over 80 percent of students shared digital files, though infrequently in large quantities. Students at the National Law School described an online electronic archive (an informal intranet) available at the student hostels, composed of articles downloaded from the major legal databases as well as sources like Library.nu, to which students would add from year to year. This includes a "First-Year Folder" of materials passed down to incoming classes, as well as a database of old projects written by senior students.

This is not a well-organized effort, but rather a matter of custom among upper classes. It is also typical of the lack of institutional support for managing learning materials at the university. None of the three schools surveyed used learning management systems or similar tools to manage access to class materials. Students and faculty provide their own such services, relying heavily on email, followed by Facebook and Google Docs.

A large majority of students, accordingly, are shadow librarians by necessity if not choice. Students bear primary responsibility for managing their own libraries of PDFs of articles or other research. Such collections are very common, ranging from 73 percent

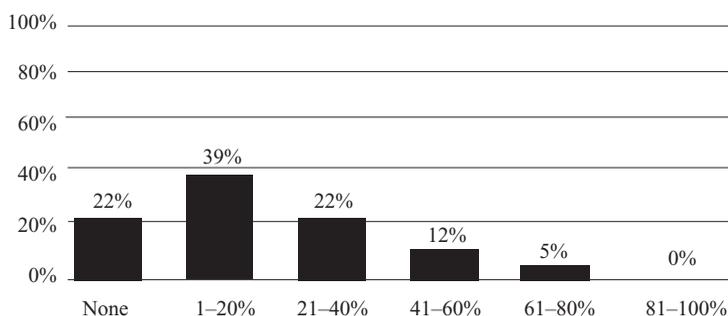


Figure 7.4

How much of your material is copied (digitally) from other students

of medical students to 80 percent of law students. Despite these overall similarities, the humanities and social science students tended to have the largest collections by a wide margin. Where law student collections averaged one hundred articles, collections in the humanities and social sciences often ran much higher, with 10 percent of respondents estimating their collections at one thousand or more articles. Here, as in other areas, we see the combined effects of an expensive curriculum, comparatively low incomes, and weak legal digital access. Here we see the origin story for Pradeep's Eleven, BiblioFyL, and many other shadow archives

Predictably, reading habits also track disciplinary differences in the use of materials—particularly online databases, photocopies, and textbooks. Sixty percent of law students indicated that they do most of their reading for classes on a computer screen. For humanities and social sciences, the number was 44 percent; for medicine, only 6 percent. Tablet and e-reader use was minimal in all groups.

These are relatively high rates for digital reading compared to other country findings, where students demonstrate a strong preference for print. The practice also appears to extend well beyond classroom materials. In spite of the low penetration of tablets and e-reading devices, nearly 50 percent of respondents possess e-book collections, strongly implying habits of acquisition that predate the launch of the major book portals. Consistent with the problems of pricing and availability in the legal digital market, few of the respondents buy e-books. Across the surveys, there was only one individual who read e-books and *did not also* download them via P2P services or file locker sites. Such common use of file sharing sites for e-book acquisition was corroborated in questions about music and movies. Among the 82 percent of students that share course materials digitally, three quarters also shared other types of media—particularly music and film. Only a small percentage (5 percent) acknowledged using pay sites like iTunes. Although

legal digital markets are emerging in India, they have not yet provided compelling alternatives for students.

Enforcement and the Delhi University Photocopy Case

In most university libraries across India, most books are available in only a single copy, which has to be shared among all the students. This scarcity has a direct effect on library policies. At the major law schools, for instance, books can be borrowed only for a day, which means that a book is often borrowed not to read but to photocopy. By the same token, there is often only a single photocopying machine in the library, which in turn gives rise to networks of copy shops around universities that provide cheap reproduction services. Near Delhi University, for example, where we conducted part of our survey work, there is an entire neighborhood comprised of such shops. This network plays the dominant role in providing access to materials, serving (according to our survey) 85 percent of those who photocopy, including nearly all of the students in law and social sciences. Although publishers have often complained about the photocopying of academic materials, these complaints had never translated into legal action. The ubiquity of the practice made enforcement controversial and, indeed, potentially destabilizing in a country where rising textbook prices could lead to riots. At a minimum, it guaranteed bad press for publishers who needed to retain students as customers. The Delhi University photocopy case (as it has become known) ended this policy of toleration. In 2011, three publishers—Oxford University Press, Cambridge University Press, and Taylor & Francis—sued Delhi University and a photocopy shop on its premises for unauthorized distribution of coursepacks to students—with a claimed \$100,000 (six million rupees) in damages.

The details of the case were unusual. The shop, Rameshwari Photocopiers, was given space on the campus of the School of Economics following an open tender, with a later agreement that it would copy 3,000 pages per student free of cost in lieu of payment for an operating license. Faculty, in turn, could assign course materials that could be taken from the library (or other sources) by students and submitted to the photocopy shop. The shop would then circulate the combined photocopied materials to the students at a rate of Rs 0.40 (\$.01) per page.

In their complaint, the publishers argued that Rameshwari Photocopiers was reproducing and issuing unauthorized copies of their publications for a commercial purpose and that such circulation did not amount to “fair dealing” under Indian law. Unlike U.S. law, where “fair use” involves a process of triangulating among different factors such as the “purpose and character” of the use (e.g., parody or educational use), the

substantiality of the reproduction, and the effect on the commercial market for the original, Indian fair dealing follows the UK tradition in requiring specific statutory language for exceptions. The case quickly became a litmus test for what constituted fair dealing when it came to photocopying academic materials.

The case turned largely on interpretation of two provisions in the Indian Copyright Act. The first is the fairly wide educational exception provided under Section 52(1)(i) which allows for “the reproduction of any work by a teacher or a pupil in the course of instruction or as a part of questions or answers to questions.” The second is Sec. 52(1)(a), which allows for fair dealing with any work (except computer programs) for the purposes of private or personal use, including research. The two provisions anchored the university’s argument that it was within its rights (and students were, accordingly within their rights) to photocopy academic texts and articles and to create coursepacks in the course of instruction.

The devil, of course, is in the details. The Indian Copyright Act does not prescribe a limit to the extent of reproduction available under the education and personal exceptions—either in terms of the substantiality or number of the copies. In theory, the complete photocopying of an academic work is permissible under the fair dealing provisions. Yet, Indian courts have, on several occasions, introduced substantiality and quantity tests, drawing on the English case of *Hubbard v. Vosper*, which pitted the Church of Scientology against one of its critics in regard to a book that drew extensively on the work of L. Ron Hubbard.⁵⁴ The Delhi case thus turned on the question of whether the copy shop reproductions were too substantial and/or too numerous to be considered “fair,” where substantiality can refer not just to the percentage of use of the work, but also to the copying of the key parts of the work.

Because the case dealt with specific instances of copying particular texts,⁵⁵ it was relatively easy to determine whether the copying involved a large percentage of the works in question. In most cases, the page counts represented under 10 percent of the work—though in a few this number climbed to between 20 percent and 30 percent. The overall average was 12.5 percent. If the accepted U.S. “fair use” threshold of 10 percent is used, eleven out of the nineteen books fell within the limit.

In the absence of statutory guidelines, the question for the Indian court was whether a fair-minded person would consider 12.5 percent of a book to be “substantial.” There is of course no right answer to this.⁵⁶ But it is worth emphasizing the irrelevance of the counterfactual, in which students actually buy all of the books in the offending coursepack—some seventeen with a total retail price of around \$1,700. This is a sum slightly larger than average GDP per capita in India. The Delhi case is not about getting the students to buy physical copies of the book so much as creating pressure on

the university to impose a reprographic fee for photocopying excerpts as well to clarify quantitative restrictions on the amount that can be legally copied from a book.⁵⁷ The problem with this proposal is that the envisaged license fee roughly triples the price of photocopying from its current level (40 paisa or around 0.5 cents) to a rupee per page (currently around 1.5 cents).

The publishers have argued that this is a relatively small amount that will not affect the students—the license fee, in an often-repeated argument, amounts to around one expensive meal. However, this assumes the perspective of the richest students, not the poorest students who are the real beneficiaries of photocopying. Rather than measuring the fee against imaginary meals, it may be more useful to compare this to the average fees paid at Delhi University. At the master's level a student pays approximately \$150 (Rs. 10,000) per semester (depending on the college that they are enrolled at). At one rupee per page, the cost of photocopying materials just for coursepacks would amount to around a 10 percent increase in fees.

The Decision

In September 2016, Justice Rajiv Endlaw on the Delhi high court dismissed the 2012 copyright infringement petition. His ruling is, in the Indian context, a remarkable defense of the public purposes of copyright limitations, informed in part by his own obvious identification with the difficulties of the students. Where the petitioners had argued for a narrow reading of fair dealing, claiming that the section allows only for the provision of materials in the course of a lecture and in the classroom, the judge arrived at a broader answer to the question (para. 62): “when does the imparting of instruction begin and when does it end?” The answer is as follows: “The meaning of Section 52(1)(i) supra would include reproduction of any work while the process of imparting instruction by the teacher and receiving instruction by the pupil continues i.e. during the entire academic session for which the pupil is under the tutelage of the teacher ... not limited to personal interface between teacher and pupil” (para. 72).

Justice Endlaw then drew on his own experience as a law student to describe the significance of the changing technological environment to interpretation of the law. In short, the salient issue for fair dealing is the purpose of the activity—teaching—not the technologies that facilitate it. His ruling states:

When an action, if onerously done is not an offence, it cannot become an offence when, owing to advancement in technology doing thereof has been simplified. That is what has happened in the present case. In the times when I was studying law, the facility available [for] photocopying was limited, time consuming and costly. The students then, used to take turns to sit in the library and

copy by hand pages after pages of chapters in the books suggested for reading and subsequently either make carbon copies thereof or having the same photocopied. The photocopying machines then in vogue did not permit photocopying of voluminous books without dismembering the same. However with the advancement of technology the voluminous books also can be photocopied and at a very low cost. Thus the students are now not required to spend day after day sitting in the library and copying pages after pages of the relevant chapter of the syllabus books. When the effect of the action is the same, the difference in the mode of action cannot make a difference so as to make one an offence.

The publishers were understandably unenthusiastic about the judgment and filed an appeal before a division bench (consisting of two judges) of the Delhi high court. In December 2016, the division bench upheld most of Justice Endlaw's orders while making a few further distinctions. Aware that nonlawyers might get lost within the thicket of technical legal arguments, toward the end of the judgment the high court provided an analogy between music and the complexity of law that summarizes the jurisprudential backbone of the judgment.

A melody is the outcome of the sounds created when different instruments, such as a lute, flute, timbale, harp and drums are played in harmony. The notes of the instruments which are loud and resonating have to be controlled so that the sound of the delicate instruments can be heard. But it has to be kept in mind that at proper times the sound of the drums drowns out the sound of all other instruments under a deafening thunder of the brilliant beating of the drums. Thus, it is possible that the melody of a statute may at times require a particular Section, in a limited circumstance, to so outstretch itself that, within the confines of the limited circumstance, another Section or Sections may be muted.

Translated back into the Copyright Act, the judges are making clear that if the predominant purpose of the law is to provide exclusive rights to owners of copyright, this right sometimes has to be muted to serve other equally important purposes such as education. Echoing the policy intentions of the legislature, the judges chose to ignore the technical distinctions between education and instruction, and between textbooks and coursepacks and held that:

education alone is the foundation on which a progressive and prosperous society can be built. Teaching is an essential part of education, at least in the formative years, and perhaps till post-graduate level. It would be difficult for a human to educate herself without somebody: a teacher, helping. It is thus necessary, by whatever nomenclature we may call them, that development of knowledge modules, having the right content, to take care of the needs of the learner is encouraged. We may loosely call them textbooks. We may loosely call them guide books. We may loosely call them reference books. We may loosely call them coursepacks. So fundamental is education to a society—it warrants the promotion of equitable access to knowledge to all segments of the society, irrespective of their caste, creed and financial position. Of course, the more indigent the learner, the greater the responsibility to ensure equitable access. (para. 30)

The judges specify that fairness is an essential aspect of the statute especially when there it impacts a person's legal rights, such as those of a copyright holder. But what is fairness? In a crucial paragraph the court states that "the utilization of the copyrighted work would be a fair use to the extent justified for purpose of education. It would have no concern with the extent of the material used, both qualitative or quantitative."

The significance of this ruling's interpretation is that it rejects the adoption of American standards (the four-factor test) into Indian copyright law and grounds the principle of fairness within a philosophy of education. No arbitrary restrictions in terms of quantity or substantiality are to be applied.⁵⁸

However, the case is not completely over. One crucial difference between Justice Endlaw's judgment and the division bench ruling is that while Endlaw found no fact that was worthy of being tried since there was no *prima facie* infringement, the division bench held that the specific question of whether the reproduction of full works is valid in the course of instruction is a matter that should be determined in trial. The division bench consequently remanded that issue back to a trial judge. The larger significance of the ruling is that while it arose out of a seemingly narrow question of whether the photocopying of coursepacks was allowed in copyright law, the judges chose to answer by returning copyright to its normative foundations—in Justice Endlaw's words "to increase and not to impede the harvest of knowledge" (para. 80). This is a powerful and potentially portable argument with implications beyond India.

Toward a Better Legal Framework for Access to Educational Materials

The contrast between the provisions for access to primary/secondary school learning materials and higher education materials in India is a sharp one. While there are many challenges facing quality primary and secondary schooling in India, on the one hand, state policies have ensured that relatively equitable access to learning materials is not prominent among them. For higher education, on the other hand, the state has largely eschewed a role in provision or regulation of the market and—at the same time—failed to create a well-financed, sustainable library system, either for students or the general public. Although the publishing industry has expanded in the face of growing demand, most student access relies on large-scale practices of informality, embedded in a confusing, contested system of rights.

Although it would be comforting to think that this failure will be addressed by the transformation of the publishing sector in the digital era and the growth of legal services, it is worth noting that none of the major institutional initiatives described in this

chapter—whether the expansion of database subscriptions or the imposition of photocopy licensing—show much prospect of lowering the costs of access to knowledge for students. The informality of much of the present ecosystem is inefficient but also, and above all else, cheap. With large numbers of Indian students and Indian institutions operating in precarious financial situations, the impact of even small changes in forms of access can be large.

In the absence of a larger state role in the provisioning of materials, policy debates around the terms of access have tended to focus on the scope of fair dealing provisions in Indian copyright law—of what can be done, in short, with privately provisioned materials. But while important, the copyright-fair dealing pair is not the only legal framework that has potential to change the day-to-day conditions of access. India also has a right to education, copyright limitations for libraries, and a growing open access movement. To date, these have been relatively marginal factors in the ecosystem, but they could have large impacts in the coming years.

The Right to Education

While the focus of most poverty alleviation strategies has been on primary education, there is convincing development case for emphasizing education at all levels. India has the highest youth population in the world, with 600 million people under the age of 25. There is no problem of primary education, in short, that does not quickly become a problem at the secondary and higher levels on a truly massive scale. The National Knowledge Commission has argued that India will need at least fifteen hundred new universities to cope with the demand for education in the coming years.⁵⁹ Here the influence of Amartya Sen has been profound. In Sen's analysis, the extension of education from primary to higher education has significant impacts on a wide range of development challenges, including health, gender equity, and awareness of political rights. Sen himself connected these concerns to the Delhi University case in a letter to Oxford University Press, which asked the press to refrain from using the force of the law against the students.

A "Right to Education" for children below the age of fourteen is expressly guaranteed under Article 21-A of the Indian Constitution. By most accounts, universal primary and middle schooling in India has achieved a minimal application of that right. But courts have repeatedly pushed for more expansive interpretations of the article. In 1992, in *Mohini Jain (Miss) v. State of Karnataka & Others* India's Supreme Court characterized the right to education as a component of the broader right to life under Article 21, arguing that "the dignity of an individual cannot be assured unless it is accompanied by the

right to education. The State Government is under an obligation to endeavor to provide educational facilities at all levels to its citizens.”

The legal development of this right in recent years has generally involved its expansion beyond a basic notion of the availability of education toward a broader understanding of social and economic obstacles.⁶⁰ There is clearly an opportunity for stronger integration of the constitutional right to education with policies governing access to learning materials and, accordingly, with copyright reform. In India, the main precedents for such integration are in the area of patents, where access to medicines has been read into the right to life in Art. 21.⁶¹

While there is a long history of student agitation over the privatization of education in India, we have not seen the same political energies directed toward questions of copyright and access to knowledge. If the Delhi University photocopy case is any indication, however, increased enforcement measures and pressures on costs and access could change this dynamic, producing stronger linkages between debates about copyright, access to knowledge, and broader constitutional rights.

The Library Exception

Stronger interpretations of existing limitations and exceptions to copyright offer another approach to expanding access to books and educational materials in India, in large part by regularizing some of the informal practices that already shape student practices. One virtue of such an approach—and part of its attraction to Indian education advocates—is that it could improve access without requiring substantial new policy initiatives, investments by the state, or, arguably, significant changes to publisher revenue streams, which as we have seen are concentrated around must-have reference texts rather than the range of materials used in most coursework. A generous interpretation of the fair dealing exception for educational uses in the Delhi University photocopy case would provide one such lever, but there are others. Sec. 52 of the Copyright Act contains a range of exceptions for personal use, research, and libraries.

Libraries, for example, benefit from an exception under Section 52(1)(o), which allows for the making of additional copies for general use—specifically, “the making of not more than three copies of a book (including a pamphlet, sheet of music, map, chart or plan) by or under the direction of the person in charge of a public library for the use of the library if such book is not available for sale in India.” The ability of libraries to make ample use of the exception could significantly expand and—where necessary—legalize collections.

The case for a broader interpretation of the exception draws primarily on the ambiguity surrounding a number of the key terms in the Copyright Act. Legal scholar Prashant Iyengar argues that the lack of definition of the terms “public library,” “book,” and “use of the library” opens space for more contextual readings that could bring the normative vision of Ranganathan’s laws of library science more strongly into play.⁶² Iyengar argues, in short, for a library clause for *users*, as opposed to a library clause for *lawyers*.

The definition of a “book,” for example, varies widely across the different states with Public Library enactments. The Maharashtra Public Libraries Act 1967, for instance, clearly encompasses non-print and digital media that go well beyond the relatively restrictive norms commonly attributed to the Copyright Act. According to the Maharashtra act: “A ‘book’ includes every volume, part or division of a volume and pamphlet in any language, and every sheet of music, map, chart or plan separately printed or lithographed, newspapers, periodicals, paintings, films, slides discs, or tapes used for audiovisual information and such other materials. (emphasis added)

The right to make a limited number of digital copies would represent an important expansion of library capacities. Still more important is the phrase “available for sale in India,” which limits library copying to unavailable texts. The most literal interpretation of this phrase would essentially void this possibility in the digital era, insofar as Amazon and other online book stores can make all books at least notionally available. But there is also a basis for understanding availability in terms of accessibility, reflecting a determination of whether a book had been made adequately available. As right to education cases identify cost as an important factor in the exercise of rights, it is easy to see how such reasoning could be applied to library exceptions. Section 6 of the Copyright Act already leads in this direction when it stipulates that the Copyright Board may deny a work status as a “publication” if it is communicated to the public in an insignificant manner. There is ample reason, in other words, to think that the framers of the Copyright Act did not view “publication,” “communication,” “issuance of copies,” and “availability” in narrow or purely technical terms. If building a robust library system to meet India’s information needs remains an important goal, nor should we.

Open Access

The spread of open access models for scholarly publication could also become a significant factor as research released under open access policies gradually accumulates into large bodies of work. The principle that publicly funded research should be open access had been discussed for some time in India, with selective adoption by Indian journals in the early 2000s,⁶³ endorsement by the 2005 National Knowledge Commission, and adoption by several leading scientific funding bodies in 2014.⁶⁴ Open access models in

other fields gained traction more slowly. Several major law schools have now formed a consortium to bring materials, modules, and conference proceedings through the Legal Information Institute, an Indian open access law portal. None of these initiatives addresses the vast history of work available only on expensive commercial terms or the database access that increasingly defines equal participation in the global research community. None of them individually go far enough to significantly impact the shadow library practices that shape research, education, and even formal librarianship in many settings in India. But they are a start and, in combination with other measures, could shift the conditions of access to knowledge in India toward a more open regime that does not so gratuitously deny modern-day Ekalavyas their opportunities to learn.

Notes

1. This pattern has not changed significantly since the 1970s, when photocopying machines began to be widely available in Indian cities. An article on book piracy in the popular Indian magazine *India Today* from 1976 described the pirate market this way: “The business flourishes during the second half of the year, as new titles are issued in the West to catch the Christmas sales. Pirates in India average 18 books a year. A popular Western novelist like Alistair Maclean has a market of 25,000 copies. His latest novel, *Circus*, was out in the West only a month ago, but is already available in India. The same was the case with Arthur Hailey's *Money Changers* a few months ago” (Depthnews 1976).
2. See <http://www.ficci.com/pressrelease/1541/ficci-press-feb21-publishing.pdf> (accessed February 25, 2017).
3. See <http://www.ficci.com/spdocument/20307/FICCI-Anti-piracy-paper.pdf> (accessed February 25, 2017). While FICCI has worked closely with the film industry for a long time, its 2014 conference signaled the closer role FICCI intends to play in the arena of book publishing.
4. See Arunachalam and Muthu 2011.
5. Standalone institutions include polytechnics, semi-skilled education schools, and diploma-granting institutions. See *All India Survey on Higher Education (2010–2011)*, 2013. http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/AISHE201011_0.pdf(accessed February 25, 2017).
6. See <http://www.scidev.net/global/communication/feature/q-a-open-archives-the-alternative-to-open-access.html> (accessed February 25, 2017).
7. See <http://infochangeindia.org/component/content/article/121-technology/features/7173-knowledge-for-all> (accessed February 25, 2017).
8. On this point, see the marvelous work of Nicholas Basbanes (2001, 2012).
9. The role of an affiliating university is to provide accreditation to colleges that do the actual teaching while the university merely provides the degree.

10. Quoted in Bose 1965.
11. For a detailed account, see Bhatt 1995 and Bhatt 2009.
12. Bhatt 1995.
13. The Ranganathan Committee recommended that state funds for libraries be rationed at Rs. 15 per enrolled student and Rs. 200 per teacher and research fellow. It also advocated the establishment of initial library grants and development grants from the University Grants Commission. See *ibid.*, 61.
14. Das and Lal 2006.
15. Cohen 2013.
16. For a contrasting account of spending on libraries in India, see "Public Libraries Are Doing Well in India, Thank You," February 28, 2014, <http://www.indiaspend.com/special-reports/public-libraries-are-doing-well-in-india-thank-you-49780>(accessed February 25, 2017). This article tracks the overall rise in library budgets based on Ministry of Culture finances but does not go into an examination of the actual spending on or condition of public libraries.
17. For a representative account, see Singh 2012.
18. The NKC focused on reforms to the education sector and intellectual property, and on the future role of libraries.
19. This may begin to be remedied with the anticipated introduction of Nielsen's BookScan. See John 2015; also http://www.nielsenbookscan.co.uk/uploads/7695_Nielsen_BOSSIndia_Sell_sheets_2_D1.pdf. For an account by an independent publisher, see <http://www.tarabooks.com/blog/profitting-by-managing-a-propensity-for-chaos/> (accessed February 25, 2017). See also Wolf 2013.
20. German Book Office New Delhi, "India" [fact sheet]. Frankfurt Buchmesse (2012). http://www.buchmesse.de/bilder/buchmesse/book_market_india_2012.pdf (accessed February 25, 2017).
21. One report places the number at \$2.5 billion but begins by stating that there are no accurate numbers. See http://www.pik.org.pl/upload/files/Global_Trends_in_Publishing_2014.pdf (accessed February 25, 2017).
22. German Book Office New Delhi, "India" [fact sheet].
23. See Bhatt 2009 and Konnur 1990. More generally, for a history of education policy see essays by Philip Altbach in Agarwal 2012.
24. Agarwal 2012.
25. *Ibid.*
26. Altbach quotes Peter Jayasinghe: "The PL 480 [books for wheat] programme delivers a crippling blow to the Indian publisher who refuses to be tempted by the blandishments of foreign governments and publishers to become a mere reprint house for their books and who insists on

performing a more exalted task—that of presenting and promoting the finest in Indian thought and scholarship. He has to compete on grossly unequal terms with the foreign publisher whose vast resources are more than amply augmented by generous subsidies from his own government” (Altbach 1975, 331).

27. For an example of the subsidized book publishing of NBT see http://www.nbtindia.gov.in/scheme__13__subsidized-books-publications.nbt (accessed February 25, 2017).

28. Thakur, Thakur, and Khan 1998.

29. Ibid. Some of these include publishers that went on to become significant players, such as Jaico.

30. For an interesting account of the nascent publishing industry in the 1970s, see <http://indiatoday.intoday.in/story/indian-authors-have-the-advantage-of-possessing-a-wider-choice-of-publishers/1/436988.html> (accessed February 25, 2017).

31. Sen 2002.

32. On the riots, see Deccan Chronicle 2015 and O’Brien 2015.

33. See <http://www.printpackipama.com/controversy-over-kerala-govts-decision-to-outsource-text-book-printing/> (accessed February 25, 2017).

34. See Agarwal 2012, 330.

35. Altbach: “In the Near East and South Asia alone, a total of 2,000,000 copies of 511 books were published in the year ending June 30, 1969. The books selected are simply given to various Indian publishers by the U.S. Information Service, with no screening by any Indian agency, and are subsidized by as much as 80 percent of the cost of publication. The Indian publisher is free to sell the books as he sees fit, or even to throw them away. There is no indication in these books that they are subsidized by the United States Government.” Quoted in *ibid.*, 94.

36. Arndt 2005, 159.

37. Ibid.

38. “Interviews with Publisher.” *India Today*, February 15, 1976. See <http://indiatoday.intoday.in/story/indian-authors-have-the-advantage-of-possessing-a-wider-choice-of-publishers/1/436988.html> (accessed February 25, 2017).

39. Guha 2012.

40. See <http://www.theguardian.com/news/2006/jul/04/obituaries.mainsection> (accessed February 25, 2017).

41. Brotchie 2014.

42. Ibid., 118.

43. For an insightful account of street-level piracy, see Faleiro 2013.

44. Delhi University is a central university and one of the largest in India with 65 associated colleges and over 130,000 students. Maulana Azad Medical College is a government medical school attached to one of the leading government hospitals. The national law schools are statutory universities established in different states and are considered to be the elite law colleges of the country. Of the three, Delhi University has the widest demographic representation.
45. It will be interesting to see whether this practice changes with the advent of cheap hand-held scanners, smart phones, and tablets with software that permits high-quality reproduction. It is not uncommon now to see students taking pictures of books in libraries.
46. College Street in Calcutta, Darya Ganj in Delhi, and Avenue Road in Bangalore are some examples.
47. For example: In the sociological theory course at Delhi University, of the thirty-two books on the suggested readings list, almost all of them are published by foreign publishers and very expensive to buy in the market.
48. A few representative examples including standard legal commentaries such as Chitty on contracts, Nimmer on copyright.
49. For an income calculator, see <http://timesofindia.indiatimes.com/calculator.cms> (accessed February 25, 2017).
50. Flipkart started in 2007 while Amazon India started only in 2013.
51. The recommendations of the Chattopadhyaya Committee on National Policy for Library and Information Systems (of 1986), for example, received inadequate attention and were ultimately abandoned. At universities, the UGC's Information and Library Network (Inflibnet) program has focused on acquiring "computers and other related infrastructure."
52. Bhattacharya (2004), for example, condemns the "sporadic and partial" attempts at digitization of Indian library resources, limited to "getting a few databases on CD-ROM," "subscribing to a few e-journals," "scanning a few documents," or "creating Adobe Acrobat files and installing them on an intranet."
53. The Inflibnet program among university libraries has been the partial exception to this rule. The National Mission on Libraries—a digitization effort launched in 2014—is not yet sufficiently operational to affect this assessment.
54. *Hubbard v Vosper* [1972] 2 Q.B. 84. This case laid out the parameters of fair dealing in the UK. The judgment of Lord Denning held that "no fair dealing with a literary, dramatic or musical work shall constitute an infringement of the copyright in the work if it is for purposes of criticism or review, whether of that work or of another work, and is accompanied by a sufficient acknowledgment."
55. Including numerous works on the history of India by Oxford University Press, as well as some more general "classics" such as Foucault's *The Order of Things*.

56. As one law librarian put it, “Yes, the library has certain internal rules about photocopying restrictions, and these rules have been put up in the photocopy room. The copying of an entire book is not allowed. Typically, we allow only 10–15 percent of a resource to be photocopied but since the number of pages which can be copied under fair dealing are not clear under Section 52 of the Indian Copyright Act, this is not an entirely inflexible percentage. But yes, it is the usual standard.” Interview with the authors, 2012.

57. After the initial hearing, an email from the lawyers representing the publishers was leaked online in which it was clearly asserted that this is a test case to establish stronger enforcement of reprographic rights and fees in India.

58. The court used similar logic to reject the publishers’ contention that Section 52 allows for reproduction of a work, but that if made available via photocopies it is no longer a reproduction but a publication.

59. See <http://knowledgecommissionarchive.nic.in/reports/report09.asp>.

60. In *Kumari Surya Shukla and Anr. v. State of U.P. and Ors.* (2007), for example, the court linked the availability of education to educational expenses and the cost of books in particular, arguing—in a case about the extent of financial and other obligations that may be imposed on students—that “Books or curriculum should not be changed at short span of time as it imposes additional burden on the family budget of lower strata of the society. ... [S]uch action affects the quality of life of the citizens, hence violative of Article 21.”

61. The judgment of the courts in the 1998 Novartis case regarding the scope of patent protection for pharmaceuticals, for instance, explicitly located the discussion of Section 3(d) of the Patent Act within the terms of the right to life in Article 21.

62. Iyengar 2010.

63. Notably *The Indian Journal of Postgraduate Medicine*.

64. Priyadarshini 2014.

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