

Education, Technology, and Democracy: Toward Justice in a Networked World

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Abstract**EDUCATION, TECHNOLOGY, AND DEMOCRACY:
TOWARD JUSTICE IN A NETWORKED WORLD**

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The need for a quality education is often tied rhetorically to conversations about justice. Unfortunately, connections between education and justice are rarely described in detail, creating school systems that only coincidentally advance justice-related aims. This theoretical study is an attempt to define with some precision what justice in the Digital Age requires, so that schooling can be better organized to meet such demands. Throughout, this study brings into conversation often-disconnected thinking about justice, democracy, technology, and schooling. The result is a call for a *minimum conception of schooling* aimed only at enabling students' active participation in deliberative systems and justificatory arenas. Such engagement requires that educators and policymakers resist the impulse to standardize curricula and embrace the uncertainty and highly context-dependent nature of social inquiry. Indeed, it is argued that widely held ideas about the aims of schooling should be subordinate to the development and practice of *justificatory literacy*. To target possible areas of research and reform, an interrogatory framework is offered to help assess the degree to which current policies and practices align with a justice-oriented minimum conception of schooling.

Chapter 1

Educating for Justice: A Minimum Conception of Schooling

In an address to future educators at the University of Virginia, U.S. Secretary of Education, Arne Duncan (2009), boldly named education “the civil rights issue of our generation” and characterized teaching as “a daily fight for social justice.” Given wide and persistent disparities in academic achievement along race and class lines and the connections between success in schools and “real-life” opportunities, it makes good sense to identify education as a social justice issue. What is not clear, however, is how, exactly, the actual education reforms Duncan has in mind might translate into the realization of social justice aims. Like President George W. Bush’s No Child Left Behind Act (NCLB), instead of defining with any precision what social justice entails, President Obama and Secretary Duncan’s Race to the Top (RttT) initiative does little more than perpetuate the false but common-sense notion that standardized test scores are an appropriate proxy for the realization of social justice. In the present inquiry, it will be argued that justice-seeking educators and policymakers should focus not on achievement test scores or related credentialing but on helping students engage fruitfully in digitally mediated democratic associations.¹ More than this prerequisite, however, the foundation of social justice and the related focus of justice-seeking educators’ work should be to

¹ While the focus of criticism will be largely on achievement test scores, the arguments apply to broader credentialing issues as well. For example, a focus on acquisition of particular degrees or certificates is also problematic when such achievements are viewed as proxies for social justice. It is not being argued that such pursuits are pointless or somehow misguided, only that they should not be the primary ends toward which social-justice-related efforts are directed.

ensure engagement as equals in forms of inclusive democratic deliberation that address calls for justification. Accordingly, a central task of this project will be both to outline what this means and to explore what justification-oriented deliberation demands in our increasingly networked and globalizing world. With such an understanding in place, it will then be possible to explore how schools might help students develop and draw into action the knowledge, skills, and habits they need to participate in justificatory arenas and to engage with digital information and communications technologies (ICTs) in ways that foster the kinds of democratic participation that constitute the realization of social justice. Justice-oriented schools, it will be argued, are those that adopt a minimum conception of schooling, aimed at nothing more than participation in social inquiry and advancement along the continuum that is justificatory literacy.

Key to realizing this kind of justice-oriented education will be a reimagining of how technology is incorporated into schooling. As Larry Cuban (1986) explains, historically, the use of technologies in schools has largely been motivated by the search for greater productivity and efficiency, whether through increased student engagement, clearer explication of subject matter, simultaneous instruction and assessment, or by simply cutting costs or time. This trend continues today. Modern scholars and technologists advocate a wide array of tools meant to increase the quality and efficiency of students' education, including but certainly not limited to the use of tablets, e-readers, clickers, mobile devices, games, digital audio and video recorders, digital cameras, the Internet, productivity and multimedia design software, and precision observation and measurement tools. Furthermore, many of these tools are providing education reformers the means to challenge what they consider to be deficits in the traditional teacher-

centered, brick-and-mortar classroom paradigm. “Flipped” classrooms, “blended” learning, “situated” learning, “adaptive” learning, or simply doing away with in-person, classroom-based instruction altogether are all among the variety of such reforms made possible by particular applications of modern technologies. Lastly, education reformers are increasingly using technologies to connect students’ test scores to teacher and school performance assessments. Assessing the merits of these enterprises individually, on their own terms, is well beyond the scope of this project. However, insofar as these efforts are aimed at helping students achieve overprescribed ends, they all lack the normative grounding necessary to claim that they contribute to the realization of justice. The point of this study is not to argue that particular technologies, whether methodological or material, are inappropriate or misguided, or that increasing productivity and efficiency, as measured by ends-oriented testing, is not sometimes a worthwhile goal. Instead, in short, it is to argue that, *if justice is the goal*, the integration of technologies into schooling, both as tools and methods, should be democratized and folded into a broader framework social inquiry; that is, the use of technologies should be shaped and directed by the changing and context-dependent needs of the communities in which schools and their students are inextricably embedded. Such democratization promises to broaden technological horizons beyond those permitted by overly prescriptive, test-directed ends and tap into unprecedented and underexplored opportunities for the connectivity, democratic participation, and justification central to advancing global justice.

A Minimum Conception of Schooling

Decentering achievement test scores immediately takes this study out of the current education policy mainstream. As a result, while anything approaching a full

critique of standardized testing is beyond the scope of the study, a few comments are necessary to explain the choice to center an understanding of justice-oriented education on democratic deliberation and justification rather than test scores and credentials.

To start, the goal is not to deny that test scores or education-related credentials often reflect students' horizons of political, financial, or other opportunities. To do so would be to offer a highly dubious proposition. Moreover, the aim is not to suggest that individuals and groups working to open doors and widen opportunities via improving achievement test scores or acquiring education credentials are somehow wrong to do so. Much good work is being done by and in support of students seeking to leverage success in schools to achieve socioeconomic mobility or other aims. Lastly, there will be no attempt to counter the idea that achievement tests may very well serve as helpful diagnostic tools. That thoughtful analysis of students' test scores can identify points of intervention and lead to improved practice is probably true, especially where aims are predetermined. However, it is not at all clear that equalizing achievement or even bringing all students up to a certain bar would do anything to create the kinds of socioeconomic and political equality implied by test-centered education reformers. Instead, greater attainment of education credentials across the board would more likely make the consequences of a lack of education more severe and diminish the role of educational credentials in the legitimation of privilege (see, e.g., Bourdieu, 1984; Green, 2007). Neither consequence would benefit society's least advantaged.

Even if such consequences could be mitigated or avoided altogether, too heavy a focus on testing may have other consequences that could prevent rather than promote social justice aims. For example, the very nature of the tests may prevent them from

doing much more than mirroring or justifying existing inequalities outside of schools (Au, 2009; Selden, 1999). Furthermore, the expanded use of standardized tests has effectively narrowed what counts as something worth knowing or doing. This is especially problematic given that decisions about what is tested and how the results should be interpreted is rarely a democratic process. As a result, tests are designed and used in ways dictated by those who already possess cultural and socioeconomic power, thus perpetuating rather than disrupting power relations that underlie social injustices (Apple, 2000, 2006). Lastly, at least for present purposes, the managerial mindset that accompanies the need to standardize and compare has led increasingly to education reforms that trade public oversight for promises of increased test scores and lower costs. Unfortunately, despite the rhetoric of privatization advocates, the removal of educational decision making from the public eye not only does little to increase test scores but also opens up educational systems – institutions central to the continuing renewal and reinvigoration of democracy – to the profit-driven myopia and selfishness that plagues other underregulated markets (Ball, 2012; Burch, 2009; Ravitch, 2010).

Again, these points are not meant to dismiss the possible benefits of achievement testing. They are offered only to argue that testing is a problematic focus of attention when it comes to the promotion of social justice aims. Given that the goal of this study is to explore how schools might create citizens capable of deepening democratic deliberation in our networked world – a pursuit at the core of social justice – whether or not a given policy, practice, or tool contributes to test score gains will receive little if any attention. Instead, following Dewey, priority will be granted to the view that, rather than resembling the pre-planned checklists that testing-centered education requires, curricula

in the service of democracy should 1) be in a constant state of revision based on the needs, interests, histories, and expertise of particular groups, and 2) serve not as ends that can be defined and measured but as means to guide open, inclusive, reflective, uncertain, and ongoing inquiry into the form and nature of social problems (Dewey, 1900/1990, 1916/1944, 1938; Hickman, 2001). What this kind of schooling might look like in practice will be explored in later chapters, especially chapter 4. For now, it is enough to note that Dewey was not suggesting some sort of classroom free-for-all. Instead, his methods and aims were both intellectually demanding and situated squarely in a commitment to interwoven understandings of democracy and technology. The interconnections of justice with democracy and technology will be explored in detail in chapters 2 and 3, respectively.

What is being advanced here, again, can be thought of as a minimum conception of schooling. Rather than defining the aims of schooling as sets of specific, comprehensive, predefined, and measurable objectives, and then holding related achievements up as proxies of other goals, this study will operate from the assumption that the specific topics explored and methods used in schools should be contingent on the needs and interests of particular communities, provided, of course, that local pursuits remain transparent, non-discriminatory, and otherwise publicly justifiable.² Bound by these minimal but crucial and global constraints, localized curricula should serve not as predetermined destinations but as dynamic contexts within which students learn and

² The notion of public justification will be explored in detail in chapter 2. For now, it is enough to note that, while much latitude is granted to localities, there is no place for racist, xenophobic, classist, homophobic, or otherwise discriminatory curricula. When in conflict, global norms promoting each individual's right to initiate or respond to requests for publicly justifiable reasons for policies and practices should trump local interests.

practice the methods of social inquiry and justification that constitute justice. It is the exercise of such methods that points toward the topics to be explored and directs the educative process. What is happening in schools will necessarily be different in communities where the experiences, histories, and subjectivities – the raw materials of social inquiry – vary. Thus, achievement test scores represent an inappropriate proxy for social justice, as focusing schooling on officially sanctioned and tested knowledge excludes a wide variety of inputs of inquiry, limiting the scope of social inquiry-oriented activities.

Justice and Democracy in the Digital Age

Emphasis on a minimum conception of schooling might connote some sort of softness or a lack of commitment to meaningful education reform. However, when one begins to consider the complexities of digital age democracies, the rapid evolution of skills required to participate fruitfully in public spaces, and the variety of ways that digital mediation of information and communication can be controlled by the powerful, it becomes abundantly clear that, even if one were able to sketch comprehensively what a future democrat would need to know and be able to do at a given point in time, such a sketch would be highly context-dependent and likely anachronistic by the end of the school year. Unlike a comprehensive outline of curricular topics, however, the norms and methods of inquiry and justification at the core of social justice are much steadier and should, as a result, constitute the curricular minimum or core aim of schooling. The following chapters will offer more details regarding norms, methods, and the related minimum conception of schooling, including how technology intersects and mediates

inquiry and engagement in public spaces. However, a few preliminary comments will be useful here to help frame the arguments.

The centrality of democratic methods in efforts to identify and ameliorate social injustices, and the connections of these efforts to education, was perhaps most clearly stated by John Dewey. Of particular importance to this study was Dewey's insistence that seemingly individual thoughts and actions almost always had social origins, and that these actions had consequences that rippled throughout the public sphere. Accordingly, Dewey (1927/1954) argued that collectively identifying and controlling the origins and consequences of these associative actions was of utmost importance, and lamented barriers to the requisite social inquiry put in place by myopic self-centeredness, prejudice, excessive deference to experts, the false equation of democratic forms with democratic inquiry, or sheer laziness. Dewey thus declared that "*the* problem of the public" was to improve the "methods and conditions of debate, discussion, and persuasion" so that all interested parties could work to ensure that the origins of the consequences of their associative actions were identified and thus made more predictable and controllable (p. 208). To do otherwise would render publics "amorphous and unarticulated" (p. 131), and create conditions where, to paraphrase Dewey, consequences were suffered but not known (p. 131).

Dewey was under no illusion that it was easy to create or sustain democratic publics that would enable the kind of social inquiry required to identify and ameliorate root causes of social injustices. Writing in the early 20th century, he watched as unprecedented advances in communications and transportation technologies made it more difficult to trace consequences to their origins and engage in debates central to issues of

broad concern. For example, he watched as “sanitation, public health, healthful and adequate housing, transportation, planning of cities, regulation and distribution of immigrants, selection and management of personnel, right methods of instruction and preparation of teachers, scientific adjustment of taxation, efficient management of funds, and so on,” all increasingly became the domain of specialists with expert, technical knowledge (pp. 124-125). Rather than adapting their democratic forms to cope with this increasing scope and complexity, Dewey saw people cast uninformed ballots or simply disconnect from the democratic process. Exasperated, he exclaimed, “What has counting heads, decision by majority and the whole apparatus of traditional government have to do with such things?” (p. 125). In short, in the face of the increasing scope and complexity of social relations and their consequences, Dewey watched as democracy thinned to the point where it was little more than the tallying of uninformed preferences. To Dewey, there were simply “too many publics and too much of public concern for... existing resources to cope with” (pp. 123-124).

Modern advances in transportation and communications technologies have, in many ways, exacerbated the problems that Dewey identified. Many publics that ought to form in response to the consequences of specific sets of associative actions remain amorphous and unarticulated. In their place are largely issue-agnostic, territorially bounded publics of convenience, whose “representatives” exercise governing authority more as oligarchs, plutocrats, and/or technocrats than as democrats. In the United States, for example, instead of actual individuals who are affected by particular issues being able to press for and participate in deliberation and, as a result, shape policy, political rules and regulations are more strongly influenced by the perceived need to sustain the vitality

of wildly underregulated flows of capital. Regarding the development of social policies, political debate is reduced to choosing prepackaged views presented by profit-driven and sensationalist corporate news media or political parties bound by the continual need to fund campaigns. To borrow language from Habermas (1998), it seems to be harder than ever for concerned individuals to claim and exercise communicative freedom, leverage communicative power, and bring the experiences and wisdom of lifeworlds to bear on systems of government.³

Educators who dissect existing political or economic organizations in order to develop curricula run the distinct risk of simply perpetuating the same diseased forms and methods of social interaction. The call here is not to simply choose a different comprehensive system of social organization so that it too can be deconstructed and rebuilt in the form of abstracted curricula. Instead, again, the idea being proposed in this study is that justice-seeking educators are best served by adopting a minimum rather than comprehensive orientation toward curricula, one focused on foundational norms and methods rather than carefully selected observations or imaginations. Early in his long career, when discussing the Golden Rule, Dewey (1890/1891) had this to say: “About the specific act to be done it tells...not a jot. But it is a most marvellous tool of analysis; it helps me hew straight and fine in clearing out this jungle of relations of practice” (p.

³ The focus here is on policy creation but Amartya Sen (2009) makes the important point that shifts in norms and expectations stemming from “public monitoring and pressure” can advance the cause of human rights outside of the “narrow box of legislation” (p. 366). Put in more Habermasian language, it is not always necessary, or perhaps even desirable, for discourse in “weak” publics to impact the actions of “strong” states. The extra-legal spread of norms and behavioral expectations can make important contributions to the realization of greater justice. Progress toward justice, in other words, is not entirely about creating better laws or means of their enforcement.

194). Digital Age technologies have made this jungle of associations wider and thicker than ever, thus necessitating a focus on the methods of justice and democracy and the inclusion of all necessary voices, so that we can better know how to orient, experiment with, and change our actions toward others. In schools, then, as will be discussed in greater detail in chapter 4, rather than arrogantly pretending to know the way through our ever-thickening “jungle of relations,” emphasis should be on instilling particular habits in students, or modes of conduct, so that they can then employ them to recreate context- and experience-dependent ends-in-view, ends continually reformed by action. In other words, prescribed ends should not dictate the actions or means of schooling, nor should, again, free-for-all action be allowed to lead to any end imaginable. Instead, the ends and means of education should be codependent and guided by their adherence to a normative foundation of justice and the democratic methods and norms it prescribes.

More will be said about the interwoven nature of justice and democracy in chapter 2, but a few quick words will help to set the stage here and make clear the necessity of drawing technological concerns into discussions of justice and justice-centered schooling. As Dewey noted, advances in technology tend to widen the scope of the consequences of associated actions. This expansion creates both moral and epistemological problems when individuals adversely affected by the actions of others are unaware of the origins of their felt conditions or somehow otherwise left out of related deliberation regarding the development of related norms and policies. In such cases, when individuals are functionally or procedurally omitted from developing, critiquing, or redirecting the policies that regulate the associative actions that affect them, the whole system of social organization can be said to be operating without a moral foundation. Morality is tied up

not in the particulars of decisions and outcomes but more importantly in how decisions are made and who plays a part in making them. Rainer Forst (2012) distills these insights down to a minimum conception of justice, one founded on the basic “right to justification.” In chapter 2, it will become obvious that ensuring the basic right to justification will require a paradigm shift in thinking about welfare and the nature of democratic participation and necessitate significant investment in our social infrastructure (see, e.g., Bohman, 1996; Olson, 2006). Additionally, the requirements of the right to justification point to particular methods of social inquiry, namely democratic deliberation, that will inform the discussion in chapter 4 of the justice-centered, minimum conception of schooling. In short, realizing minimum conceptions of justice and schooling will require a great deal of change.

Perhaps most important is that, while the habits of justice and the material preconditions for their exercise can be outlined with some specificity, the actual forms and outcomes of democratic deliberations cannot be predetermined. Describing how he envisioned the process toward a more just system of social organization proceeding, Dewey (1927/1954) stated, “[I]t is in the first instance an intellectual problem: the search for conditions under which the Great Society may become the Great Community. When these conditions are brought into being they will make their own forms. Until they have come about, it is somewhat futile to consider what political community will suit them” (p. 147). To Dewey, inquiry into the betterment of society was a fundamentally pragmatic endeavor grounded in a process of social inquiry no different than those too often artificially compartmentalized as distinctly scientific, democratic, or technical. The betterment of society needed to be a process of continual reproduction that involved

testing the fidelity of real world observations to the requirements of democracy, experimenting with various solutions to identified problems, and tentatively adopting those that seem to offer the most promise (Hickman, 2001). Existing political forms, then, emerged from distinct social contexts and needed to adapt as conditions changed. Any omission or distortion of relevant data would limit the potential to identify and ameliorate social ills. It is this insight that motivated Dewey's insistence on inclusive democratic deliberation, broad dissemination of all relevant information and points of view, and the development of reasons for action that accounted for the concerns of all affected. Chapter 2 will expand on these requirements, drawing more specifically on James Bohman's (1996) insights into the mechanisms and requirements of democratic deliberation. For now, it is enough to sum up a bit by noting that social progress is best viewed not as a process of social engineering, or the development of means to reach preexisting ends. Instead, it is an experimental process, the results of which should be thought of as tentative and dependent on the input of all of those connected by the consequences of associative action.

Modern ICTs have expanded the potential range of consequences of associated actions to a planetary scale, making it more difficult than ever to identify and trace consequences to their origins. Adding to this dilemma, even when it is possible to pinpoint sources of social problems, the territorially bound jurisdictions of states and other governing bodies are often not able to extend their regulatory influence across borders. Achieving justice in this ICT-enabled, post-Westphalian age, then, necessitates a shift in mindset. Advocating for a "three-dimensional" conception of justice more appropriate for our increasingly networked and interdependent world, Nancy Fraser

(2009) argues that justice is not only about redistribution of goods and the recognition of the subjects of justice but also a question of how to promote more accurate framing of issues. According to Fraser,

“The Keynesian-Westphalian frame is a powerful instrument of injustice, which gerrymanders political space at the expense of the poor and despised. For those persons who are denied the chance to press transnational first-order claims, struggles against maldistribution and misrecognition cannot proceed, let alone succeed, unless they are joined with struggles against misframing. It is not surprising, therefore, that some consider misframing the defining injustice of a globalizing age.” (p. 21)

The ability to press claims is analogous to one’s exercise of her right to justification, and the development of clearer and more inclusive ways to frame issues of social concern is the purpose of democratic deliberation. Thus, global justice requires the expansion and deepening of opportunities for social inquiry across borders, an endeavor that will not succeed without the widespread promotion of the norms and habits of social inquiry and the universal ability to engage fruitfully in digitally mediated public spaces.

From a practical standpoint, though, organizing the formation of transborder publics seems like a daunting task. The endeavor, after all, requires not just the presence of ICTs, but the capability of all affected parties to press for justification of policies and initiate deliberation related to their reform. This will require not only an ICT infrastructure but also health, welfare, and educational infrastructures to support their use. As Kevin Olson (2006) explains, democracy is a reflexive process, one that requires a robust health and wellness platform from which all can act *prior to* its exercise.

Discussion will return to the reflexive nature of democracy in chapter 2 and what kind of material base might support the minimum conception of schooling in chapter 4. For now, the technological considerations alone are enough to consider.

Simply put, the same technological advances that have made global the consequences of associative actions can also be used to enrich democratic associations. Modern technologies have the power to form and reform publics across previously unassailable geographical, political, and temporal barriers. Utilizing reliable communication networks, communities of interest can chat, talk “face-to-face,” and share all sorts of information and multimedia across territorial boundaries. Moreover, networked communities not only allow users to leave messages for others to view at another time but also archive past online interactions. Such characteristics of networked communities, in many ways, overcome temporal issues that can burden traditional, geographically defined publics. For example, the asynchronous character of technology mediated communication allows group members to not only come to the same meeting, so to speak, at different times, but also lets new or potential members access a group’s past conversations, thereby overcoming information deficits that could otherwise preclude membership or meaningful new-member contributions. In this way, it becomes easier to bring shape and substance to Dewey’s formerly “amorphous and unarticulated” publics.

Furthermore, digitally mediated communication is not bound by territory. Of course, access to ICTs varies from region to region and those in power can intervene to throttle, censor, or otherwise interrupt the free flow of information that nourishes democratic publics. These facts, though, say little about the *potential* of ICTs to deepen global democracy. As will be explored in more detail in chapter 3, all technologies have a range of potentialities, and the implementations and evolution of various technologies are highly contingent on the political milieu in which they are imbedded. James Bohman

(2007) offers a vision of the possibilities, explaining that the significant growth of digitally mediated, border-crossing communications points to the likely transformation of the meaning of “public” and of what it means to engage in a “public sphere.” He explains, stating that the “space opened up by computer-mediated communication supports a new sort of distributive rather than unified public sphere, with new forms of interaction.” Such communication “decenters the public sphere,” creating a “public of publics rather than a distinctively unified and encompassing public sphere in which all communicators participate” (p. 77). Bohman names a democracy that consists of such distributed, overlapping publics a “democracy of *dêmoi*,” a kind of democracy different than that typically organizing an isolated, self-legislating political entity, or *demos*. Freed from often artificial and arbitrary borders that constitute a *demos*, new forms of citizenship could emerge that require a myriad of forms of democratic association rather than voting or having been born in a certain location. Technologically mediated deliberation among citizens in a border-crossing democracy of *dêmoi* could, the argument goes, influence the related policymaking of governing bodies that are able to regulate the actions at the origins of social problems. More importantly, the solutions emerging from these distributed publics, because they could conceivably include the input of all affected parties, would be more morally and epistemologically sound than those chosen only by experts and distant representatives. After all, all individuals would be able to exercise their right to justification of policies, initiate deliberation on topics, and play a role in the framing of discussions and outcomes. And, with the inclusion of more knowledgeable voices, more precise solutions to social problems could be developed. Tentative

solutions to problems could then be tried and subjected again to continuing democratic inquiry.

Again, practicing social inquiry on a global scale seems like a large task, to say the least. Simply securing the minimum foundation of justice – the right to justification – will require a great deal of work. However, it is work that needs to be done. As Bohman states, the broad reach of consequences of associative actions have made the creation of something like a “democracy of *dêmoi*... a fundamental demand of political justice and an obligation of humanity to construct” (p. 18). Key to deepening democracy will be to resist the temptation to engineer comprehensive solutions and prescribe inflexible ends. Democratizing, or deepening social inquiry, must be an experimental process. The means shape the ends-in-view and vice versa. In other words, democratization can start now, where we are. Moreover, although deepening democratic deliberation is the central aim, a single forum does not itself have to embody all characteristics of a full and robust democracy. Instead, digitally mediated publics will necessarily consist of a wide variety of associations with varying degrees of internal democracy. Mark Warren (2001) explains that various democratic effects can emerge from all sorts of associations, including those that are not themselves democratic in any sort of robust sense. Theorists have also begun to write more specifically about democratic deliberation in this way, noting that we should think of large-scale deliberative democracy as a coalescence of democratic effects of associations within “deliberative systems” rather than as particular kinds of actions in a single forum (Parkinson & Mansbridge, 2012). Framing transnational democracy as a deliberative system suggests many ways that digital democrats could contribute to more robust social inquiry, including but not at all limited

to disseminating information and news, sharing opinions in online discussions boards, creating and responding to expressive media, engaging in largely non-deliberative consciousness raising efforts, or working to create or reform technologies in ways that promote broader and deeper sharing of information, experiences, and opinions. In sum, exactly what needs to happen is not nearly as important as how to proceed. Again, following Dewey, our goals should be context-dependent and immediate, and our outcomes and practices must change over time as the interwoven means and ends of social inquiry evolve.

Educating Digital Democrats

Given the arguments above, it is probably clear that the following pages will not be full of rich descriptions of particular technological objects and how they might be used in schools to raise test scores. Nor will there be outlines of particular instructional methods, themselves technologies in a different sense. Instead, following the insights of Dewey (Hickman, 1990, 2001) and Feenberg (2002), the principle aim of the discussion will be to politicize technologies so as to frame them as contingent and malleable. Such framing will help to denaturalize the tools, techniques, and aims of present-day schooling – a necessary first step toward considering education reform guided not by achieving prescribed ends more efficiently and effectively but by facilitating emergent, context-dependent manifestations of an educational minimum defined by the requirements of the basic moral right to justification. While tablets, flipped classrooms, MOOCs, learning analytics, adaptive learning, online and distance education, digital textbooks, games, mobile learning, etc. are all important areas of study, most of the work done in these areas relates to how well they can help engage students, meet curricular aims, promote

the development of particular skill sets, or assess students and teachers. Some of this is important work but none of it is the focus of this study.

As will be discussed in chapter 3, technologies, whether tools or techniques, act as platforms or vantage points for assessing and developing solutions to particular problems. These technologies themselves were all constructed as solutions to their developers' own particular sets of challenges and resulted from the outcomes of specific historical events and political assumptions. Moreover, the manufacture, maintenance, and disposal of material technologies often involve significant environmental and human costs. Thus, divorced from the unique historical and social contexts within which they emerged, technologies possess only coincidental relevance to the pursuit of justice. Failure to test and redesign technologies to ensure that they continue to serve social inquiry can lead to practices that range from quaint and anachronistic to potentially destructive. Indeed, one might argue that holding up test scores as a proxy for social justice and building an educational regime on standardized curricula and high stakes testing tends toward the latter possibility.

What, then, should occur in schools seeking to nurture the development of digital democrats, or citizens who engage fruitfully in digitally mediated democratic associations? How might schools contribute to the construction and invigoration of deliberative systems capable of enabling social ills to be traced to their origins and facilitating the inclusive development of democratic solutions? Certainly, much thoughtful and important work has already been done on democratic education, specifically increasing participation and practicing the techniques of deliberation (see, e.g., Fung, 2004; Gutmann, 1987; Hess, 2009; Parker, 2003). This study, then, can be

seen as a contribution to a larger body of work on democratizing education and education for democracy. However, by embedding analysis in a normative understanding of justice and the related imperatives of transnational deliberative systems, and by foregrounding the social and political contingencies of technological forms and methods, this study will offer not only a needed and timely extension of existing work but also a fresh framework for justice-seeking educators and policymakers seeking alternatives to the standardization and testing regimes that characterize modern education policy and practice.⁴

Because the applications and forms of social methods of inquiry will necessarily be different in different contexts, chapter 4 will offer no prescriptions regarding means or ends of schooling. However, despite being intentionally general regarding specific technologies, the discussion will be situated specifically in the current technological and education policy landscape. By contrasting current policy and practice to the imperatives of the normative right to justification and the related need to access and participate in a wide variety of digitally mediated associations, it will be possible to develop a interrogatory framework that can be used across varying contexts and at different levels of scale to assess practice and guide reform. Given its normative grounding in the right to justification, such a framework will also be helpful for justice-seeking educators looking for solid ground upon which to act and to defend potentially controversial pedagogical and curricular decisions.

⁴ It could be argued that building such a framework on a Deweyan conception of democracy, technology, and education is anything but “fresh.” However, despite the fact that many in education pay homage to Dewey, very little about schools is or has ever been Deweyan, and important aspects of Dewey’s agenda are often misunderstood or taken out of context. Properly understood, Dewey offers a powerful antidote to modern education reformers’ rhetoric and helps to answer tough questions about how best to think about justice and its realization in the Digital Age.

To recap, to develop a conception of education for social justice nested in considerations of technological mediation and digital age democracy, this study will draw together theoretical discussions of social justice, democracy, technology, and schooling. Chapter 2 will outline a normative conception of justice that will point to the necessity of democratic deliberation. Given the border-crossing demands of the right to justification, democratic deliberation will be framed as a transnational, digitally mediated endeavor occurring not in a single forum but across associations that generate democratic effects. Then, to ward off essentialist interpretations of technology that would undermine its potential adaptation to the shifting demands of digitally mediated associations, chapter 3 will focus on framing technology as a contextual and political endeavor, one that should be subject to continual revision and experimentation in different contexts. Finally, chapter 4 will identify ways that schools can facilitate students' deployment of the habits and skills associated with social inquiry, specifically as they pertain to participation in justificatory arenas. In doing so, this study will offer a normatively grounded vision of schooling tied not to credentials or the implicit demands of standardized measurements but to the demands of the right to justification. Its most tangible offering will be an interrogatory framework to help guide those seeking to realize the minimum conception of schooling and turn schools into centers of social inquiry and incubators of justificatory literacy.

Chapter 2

A Minimum Conception of Schooling, Part I: The Right to Justification and Engagement in Digitally Mediated Deliberative Systems

The last chapter highlighted the moral necessity of tracing the consequences of associative actions to their origins, and pointed to the fact that advances in technology, especially border-crossing ICTs, brought both potential and complications to these efforts. Additionally, it was noted that simply identifying the origins of felt consequences – a sizeable task in itself – did not do enough to meet fully the necessary preconditions for justice. Instead, it was argued that justice demands that individuals affected by the consequences of associative actions have a chance to play substantive roles in the framing of issues and the development of solutions to identified problems. This, in turn, necessitates that all are, at a minimum, able to press for justifications of policies and practices and engage in deliberation regarding their development and modification. In this chapter, these ideas will be explored in more detail. The overall goal is to outline more precisely what justice and democracy entail and to explore how technologies are transforming the public spaces where political negotiations occur. Drawing on Habermas's (1984a, 1984b, 1998) notions of system and lifeworld and Forst's (2012) right to justification, it will be argued that justice is manifested in the porosity between systems of governance and the lived realities of actual people. These interconnections are forged via discourse within publics, associations that are presently undergoing a transformation from largely consumption-driven, territorially bound, one-directional arenas to production-driven, collaborative, geographically amorphous, and

often ICT-enabled deliberative systems. Reforming schools to support and encourage citizen engagement in these modern publics will require a flexible and open-ended approach to schooling, one taking direction from the mandates of the right to justification and the skills needed to exercise it within digitally mediated deliberative systems. So, while this chapter does not focus directly on specific technologies, the arguments presented here provide an essential grounding for chapter 3's analysis of the political nature of technology. Taking the time to explore how notions of the public, justice, and democracy are intertwined and being reshaped by technologies will, in chapter 3, make it possible to identify with greater precision how assumptions underlying technological forms and methods support or work against democratic aims. Then, with a solid understanding of the nature of digital age publics, democracy, and the ways that the development and deployment of technologies intersect the demands of justice, chapter 4 will offer an overview of how adopting a minimum conception of schooling oriented toward the right to justification and justificatory literacy could transform schooling in ways that confront the challenges of digital age justice.

It should be noted from the outset that the arguments made in this chapter and throughout the study are grounded in what can very broadly be defined as the critical tradition. In other words, this project is embedded in a collective attempt to not only expose and eliminate systems of domination but also create political and educational systems that embrace individuals as ends in themselves; thus, the project is both deconstructive and constructive, and operates from the basic assumption that surface appearances often mask realities that work against the realization of justice. Staying true to this approach requires that one not only resist the temptation to offer simple

“solutions” but also remain skeptical in the midst of the rhetoric, enthusiasm, and excessive romanticism surrounding educational and technological reform. Remaining skeptical makes it more possible to recognize when appeals to justice actually mask self-interest or the maintenance of systems of domination. Many education scholars and activists who fall under the broad umbrella of the critical tradition have done important work highlighting where and how seemingly justice-oriented policies work against the interests of society’s least advantaged. For example, Patricia Burch (2009) has outlined in detail how NCLB’s accountability regime, a policy framework touted as improving educational opportunities for historically underserved populations, grew out of cronyism and diverted Title I dollars toward, among others, supplemental educational service providers who, ironically, were not forced to accommodate the unique and often resource-intensive needs of special education students and English language learners (Burch, Steinberg, & Donovan, 2007). More recently, Lipman (2011) and Buras, Randels, and Salaam (2010) offer and collect strong counter-narratives to the justice-oriented rhetoric of RttT-style urban education reform. And, Stephen Ball (2012) has documented how profit-seeking corporations are using justice-oriented rhetoric to co-opt educational policy on a global scale, institutionalizing the expectation that a quality education can and should be standardized and profitable. Of course, anything approaching a comprehensive overview of critical work in education policy is far beyond the scope of this project. The point here is simply to draw attention to the distinct possibility that a sizeable disconnect exists between discourses within official channels of power and the needs and desires of society’s least advantaged.

Stated in more precise terms, the central concern is that “systems” – governing institutions and the rules their members prescribe – are often insufficiently responsive to input from “lifeworlds” – the norms, beliefs, and practices of actual communities with distinct histories and experiences (Habermas, 1984a, 1984b, 1998).⁵ This becomes especially problematic when one considers that notions of what it means to be “public” are often tied to the state, or system, and ideas about what is “private” are linked to the concerns of individuals and their immediate family members. It is this conceptual public-private split that creates the distance between those who frame issues and develop related policies and those who feel the consequences of the actual actions that policies attempt to regulate. Aggregative, representative democracy, with its supposed experts in one sphere and periodically voting, mostly passive, information-consuming-rather-than-producing citizens in another is a political expression of this distance. Activism, social movements, and outright rebellion throughout history, of course, belie any notion of a passive citizenry, but the continued commonsense use of “public” as an adjective synonymous with the state or state control sustains this implicit, counterfactual assumption about the largely receptive and passive role of citizens. To complicate matters, when “public” is used as a noun rather than an adjective, one is usually *not* referencing systems of governance. Instead, “public” as a noun is often understood as a collection of individuals, or as voters within territorially defined political borders. Such an understanding is advanced with the use of ideas like “public opinion” or the “will of the public.” So, which is it? Does “public” refer to the state or its citizens? Given that

⁵ “Lifeworld” and “system” are paradigms or constructs. In this study, the plural of these terms, “lifeworlds” or “systems,” is meant to stand in for real and distinct contexts that exist within lifeworld or system domains.

system actors simultaneously inhabit lifeworlds, can the idea of “public” usefully tease apart notions of the state and its citizens? Failing to remove the ambiguity and internal conflict among and within forms of the word “public” will perpetuate cloudy and counterproductive thinking about the role public schooling can play in promoting justice, as well as make it difficult to frame technology not simply as tools but as a central medium through which interconnections between systems and lifeworlds are developed or hindered.

To proceed productively, then, and to highlight connections among schooling, the public, democracy, technology, and justice, it is necessary to operationalize a definition of “public.” First, following Dewey (1927/1954), when “public” is used as a noun in this study, it will refer to an association that forms to assess and make more predictable the consequences of associative actions, or to draw into greater relief the particular interests or concerns that first drew the public into existence. Sometimes, especially at small scales or over long periods of time, the formation and actions of publics can lead to shifts in norms or expectations without or in advance of any sort of formal legislation. In these cases, lifeworlds themselves are the sites of public action and influence and require systems only insofar as systems are seen to embody cultural norms. However, on larger scales or when the actions of publics highlight particularly sensitive topics, to accomplish their aims, publics are often required to influence systems to tap into their legislative and governing power. In these cases, publics form exclusively in neither Habermasian lifeworlds nor systems but emerge as a sort of nervous system connecting these two

highly useful abstractions.⁶ Accordingly, when “public” is used as an adjective in this study, it will refer to the bi-directionality, co-influence, and porosity between systems and lifeworlds. “Private,” then, is not the opposite of “public;” rather, private concerns are simply those exceedingly few thoughts and actions that have no bearing on the beliefs and practices of others. Thus, the public is neither the state nor system, nor is the public synonymous with lifeworlds. Instead, publics are drawn into existence to connect systems and lifeworlds, co-imbricating their actions and sustaining their permeability.

Adopting this understanding of public helps to move beyond aggregative notions of democracy toward an understanding of democracy as a means of organizing political actions in ways that create and sustain permeability and co-influence between systems and lifeworlds; “political” here is defined not as a set of formalized procedures that mediate the choice among preframed problems and their prepackaged solutions but much more widely and open-endedly as that which requires some form of organization to highlight or regulate consequences of associative actions. As will be outlined in more detail below, much more than mere semantics, this move has the potential to change radically our conception of what public schooling is for, how it might be oriented toward democratization and justice, and what infrastructure is needed to support it. Indeed, the legitimacy of institutions, including public schools, hinges on the degree to which they enable, create, and maintain this porosity between systems and lifeworlds. Following this

⁶ Habermas describes this process as public opinion emerging from the “wilds” of “weak states” and influencing the actions of strong, governing states. While this weak/strong state distinction is useful when thinking about public action within Habermas’s larger project, for present purposes, it will be more fruitful to continue with the simpler understanding of publics and public action as sustaining the interconnections among systems and lifeworlds.

line of thinking, the base of democratic citizenship should rest not on the acquisition of some predefined set of content knowledge or on casting informed votes but on the right to engage in the continual reshaping of the interconnections between systems and lifeworlds and to participate in associations that add to and bring greater clarity to constellation of lifeworld discourses, in both physical communities and in cyberspace. Schools seeking to develop citizens and promote justice must make it their core mission to nurture the capabilities and inclinations associated with such political engagement. Indeed, if “public” refers to the establishment and maintenance of connections between systems and lifeworlds, then public schools must develop citizens able to initiate and participate in such political activity. And, the only way to actually know that they possess such capabilities is to redefine schools as actual sites of social inquiry and public formation and to support students throughout their related endeavors. Pretending as though public schools are somehow politically neutral while, at the same time, standardizing schooling according to the needs and interests of those who hold system-rooted power, inevitably privileges systems and cuts off connections with lifeworlds, sustaining systems of domination. Taking some initial steps toward developing a more precise understanding of how such schooling might work is the primary goal of this study. For now, though, it should suffice to note that education reformers who focus on proxies of these capabilities, such as test scores or perhaps even graduation rates, risk perpetuating relations of domination characterized by divisions among those who frame and develop policies and assessments and those who are governed by them.

The sobering fact that justice seekers must be ever-mindful of the distinct possibility that ongoing reforms may simply reproduce, further obfuscate, or exacerbate

already existing relations of domination is hardly cause for paralysis or excessive conservatism. On the contrary, this fact demands that the status quo be open and subject to continual justification, a state of affairs that necessitates ongoing democratic deliberation and a spirit of social inquiry and experimentation. Much work must occur to create and sustain sociopolitical contexts within which all persons are capable of setting deliberative agendas, framing the issues that concern them, and developing related policies. Failure to meet this demanding democratic baseline will result in the continuing treatment of persons as objects rather than subjects of justice and the perpetuation of relations of domination. Accordingly, efforts should be directed not only toward the symptoms of system/lifeworld disconnects but also toward constructing a social and material base upon which individuals can develop and exercise deliberative capabilities. Stated differently, to realize justice, we must first establish the preconditions that nourish the reflexivity at the heart of democracy. The following discussions of justice, democracy, technology, and schooling attempt to, in various ways, discern essential capabilities that must operate on this reflexive base. Thus, the minimum conception of schooling developed throughout this project is essentially an attempt to develop a notion of schooling that enables citizens to exercise their moral right to justification while preventing powerful interests from colonizing lifeworlds.

Thinking about schooling in this way will offer an x-ray of sorts to assess the potential of education reforms to advance justice aims. This is especially important in today's educational technology landscape. It is hard not to get swept up in the rhetoric and see education as in the midst of exciting and fundamental changes. After all, Internet-connected mobile technologies such as phones and tablets and, soon, wearable

technologies such as Google Glass are disrupting the centuries-old paradigm of teacher-centered, classroom-based learning. Such technologies offer customized and immediate feedback, allow for students to produce knowledge rather than simply receive and process it, create new opportunities for “situated learning” experiences (Brown, Collins, & Duguid, 1989), promote widespread and immediate accessibility and sharing of information, and engage students deeply in learning activities. However, as briefly discussed in chapter one, seemingly disruptive technologies have historically been folded neatly into the status quo (Cuban, 1986). We can celebrate efficiencies, but when greater efficiency ratchets up the number of bullet points on a list of “common” standards instead of opening spaces for context-dependent exploration, is the related technology and its implementation a reform or an intensified version of the existing model? Similarly, when standards-based reform and online learning combine to create “flex degree” programs that allow individuals to earn education credentials by taking content tests, does this represent democratization or something less? Furthermore, one can celebrate information technologies and highlight the exciting possibilities of tapping into vast amounts of “cognitive surplus” (see, for example, Noveck, 2009; Shirky, 2010), but without resolving thorny issues related to access and participation, decision-making and information construction in cyberspace may simply mirror class, gender, and racial divides in the physical, face-to-face world. Some of these issues will be explored below, but most of this discussion will be held until chapter 3. For now, it is enough to simply reiterate that technologies emerge from and are continually reshaped by their social, political, economic, and cultural contexts. Far from neutral tools, technologies, whether material or procedural, are often developed and deployed in ways that naturalize and

precondition their use toward particular ends. To the extent that such ends are prescribed and remain outside the realm of inclusive and democratic deliberation, the design and implementation of technologies will tend toward reinforcing or reiterating old problems. The task for justice-seeking educators, then, is to work to ensure that technologies are developed and deployed to meet ends that contribute to and emerge from democratic deliberation. In other words, justice-seeking educators need to support the development of publics, capable of creating and nourishing interconnections among systems and lifeworlds, including those operating in cyberspace.

According to this line of thought, the minimum conception of schooling proposed in this project is an effort to engage students in actual social inquiry and public formation, and to create, modify, and use technologies to achieve democratically agreed-upon aims. As stated at the outset, the first step in building a minimum conception of schooling capable of realizing justice aims is to outline with more precision what justice and democracy might look like in our networked world. The remainder of the chapter will be dedicated to this purpose, adding more detail to the particular understanding of publics sketched above and suggesting how schools might better approach their roles as citizen-developing, democracy-deepening, association-nourishing, and justice-promoting institutions.

Modern Publics

Like the minimum conception of schooling, the right to justification is an attempt to establish fundamental principles applicable in all situations, without unnecessarily prescribing specific values or ends. Instead of adopting a particular framework, a minimal conception of justice acts as a compass point guiding ongoing efforts to find the

optimal degree of permeability and influence between systems and lifeworlds. The task of the administrative system is not only to establish and maintain the context within which all are able to exercise their right to justification but also to remain porous to contributions from “the wilds” of lifeworlds. The tasks of individuals and groups within lifeworlds include behaving in ways that anticipate the duty to justify actions; exercising justificatory capabilities made possible by the system by initiating or responding to calls to justify; and developing, supporting, continually evaluating, and, when necessary, reforming the technologies and associations that coordinate, shape, and mediate such discourse. Such actions have the net effect of generating discourses or streams of public opinion capable of influencing the actions of administrative bodies. Moreover, sustaining justification-related expectations establishes the tentative nature of decisions and prevents moral and ethical stagnation. Indeed, according to Habermas, this context of justification, or the system of rules that supports one’s “ability to say no,” is the “normative fault line” that demarcates a just, discourse-based society from one characterized by the system’s colonization of the lifeworld (p. 324). Thus, ideally, the lifeworld generates and refines what Dryzek and Neimeyer (2010) refer to as a “constellation of discourses,” while the system responds to such discourses by continually reassessing and recreating an administrative context within which such opinions and argumentative frames can exert political influence. This is the core of Habermas’s (1998) “two-track” notion of deliberative politics.

Like Dewey (1927/1954), who lamented the problem of “too many publics” and the difficulty of articulating distinct political communities out of tightly interwoven and border-spanning networks of associative action (p. 123), Habermas also confronts the

sheer scope and complexity of planetary-scale networks of social interactions and their regulation. To deal with this complexity, Habermas scales up his two-track conception of deliberative democracy and notes the need to avoid “legitimation deficits” that emerge when administrative power is cut off from “communicatively generated power,” i.e., when political systems are unresponsive to public opinion (Habermas, 1998, p. 386). In doing so, he productively describes the legitimation-demanding role of civil disobedience and the central role mass media actors play in screening and shaping the messages that pass between lifeworlds and systems. However, there are times when his arguments could be extended in light of recent advances in and the increasing ubiquity of participation-enabling ICTs. Indeed, understanding the ways in which ICTs are enabling and promoting change in the public sphere is central to the development of education systems oriented toward the schooling of digital democrats.

In some of his earliest work, Habermas (1962/1991) describes the transformation of the public sphere from exclusionary but public-opinion-generating bourgeois debates to the seemingly more inclusive but highly manipulated, mass-media-shaped technical discourse among experts. As this transition occurred, the exchange of written letters and the polite and reasoned discourse among educated laypersons was subsumed by larger patterns of consumption. This had the effect of collapsing the distinction between public and private spheres, removing the intellectual distance required to resist what Habermas (1984a, 1984b) later refers to as the colonization of lifeworld by system. What was left was not a public sphere capable of conferring legitimacy to political decisions, but a public transformed into a mass where detached experts processed information and disseminated their conclusions as prepackaged, consumable nuggets. Democracy was

reduced to aggregative forms in which debate gave way to mere choice among expert opinions, ideas that were filtered, shaped, and disseminated by the mass media.

Habermas (1962/1991) declares:

“The sounding board of an educated stratum tutored in the public use of reason has been shattered; the public is split apart into minorities of specialists who put their reason to use nonpublicly and the great mass of consumers whose receptiveness is public but uncritical. Consequently, it completely lacks the form of communication specific to a public.” (p. 175)

In other words, the increasing prominence of system-controlled, consumption-oriented production and dissemination of knowledge began to diminish the influence of lifeworld discourses on systems. Indeed, the generation and dissemination of political discourses was increasingly abdicated to system actors.⁷ What seemed to increase publicity of discourses in the sense of accessibility actually eroded the potential of publics to form and act in ways that connected the operation of systems to the wisdom and experiences of lifeworlds.

Habermas continues, explaining that the “‘culture’ propagated by the mass media is a culture of integration,” where distinctions between information, opinion, entertainment, and advertising blur and then collapse into mere slogans, effectively depoliticizing and “pseudo-privatizing” the public sphere (p. 175). This collective abdication of the duty to debate and justify opinions underlying political decision making stripped democracy of both its normative and epistemic dimensions, a trend that led Dewey (1927/1954) to declare that “the public and its organization for political ends is

⁷ Nancy Fraser (1997) argues persuasively against Habermas’s bourgeois, elitist, and exclusionary idea of the public sphere. However, even if one embraces the idea that the lost public sphere that Habermas seems to lament was less than ideal, Habermas’s insights related to the public sphere’s shift toward consumption and away from production of discourses remain powerful.

not only a ghost, but a ghost which walks and talks, and obscures, confuses and misleads governmental action in a disastrous way” (p. 125). To make matters worse, this distance between systems and lifeworlds has become not only clear to but also sustained by system actors. According to Habermas (1962/1991), experts and mass media combine to manufacture a public sphere useful only as “vehicles of advertising” (p. 217), a fact exploited and perpetuated by “election managers [who] must not only take note of the disappearance of a genuine public sphere in the realm of politics but must in full consciousness promote it themselves” (p. 216).

In the face of this somewhat grim assessment, Habermas did note in the 1960s that the “outcome of the struggle between a critical publicity and one that is merely staged for manipulative purposes remains open” (p. 235). Moreover, despite Cold War era concerns about “self-annihilation on a global scale,” he recognized the same forces of production also held at least the possibilities of reducing social conflict generated by a “scarcity of means” (pp. 234-235). Indeed, the threat of annihilation made much more acute the need to reestablish the politically legitimizing force of the public sphere and direct forces of production toward the latter possibility. Pointing toward a solution, he declared:

“[T]he two conditions for a public sphere to be effective in the political realm – the objectively possible minimizing of bureaucratic decisions and a relativizing of structural conflicts of interest according to the standard of a *universal interest everyone can acknowledge* – can today no longer be disqualified as simply utopian.” (p. 235, emphasis added)

As will be outlined below, these two conditions can in fact be distilled into a single normative base, Rainer Forst’s (2012) “right to justification.” Indeed, this right to justification fills in the ambiguous notion of a “universal interest everyone can acknowledge” in such a way that contextualizes and de-bureaucratizes political systems.

Before the full impact of the right to justification can be felt, however, a few additional comments on media, movements, and the public sphere are in order.

Despite the possibilities he identified in the 1960s, Habermas continued to lament unrealized potential and counterproductive influence of the media through the 1990s. According to Habermas (1998), the central role of the media is to “be receptive to the public’s concerns and proposals, take up these issues and contributions impartially, augment criticisms, and confront the political process with articulate demands for legitimation” (p. 378). In other words, what the media is supposed to *mediate*, primarily, is the connection between lifeworlds and systems, thus ensuring the legitimacy of the political order. Habermas does not see this taking place, and puts a large part of the blame on a disinterested public. Echoing Dewey’s concern about a ghost-like public, he states:

“Because the public’s receptiveness, cognitive capacity, and attention represent unusually scarce resources... the presentation of news and commentaries for the most part follows market strategies. Reporting facts as human-interest stories, mixing information with entertainment, arranging material episodically, and breaking down complex relationships into smaller fragments – all of this comes together to form a syndrome that works to depoliticize public communication.” (p. 377)

This syndrome creates a situation where the “capacity of the public sphere to solve problems *on its own* is limited” (p. 359, emphasis in original). For those interested in promoting democracy and justice, this idea of a disinterested, politically unmotivated, cognitively inept citizenry seems like a major problem.

Fortunately, given recent advancements in ICTs and the social interactions they enable, it is very possible that notions of disinterested masses and collective cognitive deficits are becoming increasingly anachronistic. For example, again, one could make the argument that ongoing social movements and struggles are obvious counterarguments

to strong claims related to a passive public. However, more than this, even if the public-is-a-ghost sentiment is granted and Habermas's broader diagnosis is seen as largely accurate, the increasing and widespread use of participatory technologies should at the very least offer cause for optimism. For example, for many people in today's world, the first stop for straightforward, objective information about pretty much anything is the free online encyclopedia, Wikipedia. Wikipedia is a highly collaborative, intellectual endeavor requiring participation of thousands of volunteer contributors, all of whom gladly and freely donate their expertise. Even when highly technical and idiosyncratic knowledge is required, volunteers can be brought together via ICTs to construct rather than simply consume knowledge. Noveck's (2009) description of the ongoing reform of highly technical patenting processes is a prime example of this, as are the development of open-source software and the collaboration of Foldit gamers seeking to solve actual protein-folding puzzles (Coren & Fast Company, 2011). Furthermore, the use of Twitter and other ICTs during the 2010-2011 Arab Spring demonstrations and revolutions in the Middle East shows that individuals sharing small bits of self-produced digital information can have profound political implications (see, e.g., Castells, 2012). And, even when it may seem like online groups are mostly shallow and banal, such as those ties to fan websites or tween- and teenager-inhabited discussion boards, ICT-enabled forums have been shown to be potent tools to promote charitable giving and incite and organize political action. For example, in *Cognitive Surplus*, Clay Shirky (2010) describes how Josh Groban fans built a successful charity out of a desire to do something special for their favorite singer on his birthday, and how South Korean teens ended up using a fan website to organize their participation in large protests related to meat imports. This is all

evidence that, contrary to the notion that the masses are mindless consumers, citizens are both willing and able to participate in causes that interest them, and to use technologies in unanticipated ways to coordinate collective action. Modern publics not only consume prepackaged information but also more importantly seek out avenues for creative expression and dissemination and actively engage in what has become a largely participatory and constructive culture. Participatory culture has already begun creating new possibilities and challenges for educators and media outlets (see, e.g., Jenkins, 2006, 2009; Jenkins, Ford, & Green, 2013). A key challenge in this study is to imagine how such trends might be turned toward justice-promoting education and kept from being folded into existing systems of domination.

Framing Justice

Framing justice as a process rather than a destination and publics as the nervous tissue connecting, animating, and drawing into harmony the actions of systems and lifeworlds might seem to complicate rather than advance the pursuit of justice. However, such thoughts are derived from a vestigial mindset that was far more useful prior to the recent emergence of the ICT-mediated, participatory public sphere. Engagement in modern publics requires approaching citizenship as an experimental, contextual, and tentative endeavor, guided by a compass rather than a prescription. Indeed, even if a given course of action has proven highly successful in one situation, transferring “successful” methods from one context to another may not be wise at all. Certainly, methods developed and deployed in one context can inform actions elsewhere, but to avoid potentially misguided, counterproductive, overly paternalistic, or otherwise undesirable consequences, justice must remain a constructive process guided and

continually rebuilt by those emerging from and embedded in the actual communities where the consequences of associative actions are felt.⁸ Justice, then, is not something that can be taught, outlined, delivered, or redistributed by outsiders. As a result, one should remain skeptical of those, including educators and policymakers, who promote “best practices,” demand “research-based solutions,” or build collections of “what works” as means to promote justice.

On the other hand, while justice is not something that can be imposed or prescribed, there are basic preconditions for the exercise of social inquiry, i.e., the discernment of the needs of communities and the continual experimentation with means to meet them. The capability of individuals and groups to engage in democratic deliberation, or, more broadly, the capabilities of systems to foster deliberation, should be at the core of conversations about justice. Drawing on Amartya Sen (1992, 2009), “capability” here refers not to the possession of some particular set of goods or to the existence of abstracted rights, but to realizable opportunities to pursue some action. Individuals who possess the skills and resources necessary to participate in democratic deliberation but for whatever reasons choose not to do so do not lack the capability to deliberate. However, those who do not participate in deliberation because they 1) are unaware of issues or unable to think about them, 2) lack the experience necessary to engage the required technologies, or 3) feel in other ways alienated from the deliberative process do lack the capability to deliberate. These two cases are hardly equal. Educators and policymakers should be concerned about both for epistemological reasons but only

⁸ Gramsci (1971) referred to these community-grounded leaders as “organic intellectuals.”

the latter represents an injustice. The goal is not to force every person to deliberate but to create a sociopolitical and educative context within which all individuals affected by the outcomes of particular sets of associative actions, through the actual exercise of social inquiry and public formation in schools, demonstrate that they possess the real option to initiate and participate in deliberation on issues that affect them. Justice-seeking educators and policymakers, then, should work to ensure that all are able to meet basic material and intellectual preconditions for engagement as equals in processes of democratic deliberation, and that they practice such processes in schools. The specific interventions that need to take place will differ across contexts but the continual formation and engagement in publics remains a constant indicator of justice. When individuals are, for whatever reason, incapable of engaging in deliberative processes, injustice is occurring. These precise points of exclusion are the basic injustices that should be the focus of justice seekers' attention and action. Whatever ends emerge from deliberation should be largely irrelevant where justice-oriented policy development is concerned, so long as such ends do not preclude affected individuals from initiating further deliberation. In fact, it is the obsessive focus on justice as the enactment of a particular framework, an accomplishment, a destination, or the possession of some proxy rather than creation of a context within which all individuals are capable of initiation and engaging in deliberation that prevents its realization.

In *The Idea of Justice*, Sen (2009) presents a thought experiment helpful for those tempted to institute prepackaged conceptions of justice across contexts. In his experiment, he presents a dilemma where one must decide which of three children should receive a toy flute. One has no other toys, while the other two have many by comparison.

Egalitarian impulses suggest that this poor child should get the flute. However, Sen discloses that one of the two other children is the only child who can play the flute, complicating the decision with utilitarian instincts. And, finally, the reader discovers that the third child is the one who made the flute, a fact that libertarians would likely prioritize. The point here is simply that there will likely never exist a comprehensive framework of justice to guide decision making that is universally applicable across contexts, groups, and time. Thus, justice does not emanate from some ideal social or economic arrangement, as Rawls (2001) argues; in other words, justice is not some preprogrammed, universalizing algorithm mechanizing the (re)distribution of primary goods. Instead, justice is an ongoing process that responds to the felt consequences of associative actions in a decidedly non-ideal world.⁹ Taking a “non-ideal” approach helps to prevent supposedly logical, objective, or otherwise fair conceptions of justice from imposing hidden ideologies that perpetuate relations of domination (C. W. Mills, 2005). It also recognizes that a plurality of well-reasoned positions may co-exist. These insights suggest that forms of schooling oriented toward very particular ends or the design and deployment of technologies in highly prescribed ways artificially constrain thinking in ways that could limit the realization of justice.

Realizing Justice

⁹ In Chapter 2 of *The Idea of Justice*, “Rawls and Beyond,” Amartya Sen (2009) offers an especially concise, generous, yet critical description of Rawls’s conception justice. However, as will be discussed in this study, developing and exercising capabilities requires a preexisting base, one that, it will be argued, needs to be established prior to any reasonable expectation of justice. In other words, a “well ordered society” of a Rawlsian sort would need to be in place prior to the realization of justice. However, justice is not simply the establishment and maintenance of this base, but its malleability in response to distinctly non-ideal conditions brought to light through calls for justification and their resulting deliberations.

If justice is not the deployment of a pre-packaged frame, and a variety of reasonable justice-oriented positions can co-exist, justice seekers wanting to avoid arbitrarily imposing their particular views may wonder how to proceed. The answer lies, again, in avoiding the urge to adhere too rigidly to context-independent ideas of justice. Justice seekers must do no more than enable and help develop in all parties affected by the consequences of associative actions the imminently realizable capability to press for and respond to claims for justification in processes of ongoing democratic deliberation. Such capabilities are demonstrated via engagement in the actual practice of social inquiry, the identification of points of tension between lifeworlds and systems, the formation of issue-bound publics, and the initiation and participation in justification-oriented deliberation. To motivate such social engagements, what is needed is a minimum conception of justice that establishes the foundation upon which publics can emerge to solve their own problems in their own ways. While this minimum conception of justice may seem to support a radically localized understanding of justice, it is important to remember that transportation, information, and communication technologies have created the possibility and necessity of understanding publics as geographically amorphous and overlapping. At the local level, the fact that publics and the consequences of associative actions that unite them overlap precludes the possibility of discriminatory practices, as such exclusions would diminish the capability of those who are discriminated against to exercise their right to justification within local *and* overlapping publics. Thus, given that publics are enmeshed in webs of interconnectivity, there is no such thing as an isolated community that would be free to build conceptions of justice on racist, xenophobic, sexist, or other discriminatory forms. This, of course, begs

the tough question touched on above regarding how to regulate the actions of overlapping publics, especially as these publics traverse political borders. Again, such regulation can take both cultural and more formal legislative forms, but how exactly governance across borders might work will remain an ongoing challenge for digital age publics.¹⁰ To reiterate, what is needed is not some notion of an ideal society, but a compass point to orient our thinking and actions within a decidedly non-ideal and changing world.

As already noted, Rainer Forst (2012) offers just such a compass, distilling the core requirements of justice to a single normative base, the “right to justification.” Forst argues that “we should understand political and social justice on the basis of a single right – the right to justification – and that we should construct principles for the basic structure of society accordingly” (p. 2). Doing so, he continues, “is the best possible way to philosophically reconstruct the Kantian categorical imperative to respect other persons as ‘ends in themselves’” (p. 2). In other words, situating justice at one’s right to press for

¹⁰ Here, again, is the issue Habermas identified related to public opinion in weak states – what are, in this study, referred to as overlapping publics – affecting the actions of strong states, or governing bodies. Many have identified the need to facilitate and support such influence (see, e.g., Bohman, 2007; Parkinson & Mansbridge, 2012; Sen, 2009), but ideas about how, exactly, such interactions among overlapping publics and governing bodies might occur are harder to find. Given the context-dependent nature of the right to justification, systematizing such connections might not even seem like a good idea. However, in *Foundations and Frontiers of Deliberative Governance*, Dryzek and Neimeyer (2010) outline an interesting idea. They propose a Chamber of Discourses to complement and to bring into more formal relationship systems and lifeworlds. This Chamber of Discourses would allow for representatives of potentially border-spanning ideas to influence the actions of territorially bound legislators. Such an arrangement could offer a balance between the wilds of lifeworlds and the formalities of systems. A full exploration of this idea is beyond the scope of the present study, but it is worth noting that scholars are beginning to think creatively about ways to fuse the seemingly conflicting realities of issue-agnostic, territorially bound states and geographically amorphous, overlapping, issue-centric publics. Insights tied to Westphalian logic, in other words, may not have to be abandoned completely to realize justice in a globalizing world.

justification and the expectation that unjustifiable policies and practices should change offers a concrete yet highly flexible means to guide the development, assessment, and evolution of social, political, and economic arrangements, and ensures that individuals are active subjects of justice rather than the recipients of some distributional proxy. Such an understanding of justice establishes a “deep normative grammar of justice” (p. 3) and more precisely defines what kinds of seismic activity must occur at Habermas’s (1998) “normative fault line” (p. 324).

Instead of offering a detailed portrait of social arrangements within a just society, Forst outlines criteria that should guide the exercise of the right to justification. These standards, which will be discussed shortly, are meant to ensure that individuals and groups who experience the consequences of associative actions are precisely those who participate directly in the framing of related deliberation. Indeed, this participation in the framing of issues is central to the ongoing renewal, multiplication, and strengthening of interconnections among lifeworlds and systems. The realization of these principles also demands that systems create contexts that enable reflexivity between these two discursive realms. Such reflexivity requires an *already-existing* social, economic, educational, and technological infrastructure, and points to the hollowness of proxies that allow test scores, employment rates, or other metrics to stand-in for a more demanding understanding of justice. After all, any failure of the political, economic, or education systems to enable, promote, or assist in the development of the capabilities necessary to trace consequences of associative actions, access and influence the viewpoints of others, and to participate in the framing of issues and solutions makes more difficult the

formation of publics, and, as a result, weakens interconnections between systems and lifeworlds and perpetuates systems of domination.¹¹

Accordingly, injustices should be thought of as conditions that prevent the full exercise of the right to justification. Those interested in promoting justice, including critical educators, should situate themselves at this normative fault line and be vigilant in their efforts to not only highlight where material inequalities are preventing such engagement but also support, initiate, organize, or otherwise engage in political action directed at remedying relevant baseline inequalities. It is difficult to generalize across contexts where inequalities relevant to the right to justification exist and at what point inequalities become tolerable. However, the need for a highly robust welfare state and the rich baseline equalities and social safety net it affords is a given (Olson, 2006). In our digital age, such a welfare state should also include easy access to broadband, reliable Internet-ready devices, and the training necessary to use them. Furthermore, in addition to this largely material understanding of equality, full exercise of one's normative right to justification also depends on one's feelings of political agency. The experiences of individuals and groups over generations condition ideas about what kinds of political action are possible or desirable, instill particular habits of action or inaction, and effectively restrict political engagement to groups with particular educational,

¹¹ In *Reflexive Democracy: Political Equality and the Welfare State*, Kevin Olson (2006) argues for a robust welfare state on the grounds that its supports are required to enable democratic participation. More specifically, Olson outlines how democratic forms that operate sans a supportive welfare state are not likely to create conditions that enable input and participation from those who suffer injustices. This exclusion sustains itself, reaffirming injustices in cyclical fashion while operating under the legitimizing banner of democracy. Stated differently, without a welfare state, the reflexivity at the heart of democracy is not likely to emerge from or be nourished by the exercise of democratic forms; the reflexivity and its constituent capabilities must be there from the beginning.

socioeconomic, and cultural backgrounds (Bourdieu, 1984). Where such cultural inequalities preclude political participation, Forst's "deep normative grammar of justice" is replaced by the exclusionary and shallow grammar of technical political discourse. To combat this, not only must material equalities be seen as preconditions of justice but also deliberative arenas, both physical and digital, must be universally accessible and accept a wide variety of forms of contributions as instances of the exercise of the right to justification. In other words, all must experience what Bohman (1996) calls "deliberative uptake," or the feeling that one's input matters, even if one's contributions do not fully shape the outcome of deliberation.¹² Thinking about injustices as barriers to the exercise of the right to justification can productively expand notions of poverty. Instead of being tied to income-related proxies, poverty should be understood as a "measure of minimum political equality" tied to the "threshold requirement of being able to initiate public deliberation and to participate effectively" (Bohman, 1996, p. 123). If one accepts that justice is tied most accurately to the capability to exercise one's basic right to justification, and that related capabilities are dependent on a basic material, technological, educational, and political foundation, then realizing and actively sustaining such a foundation becomes a moral imperative.

Democratic Forms

¹² Bohman (1996) explains that the openness of public deliberation to a variety of forms of "reasons" not only has moral but also epistemic value, even in situations where decisions seem to require significant technical expertise. He offers decisions surrounding the use of nuclear power as an example, citing how a variety of perspectives, including those of laypersons, can "work against the occlusion of practical questions by the authority of experts" and lead to *better* decisions (p. 64).

To this point, that “democracy is the only appropriate, though never fully appropriate, political expression of the basic right to justification and of mutual respect between persons” has been implied but not elaborated (Forst, 2012, p. 186). In this section, the idea of justice presented above will be linked more explicitly to particular democratic forms and procedures. Specifically, more detail will be offered regarding the connections between deliberative democracy, the right to justification, and the formation of publics capable of creating interconnections between systems and lifeworlds. Doing so will make it possible, in the next section, to begin to construct a minimum conception of schooling suited to promoting justice in a networked world.

First, it is necessary to add more detail to the idea of justification. Justification requires more than one-directional, post hoc explanations of motives. The justificatory process requires that one assume an intersubjective orientation and frame communication in forms that are understandable by and acceptable to all affected parties. Moreover, “public spaces of normative justifications” (p. 15) cannot exist prior to the particular kinds of communication that bring them into existence, even if proposed spaces, whether face-to-face or online, exist for the stated purpose of supporting dialog, deliberation, debate, or otherwise open-ended communication. Instead of being tied to a form or forum, messages meant to support the defense of validity must simply conform to criteria of *reciprocity* and *generality*. According to Forst, the criterion of reciprocity demands that claims to validity be made without “claiming certain privileges over others and without one’s own needs or interests being projected onto others,” thus emphasizing the “equal status and imperative of concrete respect for moral persons as individuals.” And, Forst’s criterion of generality adds the requirement to address the “objections of anyone

affected,” thereby avoiding the “exclusion of those possibly affected” and bestowing the “authority of the moral community on the individual.” Combined, these two criteria form the “*principle of reciprocal and universal justification*” (p. 20, emphasis in original).¹³

The fact that this principle allows the classification of messages as justifications but does not restrict the form or forum is crucial, in that it opens up possibilities for a wide variety of unexplored media of justification. Given the speed and power of modern ICTs, creating networks of justification and school systems that support and engage in them is increasingly more a matter of will and imagination than of technological feasibility.

Thus, justification is central to justice-oriented societies, and the exercise of particular forms of communication constitutes justice.¹⁴ The purpose of democratic

¹³ Forst is definitely not the first to make these kinds of arguments. For example, his principle of reciprocal and universal justification is very similar to Bohman’s (1996) criteria for democratic deliberation – quality, non-tyranny, and publicity – as well as to Gutmann and Thompson’s (2004) understanding of reciprocity. Forst’s principle is privileged in this study because it has been teased apart from the political practice of democratic deliberation and held as a freestanding basis of justice. By tying his principle more directly to the normative right to justification than to particular political forms, Forst makes it easier than, say, Bohman’s notion of a “deliberative minimum,” to think about reciprocity and generality as in need of rather than endowed by a particular kind of politics, and draws into greater relief the importance of a social, economic, technical, and educational base that precedes the exercise of democratic deliberation.

¹⁴ It should be noted that justice is much less inclusive than broader ideas of flourishing. Spending time with one’s children, playing musical instruments, having friends, etc., may all be important components of what one considers the “good life” that are not tied directly to one’s right to justification. However, ideas of justice and flourishing are certainly related. When engaging in networks of justification, it is hard to imagine that appeals to the importance of activities and opportunities that contribute to flourishing would not be influential. On the other hand, without adherence to the principle of reciprocal and universal justification, claims to rights inherent in one’s conception of the “good life” would be far more likely to be rejected due to their infringement on others’ right to justification. For example, if one’s conception of the good life involved owning slaves, hoarding resources, owning assault rifles and armor piercing bullets, or abusing children, related justifications for such actions would fall well short of the requirements of reciprocity and generality.

forms, especially those associated with deliberative democracy, is to facilitate the exercise of the right to justification and to mediate related communication. Where technical and political forms do not enable one to trace consequences of associative actions, it is impossible to target demands for justification. Thus, again, the mere presence of democratic forms, even deliberative arenas, cannot stand in as a proxy for justice. Realizing justice is an active process that must be realized and renewed continually. Universally and equally accessible communication infrastructures and the capabilities associated with their use are, therefore, again, a prerequisite for the reflexive animation of justice-based democratic forms. Once everyone affected by consequences of associative actions is capable of targeting accurately demands for justification, publics can then emerge to create the political forms that facilitate related deliberations and establish interconnections between systems and lifeworlds. Clearly, aggregative forms of democracy that rest on the scheduled, periodic choice among largely homogenous representatives fall well short of being able to nourish networks of justification. Indeed, deliberative democracy is the political system that best enables such public building.

A full-scale consideration of the nature and operation of deliberative democracy is beyond the scope of this study.¹⁵ However, it is important to return to the related difficulties and solutions created by technologies. Modern transportation, information, and communications technologies have exploded the reach of associative actions, often broadening the scope of consequences well beyond the jurisdiction of governing bodies. At the same time, these same border-spanning technologies carry the potential to

¹⁵ Bohman (1996) and Gutmann and Thompson (2004) both provide excellent and comprehensive overviews. Bohman's work is especially rich.

facilitate the formation of publics capable of tracing and assessing such consequences, thereby helping individuals and groups frame concerns, target demands for justification, organize action, and redesign the interconnections between systems and lifeworlds. However, in a networked world, it is not always possible or even necessary to engage in related face-to-face deliberations. Thus, traditional notions of fully deliberative public forums and their centrality to democratic processes likely need to be reimagined.

Mansbridge et al. (2012) explain, “Deliberative democracy is more than a sum of deliberative moments” (p. 26). Moreover, “[N]o single forum, however ideally constituted, could possess deliberative capacity sufficient to legitimate most of the decisions and policies that democracies adopt” (p. 1). Instead, democratic deliberation capable of mediating the vast amount of communication necessary to legitimize policies and practices needs to be understood as a system. In *Democracy and Association*, Mark Warren (2001) argues that democracies are best understood as collections of democratic effects emerging from the actions of a wide variety of associations that may or may not be internally democratic or politically oriented. He explains, “Democracy describes an ecology of effects flowing from a multiplicity of forms of collective decision and action” (p. 207). Such associations include groups ranging from NGOs, activists, neighborhood associations, universities, unions, media outlets, etc. Each of these groups creates, makes accessible, refines, and keeps alive points of view that must be accounted for when responding to demands for justification. Thus, individuals and groups creating and sharing media, building websites, organizing events on Facebook, tweeting, adding and responding to comments on online discussion boards, editing Wikipedia entries, etc., may all be contributing important democratic effects that sustain deliberative systems. These

deliberative systems provide the information and media necessary to identify the origins of problems, call for universal and reciprocal justification, and deliberate among competing ideas. In other words, a huge variety of activities, including those that occur online, contribute to, make possible, and hold accountable to principles of generality and reciprocity networks of justification. Specifically how they will do so is impossible to predict and prescribe. As a result, educating digital democrats – citizens able and inclined to engage fruitfully in digitally mediated democratic associations – will require a decidedly nonstandard approach to schooling, one that requires actual engagement in underdetermined social inquiry and normatively grounded processes of justification.

Beginning to Construct a Minimum Conception of Schooling

Chapter 4 will be dedicated to outlining how schooling might be reimagined to better meet the requirements of digital age democracy. However, a few brief preliminary remarks on the subject are in order. First, given the discussion above, it is now possible to move forward with a more precise understanding of what it means for schools to be public. Public schools are those aimed toward both creating systems more permeable and in tune to input from lifeworlds and establishing and sustaining the expectation of this permeability. Secondly, to the extent that schools are justice-oriented, they help students create these interconnections between systems and lifeworlds in ways guided by the principle of reciprocal and universal justification. Thirdly, justice-oriented schools help students develop capabilities associated with a wide variety of forms of engagement, both communicative and consumptive, in deliberative systems. Lastly, schools capable of advancing justice and democracy must operate on a pre-existing base that enables

reflexive thinking and action; in other words, they should not be tasked with creating the very material foundation upon which their operation depends.

Thus, education for democracy and justice should not involve moving through curricular topics in quick succession in order to prepare for standardized tests. Many of the topics covered by such efforts are only coincidentally related to justice-oriented concerns. Instead, educators should tie classroom inquiry to the interests and needs of local communities, and teach students how to translate their ideas into reciprocal and generalizable arguments. This crucial stipulation holds radically localized schooling accountable to global expectations that students will eventually be able to enter into spaces of justification shared by overlapping publics. What should be common across schools is the ongoing development of capabilities required for students' engagement in deliberative systems, including but certainly not limited to active participation in the following activities: online research; the design and production of various forms of media, including those widely accessible and easily disseminated via ICTs; and the participation in and creation of online forums. Importantly, these efforts should proceed in ways that provide many opportunities to practice not only presenting and defending claims using a variety of media but also assessing others' validity claims according to the criteria of reciprocity and generality. The development of these capabilities forms the core of the minimum conception of schooling, or the foundation upon which deeply context-dependent, publicly grounded, and justice-promoting schooling can be built.

In the next chapter, discussion turns toward the political nature of technology, exploring in more depth how technological forms, both material and procedural, may support or inhibit the social inquiry and communication central to the exercise of the right

to justification. This discussion will help develop in more detail a justice-oriented minimum conception of schooling.

Chapter 3

A Minimum Conception of Schooling, Part 2: Technological Assumptions and Education Policy

In the previous chapter, it was argued that publics should be conceived of as temporally and spatially tentative, often issue-specific connections between cultural, historically grounded, and context-dependent understandings of reality and the rules that govern the behavior and interrelations of groups and individuals. Neither static bodies of administrative power nor collections of citizens, publics are investigatory and dialogical spaces drawn into existence as it becomes necessary to trace consequences of associative actions to their origins and to develop collectively and inclusively policies that encourage the sustained actualization of individuals' moral right to justification and the related development of dialectical compromises and syntheses among the rules of systems and experiences of lifeworlds. Systems committed to facilitating and responding to such inquiry are democratic, in a deep sense, and should be distinguished from political systems that claim the title simply because they employ ostensibly democratic technologies. Such technologies include defined political boundaries, the wide-scale abdication of agenda setting and debate to under- or uninformed representatives, and the periodic tallying of votes. While these technologies may have emerged as pragmatic and well-intentioned responses to the complexities of social organization, this is no excuse to accept fatalistically the chasm between the reality of existing democratic forms and the ideal of deep democracy. Indeed, as noted, modern ICTs allow for engagement in a wide range of border-crossing and issue-specific associations, all of which, despite varying

degrees of internal democracy, can contribute cumulatively to the deepening of democracy. However, such democratization is hardly inevitable. Relations of power shape assumptions embedded in the form and use of technologies in ways that, if not confronted, limit rather than promote the kinds of democratic deliberation that embody the right to justification. This chapter first offers an overview of the highly political nature of technologies as tools, processes, and generators of felt consequences, and argues that all aspects of technological forms and lifecycles should be subject to the same standards of universal and reciprocal justification as any other social process. Then, these claims are extended into a discussion of technologies of educational policy and practice, a step necessary to distinguish the falsely democratic veneer of the status quo from the justification-centered normative richness of a minimum conception of schooling. This, in turn, will set the stage for the final chapter's construction of a framework for moving Digital Age education policy in the direction of a justice-oriented minimum conception of schooling.

Politicizing Technology

The main argument of this chapter rests on a largely unoriginal but important claim, namely that the development and use of technologies, whether material or procedural, are politically charged acts. Rather than depicting a point in time along some predetermined arc of technological progress, technologies are far from predetermined phenomena. Instead, technologies are best thought of as responses or manifestations of very particular assumptions or needs held by those possessing decision-making power. Negative externalities of technological forms and processes – whether social, economic, cultural, environmental, health-related, or otherwise – should, therefore, not be

considered unavoidable outcomes of progress or unfortunate, statistically improbable events. Instead, they should be addressed as the material outcomes of the very particular assumptions and aims of financiers and directors of technological innovations. Even when technologies are eventually deployed outside of the contexts for which they were intended, “hacked” to unlock new possibilities, or developed to achieve seemingly benign aims, externalities linger, often accumulating in ways hidden from view. When such externalities block the exercise of the right to justification or the development and practice of capabilities required to participate fruitfully in public spaces, lingering consequences of a commitment to technological progress have profound moral implications.

A few details might help to concretize these admittedly abstract claims and begin to connect them to the integration of technologies into schooling. In a report sponsored by the National Mining Association and the American Coalition for Clean Coal Energy, Mark Mills (2013) states, “The information economy is a blue-whale economy... Based on a mid-range estimate, the world’s [ICT] ecosystem uses about 1,500 TWh of electricity annually, equal to all of the electric generation of Japan and Germany combined – as much electricity as was used for global illumination in 1985” (p. 3). Lest one get lost in the enormity of global-scale data, Mills continues, “Reduced to personal terms, although charging up a single tablet or smart phone requires a negligible amount of electricity, using either to watch an hour of video weekly consumes annually more electricity in the remote networks than two new refrigerators use in a year” (p. 3). People who use multiple devices, of course, use more refrigerators’-worth of energy. User devices, however, are only part of the issue. Mills also explains that end-user ICTs are

part of a vast ecosystem that consists of massive data centers, communications networks, Internet-connected devices, and the manufacture of related hardware. Thus, while futuristic accounts of technology enthusiasts often draw upon sleek and clean imagery, the reality is that, until alternative energy technologies are advanced enough so as to be ubiquitous and self-sustaining, productive or seemingly benign engagements in cyberspace like watching funny cat or Khan Academy videos, surfing the Internet, and participating in digitally mediated associations are made possible by the community-, ecosystem-, and biosphere-punishing realities of mountaintop removal, fracking, drilling, and nuclear power.

In addition to the energy required to run them, components of ICT ecosystems also require continual maintenance and upgrading, especially in economies driven by competition and consumption. This results in a continual need for production of new products, a process incurring not only material but also human costs. In a report for the *New York Times*, Charles Duhigg and David Barboza (2012) outlined the harsh working conditions in factories producing Apple products:

“Employees work excessive overtime, in some cases seven days a week, and live in crowded dorms. Some say they stand so long that their legs swell until they can hardly walk. Under-age workers have helped build Apple’s products, and the company’s suppliers have improperly disposed of hazardous waste and falsified records, according to company reports and advocacy groups that, within China, are often considered reliable, independent monitors.

More troubling, the groups say, is some suppliers’ disregard for workers’ health. Two years ago, 137 workers at an Apple supplier in eastern China were injured after they were ordered to use a poisonous chemical to clean iPhone screens. Within seven months last year, two explosions at iPad factories... killed four people and injured 77. Before those blasts, Apple had been alerted to hazardous conditions inside the Chengdu plant, according to a Chinese group that published

that warning.”¹⁶

However, costs associated with the construction of technological objects – material extraction, manufacturing, and transportation – represent only the most visible costs. Deeper investigations, often at sites far from technological objects’ points of sale, expose additional, equally severe costs of technological progress. For example, recycling or outright disposal of old technologies has had profound environmental and human impacts. Distant, largely unregulated sites in places such as China, India, Pakistan, Nigeria, and Vietnam keep the toxic realities of Digital Age waste largely out of affluent end-users’ view. In an interview on National Public Radio (2010, December 21), Jim Puckett, the Executive Director of the Basel Action Network (BAN), describes the “cyber-age nightmare” occurring at such disposal sites, focusing particularly on Guiyu, China, where thousands of women cook circuit boards and bathe components in toxic,

¹⁶ This refers to a report by Students and Scholars against Corporate Misbehavior (SACOM) (2011), issued in response to a string of suicides they believed were connected to labor practices at Foxconn factories. The report describes apparent disconnects between reality and the labor-related promises made by both Foxconn, a major electronics supplier, and its customers Apple, Dell, and Hewlett Packard. In the report, SACOM concludes, “It is hypocritical that Foxconn hires a number of counselors, opens up care centres, launches [a] hotline service for workers after the spate of suicides, but imposes harsh management on workers at the same time. Workers are not allowed to talk on [the] production line and they always feel they resemble machines. Furthermore, the labour rights abuses such as miscalculation of wages, excessive and forced overtime, threat of occupational diseases, denial of contract and use of student labour, cannot be tolerated” (p. 19). Foxconn also funded its own investigations, which, not surprisingly, found that the root of the problem was not in its military-emulating labor practices but in the broader and more systemic problems inherent in the transition from rural economies to the realities of factory life. To its credit, Foxconn did install nets on its factory buildings to catch people who might otherwise succeed in hurling themselves to their deaths. This action was, unfortunately, too late for nine others earlier that year who succeeded in killing themselves at work (Barboza, 2010). Fortunately, as will be explained in more detail below, increasing exposure to such issues seems to be, at least on the surface, creating enough pressure on companies to prompt changes in labor relations.

acidic stews to extract salable components. That which is unsalable is then burned, often releasing toxic fumes. These practices have so poisoned the Guiyu water supply that fresh water has to be brought in via pipeline from 40 kilometers away. Summarizing the significant human costs of such activities, Michelle Castillo (2011) explains in her report for *Time*, “Scientists who have examined Guiyu have determined that because of the waste, the location has the highest levels of cancer-causing dioxins in the world. Pregnant women are six times more likely to suffer a miscarriage, and seven out of ten kids have too much lead in their blood.” Lest affluent Westerners be tempted to eschew culpability, Castillo continues, “Many of the devices broken down in the town came from other countries including the US, who in 2008 according to Natural Resources Defense Council Allen Hershkowitz tossed out 130,000 computers each day and dispose of over 100 million cell phones each year.”

Fortunately, increasing awareness of these kinds of abuses seems to be having a positive impact on the behavior of Apple and other technology companies. For example, according to its website, in response to increasing awareness of worker conditions at its suppliers’ factories, Apple (2013c) is now “vigorously enforcing” its Supplier Code of Conduct, an ongoing commitment it summarizes as follows:

“The Apple Supplier Code of Conduct... is based on standards created by the International Labor Organization, the United Nations, and the Electronic Industry Citizenship Coalition (EICC). It requires suppliers to provide safe and healthy working conditions, to use fair hiring practices, to treat their workers with dignity and respect, and to adhere to environmentally responsible practices in manufacturing. But our Code goes beyond industry standards in a number of areas, including ending involuntary labor practices and eliminating underage labor. To make sure suppliers adhere to the Code, we have an aggressive compliance-monitoring program that includes Apple-led factory audits and corrective action plans, and confirmation that these plans have been carried

out.”¹⁷

Moreover, Apple (2013a) has committed publicly to reducing or minimizing its “environmental footprint” associated with the manufacture, transportation, use, and recycling of its products. Apple’s efforts also include energy conservation and the use of renewable energy and energy-efficient hardware at its massive, iTunes- and iCloud-sustaining data centers.¹⁸

These and other related efforts are, of course, necessary and important. However, it is worthwhile to consider whether or not such ameliorative actions are simply addressing symptoms or combating underlying causes. Consider first the use of energy-efficient technologies. On the surface, if one considers only the rhetoric from the technologists’ press statements and websites, it appears as though preventing or remediating the negative consequences described above can be achieved completely through the development and widespread use of better technologies. However, even where greater efficiency promises per-unit energy savings, increases in the size and reach of the ICT ecosystem due to population growth, expansion into new markets, the creation

¹⁷ Apple’s Supplier Code of Conduct is available on its website (Apple Inc., 2012). According to its own 2013 Supplier Responsibility Progress Report, which reports 2012 data, Apple has increased its supplier audits by 72% (for a total of 393 audits of varying types), achieved a 92% compliance with its goal of a maximum 60-hour work week, and reached a variety of other goals (Apple Inc., 2013b). Unfortunately, a recent report has contradicted these positive assessments (China Labor Watch, 2013).

¹⁸ Through its 2011 launch of the Open Compute Project, Facebook has also expressed and worked to realize its commitment to energy efficient data centers (Heiliger, 2011). This commitment seems to be meeting with success. Finley (2013) reports, “Facebook passed another milestone in the green data center arms race... with the announcement that its Altoona, Iowa data center will be 100 percent powered by wind power when it goes online in 2015.”

of new perceived needs, or other accomplishments of the technologists' marketing campaigns, it is difficult to see how these successes represent net gains. Again, this is not to suggest that pursuing energy efficiencies is a bad idea, only that such achievements were made necessary not because they are the next inevitable steps along some predetermined arc of technological progress but because of previous commitments to particular directions of technological inquiry. Privileging or considering myopically immediate concerns rather than attempting to pin down and critique underlying assumptions of value makes this fact difficult to see and limits the degree to which issues of technological concern can be reframed democratically.

For example, in *Forces of Production*, David Noble (2011) outlined how modern industrial automation followed paths blazed initially by military interests seeking more precise means of analysis and control. New developments in these areas required that the military use its significant financial resources, derived via taxation, to fund particular kinds of scientific research and connect with industries capable of military-scale production. Despite the fact that the motivations of these various groups were not identical, there was enough overlap among groups' needs and interests to create a unifying technological current that seemed agreeable and eventually natural to follow. This coalescence of technological inquiry around the interests of the powerful is at the heart of Noble's cautionary tale.¹⁹ Noble explained:

“[I]t is no accident that technical people are often allied so closely with the

¹⁹ Not surprisingly, when he first published the book in 1984, Noble's employers were not pleased. He explained in the preface to the 2011 edition, “I was fired both by MIT for writing this book and by the Smithsonian Institution – to which I had been temporarily seconded as curator of automation and labor – for organizing an exhibit on industrial automation partly based upon this book” (p. x)

owners of capital and the agencies of the government; the connection is the necessary prerequisite of scientific and technological development, given the relations of American capitalism; technical people strive continuously to anticipate and meet the criteria of those in power simply so that they may be able to practice their calling. It is no wonder that, in subtle and not so subtle ways, they tend to internalize and even consciously adopt the outlook of their patrons, an outlook translated into professional habit through such mechanisms as education, funding, reward structures, and peer pressure.” (p. 43)

These relations establish distance between those who design and deploy technologies and those who use and/or are controlled by them. This restricts the ability of those who lack power to either play a role in framing the problems that technological inquiry is attempting to solve or judge the appropriateness and potential of related solutions. In Noble’s story, this resulted in increased automation and the deskilling of manual work, a trend preserved by a perverse positive feedback loop between a declared shortage of skilled workers and calls for more of the automation that caused it. The distance between designers and users of technologies is central to this project’s story as well, given that the outcomes of the development and deployment of technologies have significant implications for individuals’ ability to trace consequences of associative actions to their origins, exercise their right to justification of policies and practice, and create publics to

bring into greater alignment the values and commitments of lifeworlds and the governing actions of systems.²⁰

The lack of democratization of technological inquiry and design, then, was at the core of the problem Noble identified. Accordingly, Noble declared that the “essential challenge” was to “stand in the way of today’s technological progress in order to make possible a more humane and democratic future” (p. 352). Importantly, Noble also noted that there were “no short-cuts, no quick fixes, no technological routes to this future” (p. 352).²¹ Of course, Noble’s last point could seem somewhat dubious given the democratic possibilities of technological advances like those noted in chapter 2, or perhaps ICT-enabled accomplishments like Iceland’s crowd-sourced constitution (Castells, 2012) or Barack Obama’s unprecedented and successful online volunteer coordination and fundraising efforts in 2008. Indeed, exposing the labor and environmental injustices outlined above required the communicative power of ICTs. However, one may still wonder whether flashes of well-publicized democratic gains have substantively deepened

²⁰ Once such distance is established, it tends to become naturalized and reified through self-exclusion from technical discourse (Bourdieu, 1984), engender epistemically poor framing of issues and related decision-making (Bohman, 1996; Fraser, 2009), limit individuals’ opportunities to exercise their moral right to justification (Forst, 2012), and embed logics of capital and control into imprimatur-granting systems of public education (Apple, 1995). This kind of technological rationalization and how it connects to educational policy and practice will be explored in its own section below. It is important here simply to note that directions of technological inquiry are neither natural nor neutral, and to suggest that democratization of technological agenda setting and assessments of design and deployment could very well have prevented the ongoing environmental and human catastrophes associated with technological progress described above.

²¹ In the acknowledgements section of *Forces of Production*, Noble (2011) cites his indebtedness to Lewis Mumford’s life’s work (pp. xvii-xviii). Indeed, Mumford (1934) closed his *Technics and Civilization* with much the same admonition Noble offered, declaring, “It would be a gross mistake to seek wholly within the field of technics for an answer to all the problems that have been raised by technics” (p. 434).

democracy, in the specific sense of facilitating the tracing of felt consequences to their origins and the inclusive development of policies that bring into greater fidelity the actions of systems and the beliefs and experiences of lifeworlds.

Consider, for example, some cautionary claims as to the effects of ICT mediation on the ways that people communicate with one another. First, Boler (2007) cautions that the freedom anonymity grants participants in disembodied online forums may undermine historical, distinctly embodied and place-based struggles for identity and recognition.²² Along these lines, in the mostly celebratory but highly nuanced work cited in chapter 2, Jenkins (2006) notes not only how easy it is for online forums to allow the perpetuation of “politically incorrect” stereotypes but also, echoing Bourdieu, cites a cultural participation gap that traces race, class, and language lines (pp. 269-292). A strong claim can also be made that participation online is gendered, a possibility supported by the fact that less than 15% of Wikipedia editors are women (Khanna, 2012). Despite its possibilities, Wikipedia’s anarchic, democratic veneer is also chipped away somewhat by the hierarchical structure of its administrative levels (Wright, 2010). Even when people have access and are inclined to navigate the Internet, it is exceedingly easy to self-select contacts and information, a fact exacerbated by the homogenizing exclusiveness and

²² Lessig (2006) notes that, given that a record of one’s IP address is left at every stop in cyberspace, perceived Internet anonymity is an illusion. Edward Snowden’s recent exposure of large-scale citizen surveillance by the U.S. National Security Agency also undermines overgeneralized claims to online anonymity or privacy. However, despite the fact that absolute anonymity is nearly impossible to achieve, where users are allowed to use pseudonyms in online forums, they can effectively remain unknown to one another.

predictability of search algorithms (Pariser, 2011).²³ Goldsmith and Wu (2006) also argue that, despite the rhetoric of Internet enthusiasts who tout the possibilities of a world without borders, Internet experiences have been and will likely continue to be shaped by local, territorially bound governments. And, it is possible that, even when people are engaging with one another, modern communications media like text messages and Twitter encourage such shallow-level social engagement that we are simply, as Turkle (2011) vividly puts it, “alone together,” sharing virtual space but little else, our previously rich interactions and deeply contextual stories deconstructed into data suitable to categorization and subsequent storage in databases (Barney, 2000). Such perceived disconnection from each other and diminishment of past and present experience led Heidegger (1977) to declare fatalistically that “only a god can save us” (p. 57) and Ellul (1964) to bemoan, with much resignation, a monolithic, dehumanizing, possessive, and controlling technical world from which there was no escape.

In short, then, while many technological forms show promise in that they can be turned toward democratic aims, not only their production but also their use generates consequences that prevent rather than encourage democratization. In other words, when technologies are taken “off the shelf,” so to speak, they carry with them the assumptions and wishes of not only their designers but also their designers’ employers and financiers. This creates a significant antidemocratic current beneath even the most ostensibly democratic endeavors, the pull of which appears in the many stories of technology-

²³ As was explained in chapter 2, access to technologies and the ability to use them is a precondition for democratic participation. In other words, full access and ability to engage as equals in cyberspace needs to be a given, preceding all democratic deliberations. What this means in specifically school-related contexts will receive more attention in chapter 4.

related environmental destruction, human rights violations, labor abuses, feelings of disconnection or ennui, or effective exclusion from online forums.

In light of these concerns, it is important to return to the core claim of this project and assess its merit. Again, the central idea is that, once the democratic minimum required for reflexive democracy has been established, schools should abandon their overly prescriptive curricula and testing regimes in favor of a minimum conception of schooling. This minimum should be composed of only those concepts, skills, and attitudes necessary to guide students in their advancement along the continuum of justificatory literacy, i.e., to support students' engagement in actual social inquiry and public formation, including those activities that require interaction with and use of ICTs. However, if the design and use of technologies occurs on very thin ice above a flowing river of antidemocracy, is it wise to embed ICTs so firmly in plans for school reform, especially if deepened democracy is the aim? And, if expanding and maintaining communications networks and making ubiquitous the availability of connected tools – a prerequisite of transborder public formation – has such profound environmental and human costs, is it right to pursue that aim?

In response to the first question, what many consider “normal” schooling is already characterized by a very particular collection of techniques of efficiency (see, e.g., Tyack, 1974), control (see, e.g., Apple, 1995, 2004; Kaestle, 1983), and distinction (see, e.g., Labaree, 1997; Labaree, 2010), a fact both intensified and obscured by the use of modern ICTs. In other words, the question should not be whether or not technologies should be at the core of education – they are already inextricably embedded – but how students might be made aware of and interact with technologies in ways that promote

social inquiry and public formation rather than the continued distraction from methods of control. Adding more detail to this discussion, the following section will present a high level overview of how technological assumptions have shaped modern education policy. For now, it is necessary to address the second question.

The question of whether or not it is right to pursue the aim of deepened, ICT-mediated, global democracy when the construction of its requisite networks carries such profound human and environmental costs can be answered in a similar way: the requisite networks and devices are already being and will continue to be expanded because they generate profits. Furthermore, the effects of global networks are already being felt, thus it is imperative to trace such effects to their causes, a process that cannot be achieved without ICTs. The aim, then, is not to create global ICT networks for the sake of some ideal democracy, but to confront the decidedly non-ideal, already-existing barriers to the exercise of all individuals' moral right to justification. This will require democratizing the development and deployment of related technologies, opening such processes to non-technical contributions from laypeople, and, consequently, reorienting how the purpose and assessment of technological activities and pursuits are framed. Borrowing Gilbert Simondon's term, Andrew Feenberg (1999) explains that such "concretization" of underlying assumptions is fundamental to the "reflexive accommodation of technologies to their social and natural environment" (p. 218). Technological development must be reframed as social inquiry, operate from the foundational normative assumption that any technological methods or outcomes that inhibit the exercise of the right to justification are morally unsound, and remain subject to omnipresent deliberative scrutiny. Feenberg (2002) summarizes the importance and magnitude of this democratizing project:

“All modern industrial societies stand today at the crossroads, facing two different directions of technical development. They can either intensify the exploitation of human beings and nature, or they can take a new path in which the integrative tendencies of technology support emancipatory applications. This choice is essentially political. The first path yields a formally biased system that consistently reinforces elite power. The second path requires a concretizing application of technical principles, taking into account the many larger contexts on which technology has impacts. These contexts reflect potentialities – values – that can be realized only through a new organization of society.” (2002, p. 188)

Echoing the discussion of the reflexive nature of democracy in chapter 2, It is crucial to remember here that the reflexivity Feenberg calls for requires the pre-existence of policies and economic contexts that confer in all at least the capability to not only engage in democratic deliberation but also experience deliberative uptake. Only once this material, a priori democratic minimum has been established can publics form to challenge and dislodge assumptions driving technological progress and its consequences, assumptions including largely taken-for-granted notions of ownership, expertise, accumulation, control, and profit. Thus, the conditions for, expectations of, and universal capability to participate in inclusive dialogue must be established prior to any reasonable expectation that technology will be democratized.

The significant difference between an ideal of democracy that embraces the moral right to justification and our modern pseudo-democratic plutocracies can be paralyzing. After all, if a democratic minimum needs to exist prior to democratization, it seems unlikely that representative governments will ever be able to act in democratizing directions. Indeed, citizens who lack the capability or inclination to press for justificatory processes are likely to find that their representatives do little other than respond to the demands of campaign donors. Even when technologies facilitate the expansion of the donor base, as was the case in the 2008 U.S. presidential election, where there is no expansion of democratic deliberation, simply collecting smaller amounts of money from

more people represents a highly dubious proxy for democratization. At the same time, to borrow Wright's (2010) terminology, a large-scale "ruptural" social transformation does not seem productive either, since it would likely destroy the social safety net that has, in effect, been fully parasitized by capital. The solution is, instead, to pursue "interstitial" transformations, or small-scale, embedded changes that open up spaces for different kinds of thinking and ways of being. Drawing on the idea of deliberative systems described in chapter 2, such efforts require the maintenance and production of a variety of discourses via activism, alternative or fringe lifestyles, hacked technologies, whistleblowing, engagement in participatory culture, blogging, construction of websites, editing Wikipedia, and a host of other activities, none of which needs to be internally democratic to confer democratic effects to the overall system. In this way, interstitial changes act in ways analogous to the disruptive effects of water freezing and thawing. Building expectations of diversity, inclusiveness, participation, and reciprocal and universal justification into interactions online can eventually, one contracting and expanding digital filament at a time, universalize justificatory norms and crack the techno-plutocratic edifice preventing the democratization of technology.

Thus, given that very particular social, political, and economic commitments are embedded in technological methods and forms, the legitimacy of existing technologies and the directions of technological inquiry should be open and responsive to inclusive democratic deliberation. Publics should be able to form to connect the realities of technology-affected lives with the policies that govern technological design and management, even when such effects are traced to origins across borders. "Standing in the way" of the false notion of neutral technological progress and creating space for

alternative frames and discourses is, therefore, essential work in laying the normative foundation for a universally accepted right to justification.

Modern Educational Policy and Its Technological Assumptions

Schooling has hardly been immune to the influence of undemocratic technological developments. Given its central role in shaping the thoughts, actions, and values of a citizenry, it is especially important to ask how technologies in schools, whether procedural or material, reinforce political assumptions and relay them to students. In chapter 1, standardization and credentialing movements were framed as barriers to justice-seeking social inquiry. In chapter 2, the idea of justice was grounded in the normative right to justification and its expression in inclusive democratic deliberation. Now, after this chapter's discussion of the political nature of technology, it is possible to hinge the prospects of Digital Age justice and democracy on the willingness to pull away from prescriptive curricula and embrace schooling oriented toward the largely underdetermined methods of social inquiry, i.e., the tracing of felt consequences to their origins and the development of the kinds of deliberative publics necessary to establish reflexivity between systems and lifeworlds. How such schools might be created and organized is the topic of the next chapter. Here, to create space for that discussion, the task is to frame as politicized technologies central assumptions about schooling and point to how these assumptions are guiding technology-enabled education reform.

Stephen Ball (2013a) names three interconnected and politically charged policy technologies that organize modern education systems: markets, management, and performativity. Combined, the assumptions embedded in these supposedly neutral or common sense technologies have shaped education policy in ways that are “increasingly

subordinated to and articulated in terms of economic policy and the necessities of international competition” (p. 61). Considered individually below, each of these technologies embodies values that conflict with those that create expectations of, space for, and opportunities to participate in justification-supporting deliberative systems.

First, markets both require and reinforce competitive logics, and transform assessments of schools into comparisons of products and cost efficiencies. These products are most often test scores and graduation rates but can also be thought of more abstractly as the perceived quality of the credentials generated, as defined by marketing efforts or the choice of particular aesthetics that endow cultural distinction (see, e.g., Bourdieu, 1984). As a technology of comparison and consumption, markets attenuate democratic engagement about and within schools until it bears much more resemblance to shopping than deliberation (Apple, 2006). Market logic also opens up schooling to not only the processes and assumptions of capital but also the direct influence of profit-seeking interests (Ball, 2012; Burch, 2009; Ravitch, 2010). Such involvement has led not only to the management of schools and related services but also the infusion of the interests of capital into actual curricula. Lest one imagine that this is an isolated phenomenon, the development of the Common Core State Standards, a curriculum standardization effort central to President Obama and Secretary Duncan’s Race to the Top competition, has been strongly influenced by very particular political and economic interests, many of which are set to profit from the sale of educational solutions tied to the predictability and uniformity of the curricula (Bernd, 2013). Indeed, standardizing the aims of schooling is essential to regimes of comparison and consumption, as highly prescribed aims offer clearly comparable benchmarks and a veneer of objectivity to

assessments of schools and their workers. That the requisite canon of “official knowledge” tends to be homogenizing, overgeneralizing and superficial when it comes to racial and cultural diversity, and fundamentally undemocratic (Apple, 2000, 2004, 2006; Buras, 2008) is lost in the market logics of free choice, individualism, and competition.²⁴

The standardization that undergirds markets also makes possible the second of the education policy technologies Ball identifies – managerialism. According to Ball (2013a), managerialism is a technology aimed at the “wearing away of professional-ethical regimes in schools and their replacement by entrepreneurial-competitive regimes” (p. 55). By prescribing outcomes and ensuring that their achievement is easily identifiable and quantifiable, different strategies and tools can be developed, tested, and judged objectively according to their relative efficiencies. With pre-established ends

²⁴ Popkewitz (2008) argues that any efforts to standardize content or notions of progress, especially as they are linked to salvation- or rescue-oriented thinking or themes, subject the Other to abjection. Neither inclusion nor exclusion, abjection defines groups as bearers of deficiencies that somehow need to be overcome before progress is possible. According to Popkewitz, the “object are given the categories of the disadvantaged, urban, at risk, and left behind child; recognized for inclusion and paradoxically radically cast out as different” (p. 172). Rather than being viewed as bearers of distinct lifeworld-rooted points of view relevant in the framing of technical issues in arenas of justification, difference in regimes of standardization and assessment is something like a sickness that needs to be cured before inclusion can actually happen. Such abjection can be contrasted to Ranciere’s (1991) notions of universal teaching and radical equality. Universal teaching begins with the a priori assumption that all are radically equal and capable of teaching themselves anything it is that they want to know. Operating from this point of view, standardized tests, insofar as they show just as much what is not known as what is known, serve simply and absurdly to inscribe difference so as to work against it. Teachers operating from the assumption that all are radically equal need only to tap into the will of their students and convince them of their innate equality and ability to discern and pursue what they need to know. Creating contexts within which such confidence and skills can be developed without, at the same time, reiterating technologies of distinction and control that result in abjection, is near the heart of the current project. Indeed, exploring the idea of a minimum conception of schooling is an attempt to dislodge schooling from the hubris-laden mindset that it is possible to know what people need, want, and are capable of achieving.

clearly defined, schooling can be reconstructed into a system of discrete tasks and learning outcomes, the execution and attainment of which can be managed with precision and distance. The messiness of decidedly more qualitative, experiential, relational, historical, and contextual assessments of success is, under managerial regimes, replaced with the clean and modern precision of black-and-white, no-nonsense, statistically isolated judgments of each component. Instead of viewing schooling as facilitated social inquiry within irreducibly complex school, classroom, and community ecosystems, the managerial mind assumes that what is important about the educative process is that which can be broken into collections of objective/objectifying attributes suitable for storage in databases – age, grade, sex, free-or-reduced lunch status, teacher, test, test score, concept, school, school system, administrator, textbook, etc. Such assumptions are embedded deeply into U.S. education policy.²⁵

Breaking down complexity into manageable, comparable, storable, and assessable chunks as a first step in an educative process may seem to be not only good sense but also good pedagogy. However, this deconstructive process often rests on highly dubious assumptions, including any or all of the following: that the components of a complex idea or process are, in and of themselves, worth knowing; that understanding the essence, properties, or behaviors of isolated components will lend insight into either their functioning within their native systems or the properties of the system as a whole; or, that, once broken contextually from the larger thought or material ecosystem, isolated bits

²⁵ Along with promoting states' adoption of comparable standards and assessments, encouraging the construction of data systems to store test-based performance data was one of the central aims of the Race to the Top program (U.S. Department of Education, 2009a).

will or can be reassembled in meaningful or accurate ways. Where one is unable or fearful to press for reciprocal and universal justifications of such assumptions, education systems become antidemocratic systems of control. Unfortunately, under conditions of austerity and severe wealth stratification, accepting corporate involvement or the strings attached to Race to the Top funds is a matter of survival for schools, a practice that engrains the ideals of standardization and the appropriateness of market and managerial technologies into the common sense of schooling.

To make matters worse, the less students are taught to navigate complexity and the more that curricula are fractured, the less likely that the kinds of communication that occur in ostensibly public spaces will be thick enough to draw together lifeworlds and systems. Barney (2000) explains, “In societies where computer networks are the ascendant medium, information and communication not only occur simultaneously, but also collapse into the single category of exchange. Thus, while they are portrayed as media of *interaction*, computer networks might be described more accurately as media of *transaction* (pp. 97, emphasis in original).” While transactions may be appropriate for “banking” styles of education (Freire, 2000), school systems that equate or collapse information and communication privilege the distance and predictability of detached, technical, pre-framed, static, generalized knowledge over laypersons’ less predictable and possibly reorienting contributions. In other words, when supposedly public school systems embrace networks and their assumptions as means of organization, they risk censoring the kinds of communication foundational to the creation of justification-oriented publics. Habermas (1998) explains:

“The intersubjectively shared space of a speech situation is disclosed when the participants enter into interpersonal relationships by taking positions on mutual

speech-act offers and assuming illocutionary obligations. Every encounter in which actors do not just observe each other but take a second-person attitude, reciprocally attributing communicative freedom to each other, unfolds in a linguistically constituted public space. This space stands open, in principle, for potential dialogue partners who are present as bystanders or could come on the scene and join those present. That is, special measures would be required to prevent a third party from entering such a linguistically constituted space. Founded in communicative action, this spatial structure of simple and episodic encounters can be expanded and rendered more permanent in an abstract form for a larger public of present persons. For the public infrastructure of such assemblies, performances, presentations, and so on, architectural metaphors of structured spaces recommend themselves: we speak of forums, stages, arenas, and the like. These public spheres still cling to the concrete locales where an audience is physically gathered. The more they detach themselves from the public's physical presence and extend to the virtual presence of scattered readers, listeners, or viewers linked by public media, the clearer becomes the abstraction that enters when the spatial structure of simple interactions is expanded into a public sphere.” (p. 361)

Building on this, the claim here is that markets and managerial technologies and their reflexively connected standardization and network technologies have reshaped school curricula so that they are increasingly functionally identical to abstracted public media.²⁶ In doing so, school systems are privileging forms of information and communication that are vaguely applicable across a wide range of contexts rather than those tied more concretely to lifeworlds, abandoning any resemblance to the richness and depth of community-minded publics. This makes it increasingly difficult to trace the consequences of associative actions to their origins, and to create or engage in publics

²⁶ If this connection seems dubious, it is perhaps worth the time, especially for those with classroom teaching experience, to think about not only how often students ask why they are being forced to engage with particular topics but also the answers offered in response to such questions. The more answers are connected to the authority of standardized curricula or tests, references to some possible future applications, ties to particular forms of employment, or to some quality of the information that students just do not yet but might later appreciate, the more that teachers are in the business of marketing and selling than they are educating.

capable of exerting political influence. Habermas continues, explaining how this attenuation or abandonment of dialogical communicative structures dulls public thinking:

“When generalized in this way, communication structures contract to informational content and points of view that are uncoupled from the thick contexts of simple interactions, from specific persons, and from practical obligations. At the same time, context generalization, inclusion, and growing anonymity demand a higher degree of explication that must dispense with technical vocabularies and special codes. Whereas the orientation to laypersons implies a certain loss in differentiation, uncoupling communicated opinions from concrete practical obligations tends to have an intellectualizing effect. Processes of opinion-formation, especially when they have to do with political questions, certainly cannot be separated from the transformation of the participants' preferences and attitudes, but they can be separated from putting these dispositions into action. To this extent, the communication structures of the public sphere relieve the public of the burden of decision making, the postponed decisions are reserved for the institutionalized political process.” (361-362)

Thus, by embracing markets and managerial technologies, school systems are implicitly accepting and legitimizing assumptions about knowledge and ideas that distinctly privilege those who already hold decision-making power.²⁷ When such assumptions block the exercise of the right to justification or the kinds of social inquiry that would motivate people to seek justification, school systems become mechanisms of social control.

²⁷ Apple (2006) explains that, in addition to neoliberal market advocates and a “managerial middle class” trained in the techniques of comparability and efficiency, standardized curricula are also favored by both neoconservatives who desire a return to imagined pasts of shared ideas, histories, and values and an increasing number of homeschooling participants whose external legitimacy depends on demonstrations of comparability. This seemingly odd convergence of interests around the importance of uniform curricula has created a hegemonic bloc of sorts, granting standardization both the imprimatur of official sanction as well as a common-sense feel. Failure to subject curricula to the requirements of universal and reciprocal justification maintains systems of schooling tools as tools of the reproduction of power relations rather than transforming them into forces for justice.

Finally, the last of the three education policy technologies Ball identifies is performativity. Connected to modern technologies of markets and managerialism, performativity is a deeply personal process of self-making and self-governance that occurs in response to the anticipation of external judgments. Under the seemingly sterile auspices of market and managerial technologies, individuals come to assess their own worth and the merit of others according to their achievements relative to prescribed benchmarks. These demonstrations of achievement are far from neutral, as they redefine people as comparable objects and interchangeable components of end-oriented processes. Moreover, where excellence is either a scarce or relative commodity, such performances also implicitly frame system actors – e.g., students, teachers, administrators, schools, school systems, communities, service providers, content developers, publishers, etc. – as antagonists, each attempting to establish separation and distinction from the mediocre or worse. In surveillance systems where student test score data are constantly collected, processed, shared publicly, used to create new benchmarks, and tied to merit, the constant need to perform can create deep ontic anxiety, especially where criteria according to which one's worth is assigned and internalized are increasingly arbitrary and disconnected from the lives of students and their communities.

A particularly insidious quality of performative regimes is that success within them makes one easier to govern and direct. Indeed, challenging the assumptions of a performative system not only positions oneself as a threat to progress and quality but does so in a way that denies qualities in oneself that bring affirmation, personal gain, and self-satisfaction. This makes exit or resigned conformity the easiest two paths for dissenters. However, neither exit nor conformity opens up interstitial spaces where

alternative conceptions of merit can take root. Ball (2013b) explains, “[P]erformativity works best when we come to want for ourselves what is wanted from us, when our moral sense of our desires and ourselves are aligned with [the performative system’s] pleasures” (p. 140). Thus, justice-seeking educators and policymakers must begin by refusing to want what the performative system wants. Instead, they must choose a morality and method grounded in the decidedly more tentative, inclusive, and contrarian right to justification, and work interstitially to create space for alternative discourses. As was the case with the need for democratization of the design of material technologies above, policy technologies must also be open to contestation and democratization. Given the public shaming that accompanies performative regimes, “standing in the way” of technology in this way is a decidedly risky proposition.

Continuing to Construct a Minimum Conception of Schooling

The three policy technologies described in the last section were taken individually as a matter of convenience, not because they are easily or obviously separated. In reality, the technologies of markets, managerialism, and performativity function reciprocally, continually reinforcing the embedded assumptions of the others. Feenberg (2002) explains, “The most sophisticated technologies employ synergies between their various milieus to create a semiartificial environment that supports their own functioning” (pp. 186-187). In other words, technologies can act on the natural world to generate material conditions that invigorate their operations, “as when the heat generated by a motor supplies a favorable operating environment” (p. 187). In this way, via their material and procedural manifestations, technological assumptions can create positive feedback loops that sustain their status as common sense. Unfortunately, as has been noted above, the

common sense of modern education policy technologies does not always equate to what is best at promoting justice. Furthermore, significant environmental and human costs accompany the construction, maintenance, improvement, and use of the very information and communications infrastructures that constitute digitally mediated deliberative systems. This means that teaching students how to use ICTs and establishing their widespread availability as one of the core requirements of a reflexive democracy may simultaneously create new barriers to the exercise of the right to justification among society's least advantaged. Thus, even when one pursues democratic aims, assumptions embedded in the design of technologies and the consequences of their deployment tend to create or reinstate barriers to the exercise of the right to justification.

Fortunately, these barriers can be overcome by rejecting the core technological assumption not only underlying all of the policy technologies above but also guiding the myopic deployment of technological forms – standardization. In facilitating regimes of comparability, standardization creates the “favorable operating environments” for markets, managerial forms, and performative assessments, and frames technologies as either means to achieve prescribed ends or objects to master in particular, vocationally prescribed ways. Adopting a minimum conception of schooling requires the rejection of prescription beyond that which is essential to social inquiry, and establishes justice-oriented social inquiry as public education's central method and purpose. Where schools embrace this curricular minimum, technologies can be turned back on themselves and become the objects of study, opening a whole host of underdetermined explorations into the design, manufacture, and intended uses of technologies, any of which, depending on the kinds of questions that arise during the inquiry, could require that students engage

with history, design, aesthetics, statistics, geography, economics, business, sociology, chemistry, biology, environmental science, engineering, philosophy, or other often disconnected curricular areas. In a networked world, where ICTs mediate public formation and the tracing of consequences to their origins, such technological inquiry needs to be foregrounded to challenge technological assumptions and their concrete implications. A minimum conception of schooling is necessary to facilitate this.

In addition, a minimum conception of schooling would also help to demystify material technologies, repositioning students as participants in rather than mere operators of technology. In *Zen and the Art of Motorcycle Maintenance*, Pirsig (1999) describes the attitude of the technological “spectator.” Spectators, according to Pirsig, “live with technology without really having anything to do with it,” or, if they do interact with it, they do so “outside of it, detached, removed...involved in it but not in such a way as to care” (p. 34). This creates a consumer- or user-oriented attitude toward technologies that hides their possibilities and adaptability. An anecdote Pirsig shares involves his friend, John, being reluctant to, even put off by, the idea of using a piece of aluminum can as a shim to fix his loose handlebars. Despite the fact that the beer can would have served the purpose perfectly, the idea that something so simple could fix his BMW motorcycle was not only inconceivable but also offensive to John. John assumed that any shim capable of working would have had to be produced explicitly for that purpose, thus failing to grasp the range of possibilities the technology afforded. In other words, he lacked what could be called a hacker’s mindset and initiative. When technologies in schools are used in highly prescribed ways and directed toward very particular aims, students are likely to adopt this kind of spectator orientation. However, if students spend their time in schools

engaged in largely underdetermined, open-ended, technologically mediated social inquiry, and are asked whenever possible to justify their assumptions and opinions in ways sharable in digitally mediated public spaces, they will be much more likely to experience and internalize the malleability of technological forms and participate in their redesign or nonstandard application. Such an orientation is key if students are to be able to work around possibly anti-democratic assumptions embedded in technologies and engage in digitally mediated spaces in ways that both maintain a vibrant constellation of discourses and create inclusive arenas of justification.

In sum, rejecting overly prescribed curricula and adopting a minimum conception of schooling can create the kinds of schools where students are able to engage with technologies in ways that support the deepening of Digital Age democracy. In the next and final chapter, discussion will turn toward the crucial issue of how to determine the point at which social inquiry ends and unwarranted prescription begins. This analysis will inform the development of an interrogatory framework that educators, school systems, and policymakers can use to promote justice aims through schooling.

Chapter 4

A Framework for Schooling for Justice in the Digital Age: Justificatory Literacy and the Minimum Conception of Schooling

At this point, it can be stated succinctly that realizing justice in the Digital Age hinges, in large part, on the degree to which technologies, both procedural and mechanical, can be democratized. This brief statement, however, took some time to develop. Before turning to the kind of schooling that can encourage citizens to engage in such justice seeking – a minimum conception of schooling centered on helping students develop justificatory literacy – it is important to review one last time the core arguments, lest all manner of other conceptions of justice and democracy undercut the importance of the minimum conception of schooling.

In chapter 2, it was argued that justice is best conceived as the ability to trace consequences of associative actions to their origins, press for universal and reciprocal justification of policies and practices, and participate in the reframing of governing norms and policies in ways that draw into greater reflexivity the rules of governing systems and the experiences of lifeworlds (Dewey, 1927/1954; Forst, 2012; Fraser, 2009; Habermas, 1998). The political expression of this justification-centered normative foundation, it was also suggested, is engagement in public democratic deliberation where all affected can participate and experience deliberative uptake (Bohman, 1996). What such participation entails can vary widely across associations within deliberative systems (Parkinson & Mansbridge, 2012; Warren, 2001), but opening opportunities for such participation must occur after extra-democratically assumed material foundations have been realized (Olson, 2006). Once this material base is solidified, justificatory norms can be nurtured in places

like schools, and then serve as the motivation to create publics where policies preventing the exercise of the right to justification can be challenged and redrawn. Establishing and maintaining this kind of political uncertainty and subjecting policies to continual justificatory scrutiny should be the end-point of the justice seeker's project. The lack of prescription beyond the establishment of a foundational set of preconditions makes this a minimum conception of justice.

In chapter 3, prospects for such democratization were tied to technological concerns, not out of any special interest in technologies, per se, but because ICTs have not only broadened the scope of felt consequences of associative actions but also offered a means of tracing such consequences to their origins. Moreover, as ICTs become the principle mediators of communication, issues related to their manufacture, distribution, design, and use are of central importance to both the construction and maintenance of the normative and material infrastructures required for the full and inclusive exercise of the right to justification. Unfortunately, education policy technologies (Ball, 2013a) – technical methods of governing actors within school systems – rooted in the interconnected ideals of standardization and objective comparability have made it increasingly difficult to understand the contingent nature of technological design and to make the assumptions and externalities tied to the use of technologies an explicit focus of school-based social inquiry. “Standing in the way” of technological progress, as Noble (2011) puts it, especially as such progress is guided by policy technologies, is necessary to create interstitial spaces where students' engagement with technologies can occur as participants rather than as spectators and where tools can be turned back on themselves in ways that define technology simultaneously as both the means and object of social

inquiry. Thus, overcoming the negative externalities of the use of technologies requires exactly the opposite of the rejection of technological forms; instead, it requires opening up technologies to democratic processes where the aims, forms, costs, and underlying assumptions are made concrete (Feenberg, 2002) and are subject to justificatory scrutiny. Such space will be made possible in schools by adopting a minimum conception of schooling.

Defining what, exactly, this minimum conception of schooling entails is important, but developing a list of highly prescriptive curriculum standards that somehow defines it would be absurd. Instead, rather than viewing it as a means to achieve prescribed curricular ends, the minimum conception of schooling is best thought of as a commitment to organizing schooling around the normative right to justification, where students are supported by their teachers and communities as they engage in developmentally appropriate social inquiry and advance along the continuum of justificatory literacy. The technologies and topics students engage with must remain underdetermined but always connected to issues relevant to their communities. Instead of standardization regimes that encourage uniformity and conformity to external aims, schools would be free to support their students as they participate in actual public formation aimed at concretizing how lifeworlds represented in their communities are characterized, represented, and shaped by system-generated controls. Hardly a scaled-down conception of education, given the vast scope of connections and culpabilities both caused and exposed by ICTs, a lifetime of inquiry could present itself to each classroom. Indeed, by operating from this minimum conception, instead of being poor preparation for later living, schooling would itself become genuine social engagement, its mentor-

facilitated nature being the only fundamental difference between “real life” and life in schools.

A minimum conception of schooling, then, aligns with Dewey’s (1897/1959) vision of education as a “continuing reconstruction of experience” where the “process and goal of education are one and the same thing” (p. 27). Thus, where the goal of schooling is proclaimed to be justice or its manifestations in democracy, such aims must become its methods as well. Bringing together Dewey’s views on the topic, Hickman (2001) explains, “Democracy is... not so much the maintenance of a historical institution, or even work toward a fixed goal, as it is a method of education” (p. 182). Such thinking led Dewey to reject adamantly the idea of education as preparation, since framing it as such would wrongly devalue and subordinate actual, present-oriented experiences in places like classrooms. Dewey (1938) explained:

“When preparation is made the controlling end, then the potentialities of the present are sacrificed to a suppositious future. When this happens, the actual preparation for the future is missed or distorted. The ideal of using the present simply to get ready for the future contradicts itself. It omits, and even shuts out, the very conditions by which a person can be prepared for his future. We always live at a time we live and not at some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future. This is the only preparation which in the long run amounts to anything.” (p. 49)

Thus, schools that aim to promote justice and democracy are not those that focus myopically on helping students achieve some future-oriented credentials or marks on standardized tests, but are places that immerse students in actual, context-specific, and justification-oriented social inquiry. Adopting a minimum conception of schooling is the related commitment to prescribe only those things that are essential to developing and deploying sets of skills, orientations, policies, and intellectual freedoms central to such inquiry. Such aims can be distilled into the single goal of justificatory literacy.

Below, the discussion will turn toward defining with more precision what constitutes the minimum. Then, an interrogatory framework will be offered to help educators and policymakers identify points of over-prescription and transform schools into centers of public formation and incubators of justificatory literacy.

Defining the Minimum

Curriculum

A rejection of fixed ends is not a call for the complete abandonment of structure or ends-oriented thinking within the classroom. Instead, it is a call for the rejection of decontextualized or inquiry-dulling aims. Consistent with his view that the means and ends of education should be indistinguishable, Dewey (1916/1944) stressed that any aim of education should be viewed as an “end in view,” with no inherent function other than to motivate and sustain the educative process (p. 106). By contrast, where aims are externally derived and imposed, the ends and means of education are artificially split, and anything resembling social inquiry is constrained within officially sanctioned channels. In such cases, education becomes a means of control rather than of liberation, “rendering the work of both teacher and pupil mechanical and slavish” (p. 110). Dewey explained, “Only persons, parents, and teachers, etc., have aims, not an abstract idea like education” (107). Thus, it is highly presumptuous to assume that schooling of any sort, perhaps especially schooling for justice and democracy, would have a distinct canon of universal, context-transcending aims. Dewey continued, “Even the most valid aims which can be put in words will, as words, do more harm than good unless one recognizes that they are not aims, but rather suggestions to educators as to how to observe, how to look ahead, and how to choose in liberating and directing the energies of the concrete situations in

which they find themselves” (107). Accordingly, the minimum conception of schooling, one that creates and holds open the intellectual space necessary for students to develop habits of social inquiry, justification, and deliberation, does not include a checklist of mandatory topics or standards.

However much one agrees with these insights, without a prescribed list of topics and activities, one might understandably wonder both what students should be doing in class and if classrooms even need to exist. These questions will be answered in turn, the first in this section and the second in the next. First, rather than offering a detailed list of aims, Dewey (1900/1990) murkily declared, “What the best and wisest parent wants for his own child, that must the community want for all of its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys democracy” (p. 7).

Unfortunately, this bold statement, detached from the rest of Dewey’s work, is easy to misinterpret. For example, Gutmann (1987) argues, “Although Dewey’s aim is admirable, translating what the best and wisest parents want into what a community *must* want is not an acceptable way to enlarge our outlook on education, to be less individualistic” (pp. 13-14, emphasis in original). However, Dewey was almost certainly projecting his own thinking on his “best and wisest parents,” thus it is highly doubtful that he would have imagined them suggesting anything other than a full commitment to helping students trace their own observations and experiences through social space so as to contextualize them in a much larger social milieu. Indeed, Dewey (1909/2009) adamantly declared, “*A study is to be considered as a means of bringing the child to realize the social scene of action*” (p. 41, emphasis in original). Thus, rather than acting as agents responsible for developing dictatorially homogenizing lists of what everyone

should know, as E. D. Hirsch (2006, 2009; 1988) and other neoconservative developers of “core curricula” are inclined to do, Dewey’s “best and wisest parents” are more appropriately thought of as those most deeply connected to lifeworlds, most aware of tensions between local norms and practices and governing systems, most able to offer suggestions and direction as social inquiry traces the consequences of associative actions to their origins, most apt at framing the needs of communities universally and reciprocally, most able to create and engage in publics, and most able and willing to view each child’s unique gifts and interests as sparks to ignite facilitated social inquiry.

Gutmann’s misinterpretation leads her to dismiss Dewey’s “wisest-parents” ideal as the imposition of some external, democracy-subverting morality, since, she claims, it fails to allow citizens to deliberate about how to best educate their citizens. “The enforcement of any moral ideal of education,” Gutmann argues, “whether it be liberal or conservative, without the consent of citizens subverts democracy” (p. 14). Again, however, Dewey did not advocate for anything of the sort. Instead, he (Dewey, 1909/2009) proclaimed, “Apart from participation in social life, the school has no moral end nor aim” (p. 25). The only appropriate guidance for what should occur in schools, according to Dewey, was his foundational insight that educational pursuits should connect to actual participation in deeply personal but outward looking and socially oriented inquiry. Who best to suggest ends-in-view, or compass points to direct such social inquiry, than those with wisdom specific to the communities within which public schools are inextricably embedded?

Tellingly, almost immediately after bemoaning the antidemocratic tendency of moral imposition, Gutmann notes that citizens could very well destroy democracy

through their own democratic deliberations and, in an attempt to protect citizens from themselves, offers morally grounded governing principles of her own – the principles of nonrepression and nondiscrimination.²⁸ The point here is not that these principles are somehow misguided; on the contrary, they line up nicely with those of universal and reciprocal justification. The goals here are simply 1) to suggest briefly that moral impositions – ideas about what is right and wrong – are an inevitable part of framing ideas about schooling, and, more importantly, 2) to argue that, if democratic deliberation is the political expression of justice, as is being argued in this study, then justice-oriented deliberations cannot rightly be imposed or distributed, but must be animated, from the start, by the moral demands of the right to justification.²⁹ If deliberation must be initiated or acted upon from without, it can only be turned into something resembling democracy and will likely not be connected as strongly to issues of justice. Rules that respond to or assess deliberations, as opposed to moral norms animating justificatory claims and responses, may be useful pedagogically, such as when teachers stage debates on controversial issues (see, e.g., Hess, 2009); indeed, playing at deliberation in this way may not only help students develop skills necessary to participate in democratic

²⁸ People can destroy or suspend democracy through democracy only if democracy is thought of as procedurally rather than normatively grounded. If normatively grounded in the right to justification, a decision to block the potential exercise of anyone's present or future right to universal and reciprocal justification would, by definition, be undemocratic. Democracy is reflexive. Its normative and material preconditions precede its exercise. Failures to adhere to democratic norms represent the lack of democracy in the first place.

²⁹ Not all democratic deliberations need to be justice-oriented. Only those stemming from social inquiry and targeting the universal realization of the right to justification need to be considered as such. However, participation in any associative action, as discussed in chapter 2, has potential, regardless of its own internal democracy, to create democratic effects that create and enrich deliberative systems capable of supporting justice-oriented social inquiry.

deliberation but also create classroom contexts that mirror those where genuine, organic social inquiry is being facilitated. However, when deliberative activities do not engage with points of tension that arise through the course of ongoing social inquiry, they are essentially preparatory in nature and thus somewhat artificial. Dewey (1909/2009) explained, “To form habits of social usefulness and serviceableness apart from any direct social need and motive, apart from any existing social situation, is, to the letter, teaching the child to swim by going through motions outside of the water. The most indispensable condition is left out of account, and the results are correspondingly partial” (p. 27). Thus, if deliberative skills are seen as ends in themselves, and particular themes are distributed via curricula or prescribed “what works” activities, then they operate outside the minimum conception of schooling. This does not mean that such activities are pointless or somehow wrong; they may very well be part of a project of interstitial transformation toward realizing the minimum conception of schooling. However, if these pedagogical practices are not themselves thought of as ends-in-view, they risk disrupting genuine social inquiry and the moral, justificatory impulses and responses it instills.

Again, none of this offers a standard checklist of topics or concepts that can be used to assess how well schools are promoting justice. What happens in different schools should not adhere to a shared blueprint. Instead, activity in schools needs to be rooted in processes of social inquiry, following the guidance of those in the community possessing the wisdom required to connect lifeworlds to systems, and facilitated by teachers with the training, skills, and commitments necessary to not only translate the wisdom of communities into pedagogically sound ends-in-view but also engage students in deliberative systems, nurturing the capabilities and inclinations necessary to form publics

in response to internal or external demands for justification. Thus, if justice is the aim, the success of schools must be measured not by marks on standardized assessments or some other proxy of justice, but by the degree to which students are actually engaging in social inquiry and both initiating and responding to calls for justification in public spaces. In other words, schools should be judged by the degree to which students are *actually participating* in deliberative spaces, not by how well they supposedly prepare students to eventually do so.

As explained in chapter 2, the consequences of associative actions do not necessarily stop at political or geographical borders. While Westphalian states may retain governing power over their territories, distributed publics must, through their emergent, transitory, interwoven, ICT-mediated communications, tune the operations of systems to the realities of lifeworlds. In chapter 3, the ICTs that enable border-crossing communications were analyzed to remove their clean, technical, neutral veneer and expose the human and environmental costs of manufacturing and disposal, the embedded assumptions in the development, design, and deployment of technologies, and the policies and forms of governance that technologies support and naturalize. Thus, from the start, as students are creating and participating in publics, the technological milieu that mediates their inquiries and communications – not only the forms but also the political assumptions, histories of development, and intended uses – must also be made an explicit topic of inquiry and subject to related interventions. Furthermore, given their costs, any use of ICTs must be supported by universally and reciprocally framed justifications. If students are to participate in such inquiry and justification, as opposed to merely preparing for it, they must themselves engage in ICT-mediated inquiries,

understand and then adapt to or modify how technologies are affecting their inquiries and communications, and press for and respond to claims for justification tied to both the means and the ends of their inquiry.

Such curricular ambiguity – or, more precisely, context-oriented malleability – may seem to be extraordinarily idealistic, risky, and detached from reality, especially when viewed through the lenses of modern education policy technologies. However, when one considers the hubris underlying the development of standardized curricula and the highly predictable, hierarchy-sustaining, race- and class-correlated outcomes of modern education regimes, the very practical, mutually respectful, tentative, responsive, flexible, reserved, experimental, public, and empirical nature of normatively grounded and social-inquiry-based schooling should seem a bit less radical.

Instruction

If justice-oriented curricula are thought of not as shared lists of topics and skills but as social inquiry-oriented ends-in-view, and related assessments not as standardized exams but as underdetermined participations in digitally mediated and face-to-face public spaces, then the question becomes what schools and teachers are supposed to do. Indeed, if direction and inspiration for such inquiry is best derived from community members with wisdom tied to public formation and tensions between lifeworlds and systems, one might even wonder if teacher-led schools and classrooms are the most appropriate educative spaces. It has already been noted that a teacher's role is to translate the experiences and needs of the communities into inquiry-inspiring and sustaining ends-in-view, but is it not possible that something vital could be lost in this translation? And, might the physical proximity required by brick-and-mortar school systems bring together

people and communities with starkly different backgrounds and lifeworld/system relationships? Certainly, critiques of schooling from both sides of the political spectrum could mobilize these kinds arguments, turning them into supposed justifications for exactly the sorts of market-based schooling that standardized tests enable. In this case, in place of test score comparability, such schools could compete to convince students that they were the best fit for their highly individual needs and interests. Accordingly, justice would demand that students be allowed to choose which school they attend, or if they attend schools at all. Historically, such thinking has animated all manner of private schools, homeschooling, virtual schools, distance education, and voucher-oriented plans, including those facilitated or supported by online learning management systems or other ICT-enabled educational technologies.³⁰ More recently, adaptive learning technologies are beginning to enable highly individualized online instruction, automating unique student paths through publisher- and expert-created learning webs.

There is certainly good sense underlying in these individualistic views – students bring to their classrooms different experiences and interests and no one should be trapped in poor schools. However, these obvious points should not be overgeneralized so as to support hyper-individualized education systems built on comparability and consumer choice or the dissolution of classroom-based schooling. The goal should not be to create

³⁰ Regarding voucher plans, historically, this best-fit type of individualism has motivated fully market-based plans from the political Right (e.g., Chubb & Moe, 1990; Friedman, 1962), distribution- and equity-oriented plans from liberals (e.g., Areen & Jencks, 1971; Coons & Sugarman, 1978; Jencks, 1966), or plans from social radicals to “deschool society” and distribute education throughout “learning webs” or “educational resource networks” (e.g., Goodman, 1966; Illich, 1970; Reimer, 1971). More recently, allowing students to transfer out of “low-performing” schools is a key component of No Child Left Behind, the 2001 reauthorization of the 1965 Elementary and Secondary Education Act (U.S. Department of Education, 2009b).

systems where people can escape dissatisfaction or avoid discomfort. Instead, tensions should be thought of as generative, exactly the points where actual publics can be formed, deliberations can take place, and contributions to deliberative systems can be made. This view is not an excuse to ignore the vast disparities in resources between actually existing communities and school districts. The next section will discuss the necessary reflexive base upon which the kind of schooling being promoted here requires. The point here is simply that homogenization of diversity, whether of persons, thought, or possible ends, while perhaps useful toward other aims, undermines the potential of schools to promote and participate in justice, as it calms the dissonance that could inspire calls for justification. Since they are situated in a decidedly non-ideal, unjust world, justice-seeking schools should not be about creating a perfect fit for each student, but in channeling discomfort into the kinds of tensions that demand justification and force the development of justificatory literacy.

Justice-seeking educators, then, have an expansive and largely underdetermined job. As they participate in deeply contextual social inquiry with their students, they must continually guide, facilitate, explain, curate, redirect, affirm, coordinate, and a whole host of other activities captured only partially by dynamic verbs. Key to all of these activities is that they remain situational, contextual, and responsive rather than predetermined or prescriptive. Teachers, of course, need to be responsive to individuals' interests, strengths, and experiences, and develop pedagogically sound activities, but the goal is not necessarily content mastery but progress toward ends-in-view. Such progress will be difficult if thinking about educational aims remain compartmentalized within various forms of literacies or numeracies. What is being called for here is a subordination of

these literacies under the idea of justificatory literacy, or the ability to identify tensions between lifeworlds and systems and to both press for and respond to calls for universal and reciprocal justification in a variety of forms accessible across deliberative systems. In other words, justificatory literacy demands that numerical, textual, digital, media, computational, spatial, and other literacies be subordinated to justificatory aims and oriented accordingly toward developing capabilities associated with universal and reciprocal argumentation and expression. This requires teachers who are able to support students' open-ended engagement with ICTs and who help students become comfortable consuming and producing justifications in a variety of forms. Indeed, rather than pencil and paper assessments, authentic assessments of justificatory literacies would require that students present and publish justifications for actions and points of view, including their own, using a variety of media, as well as to challenge publicly others' justifications where not universal and reciprocal. Policies that result in narrowed curricula that exclude or underfund visual arts, music, vocational pursuits, and other means of creation, reflection, and cognition restrict students' exposure to the full array of forms of expression potentially necessary in distributed, overlapping, multilingual, border-crossing, and digitally mediated public spaces.³¹

³¹ Halverson (2013) argues that the construction of digital art, especially that with an autobiographical emphasis, can not only play an important role in developing one's digital identity, a standpoint from which one can make representation-oriented claims and assessments in ICT-mediated deliberative arenas, but also encourage mindfulness of the ways that technologies shape stories and perceptions of self. Drawing on her study of participation in youth media arts organizations (YMAO), she explains, the "YMAO production process engages young artists in a *representational trajectory* that begins with developing a story about the self, moves toward a focus on how the tools of the medium afford representation of that story, and culminates in digital representations that reflect an understanding of the relationship between story and tools" (p. 122, emphasis in original).

Developing the skills required to teach toward justificatory literacy is increasingly difficult, not only because of the coordination and constant monitoring it requires but also because of the ever-increasing rate of technological change. Drawing on data from a large survey of Advanced Placement (AP) and National Writing Project (NWP) teachers, Purcell, Heaps, Buchanan, and Friedrich (2013) report, “75% of AP and NWP teachers say the internet and other digital tools have added new demands to their lives, agreeing with the statement that these tools have a ‘major impact’ by increasing the range of content and skills about which they must be knowledgeable. And 41% report a ‘major impact’ by requiring more work on their part to be an effective teacher” (p. 2). Moreover, these significant concerns do not even cover the ability to modify, hack, or identify the assumptions and costs underlying the design, manufacture, and use of technologies, all key components of social inquiry in the Digital Age. Thus, teaching and teacher development must be conceived, like the aims of any educative endeavor, as ongoing and context-dependent progress toward ends-in-view.

To make things a bit easier on themselves, it is certainly possible that teachers and teacher educators could, during the course of inquiry, draw upon and point students toward pre-framed content embedded within Massively Open Online Courses (MOOCs), TED talks, adaptive learning packages, textbooks, and other static sources. The use of such tools, however, must be oriented toward helping students answer questions stemming from ongoing inquiry, reframe such questions, or encourage new ways of

Echoing Dewey’s notion of “ends-in-view,” Halverson continues, “The end products (as one can only understand from tracing the process through) is young artists’ mindful engagement with the tools of digital art media to represent the complicated relationship between the way they see themselves, the way others see them, and the way they fit into the communities to which they belong” (p. 158).

thinking.³² However, staying aware of what quality materials are available and making them accessible is very time consuming work. Perhaps the most fruitful way to approach using these static forms is to see them as means to “flip” the classroom, i.e., to disseminate content outside of face-to-face class time so as to open up teacher-facilitated activities to deeper exploration, application, or confrontation of ideas. In these ways, static content represents fragile, assumption-laden crystallizations of views that offer not standardized content to acquire or skills to master but handy references and points of comparison along one’s own ends-in-view-oriented educational journey. In other words, what can be thought of as “critical flips” can be used to open space to expose tensions between system-based “official knowledge” (Apple, 2000) and the realities of lifeworlds.³³ However, where flips and other ICT-enabled pedagogical technologies such as “blended” or “hybrid” learning approaches are used to simply cut costs or cram more prescribed content into the curriculum, they can be viewed simply as the most recent manifestations of managerial logics and technologies.

Thus, despite the tendency explored in chapter 3 of online spaces to intellectualize rather than contextualize, or to transform interaction into transaction, online educational approaches do have the potential to promote social inquiry and

³² When divorced from larger systems aimed at advancing justificatory literacy, the practice of offering credit or certification for completion of MOOCs, adaptive learning modules, or some other collection of prepackaged content may satisfy other educational or administrative aims, but it does not promote justice.

³³ Simply pointing students to content online is not necessarily educative. In the same way that in-person delivery of static content needs to be structured and scaffolded, so too does online content delivery. Recognition of this need has led to the rise of the field of “instructional design.” The fact that instructional designers are equally valued in corporate and educative settings is telling, as the delivery of static, online content is, in many ways, equivalent in both marketing and online schooling environments.

advance justice aims. Indeed, some ICT-enabled educational approaches may very well open rather than restrict spaces for social inquiry. For example, connectivist MOOCs (cMOOCs) (see, e.g., Milligan, Littlejohn, & Margaryan, 2013) and Distributed Open Collaborative Courses (DOCCs) (Jaschik, 2013) are both models that require active participation, collaborative knowledge construction, and, especially regarding DOCCs, contextualization of inquiry. Moreover, effective game design can create experiences or entire worlds where participants must engage in deliberations and collaborative problem solving (see, e.g., Gee, 2007; Squire & Jenkins, 2011). And, as noted in earlier chapters, participation in activities online can accomplish a variety of justice-supporting aims, including the mobilization of deliberative-system-supporting activism and the coordination of highly technical processes such as patent assessments, encyclopedia construction, and scientific research.³⁴ Regardless of the tools or approaches, however, it is crucial that none be viewed as *the* answer, and that all be embraced as interstitial means to transform education systems from prescriptive, standardized-ends-oriented, credentialing systems into resource-rich spaces where students participate in real-world justificatory arenas and advance along the continuum of justificatory literacy. Moreover, ICT-enabled spaces need to become explicit subjects of inquiry. Rather than swimming in technological assumptions like fish unaware of their surrounding waters, inquiry needs

³⁴ The fragmentation, distribution, and/or coordination of highly complex tasks embodies both good and bad sense. While our “collective intelligence” (Lévy, 1997) or “cognitive surplus” (Shirky, 2010) can be celebrated and directed toward productive aims, it might not always be best to do so. Reliance on volunteers, while efficient, cost-effective, and viewpoint-inclusive, may simply represent surplus labor extraction, especially where the interests are those proposed or maintained by systems detached from lifeworlds. Furthermore, the spirit of volunteerism and crowdsourcing in educational arenas may very well be contributing to the deprofessionalization of teaching, or at least serving as means to naturalize and justify the implementation of related managerial technologies.

to turn frequently to not only how spaces like learning management systems shape experiences but also the underlying resources that are necessary to enable and sustain such environments. Such cost-benefit analyses may end up being just as valuable, from a social-inquiry perspective, as the tensions and questions that inspired the initial inquiry. Thus, to prevent the use and development of online educational technologies from being shaped and constrained by the technologies and assumptions of markets and managerialism, justice-seeking educators must work to design and publicize their successes deploying justification-oriented uses of educational technologies. As discussed in chapter 3, engaging in such work within performative regimes can be decidedly difficult and risky work.

In sum, in the same way that there is no curricular checklist or blueprint, there is also no easy list of “what works” or “best practices” regarding justice-seeking instruction. Indeed, where justice is the aim, curriculum and instruction collapse into what can best be described as flexible, context-informed pursuits of social-inquiry-oriented ends-in-view. The only constraints on such schooling are demarcated by the demands of universal and reciprocal justification and the need to participate in, rather than prepare for, public formation and the maintenance and growth of deliberative systems. While such education is impossible to prescribe, the following can serve as a very general framework for thinking about how justice-seeking educators can help students internalize justificatory norms and advance along the continuum of justificatory literacy.

1. Justice-seeking educators’ first duty is to embed themselves in their schools’ communities, learning about the histories and lives of community members.

Such communities often exist as temporal, ICT-enabled and mediated, border-crossing, distributed, and overlapping associations.

2. From such connections, educators identify community members best able to propose lifeworld-connected ends-in-view, especially those directed toward tensions between the community members' lived realities and histories and the rules and norms of their governing systems.
3. Considering various ends-in-view gleaned from community members, educators design age-appropriate contexts within which social-inquiry-directed questions emerge and related pursuits can be facilitated.
4. Teachers and other community members monitor and support student inquiry. This includes developing pedagogically sound activities that support related research and the continual reflection on the assumptions underlying, externalities associated with, and influence on research outcomes of the methodological and material technologies deployed through the course of inquiry.
5. Teachers help students engage in or create actual publics via the initiation, preparation, delivery, and response to multimodal justifications in deliberative spaces, digital and otherwise.

Again this list is simply a guide, as a minimum conception of schooling substitutes a precision of method and vagueness of myriad aims for precision of a singular aim and vagueness of method.

The reflexive base

Without the *a priori* material and normative foundations upon which reflexive democracy depends (Olson, 2006), the adoption of a justice-oriented minimum conception of schooling and the wholesale dissolution of standardized curricula would be unwise. Many teachers currently rely on the structure of highly prescribed curricula, and the supposed objectivity of standards-based credentialing schemes offers hope for socioeconomic mobility to many disadvantaged students. Moreover, teachers themselves need to be educated in ways that would make them capable of leading justice-oriented classrooms. Thus, a ruptural transformation of the organization of schooling, as opposed to ongoing interstitial efforts, would disproportionately disadvantage those without access to other means of distinction. What is being outlined here is a direction toward which collective efforts can be oriented, not some prepackaged reform or algorithm-driven program that can be downloaded or taken out of a box. Guaranteeing the universal capability to exercise the right to justification will require different things, depending on the context. Since it is a minimum, it does not specify many particulars. However, the resources necessary to establish the reflexive base of justification will likely far exceed those currently suggested by even the most optimistic policymakers. Given such facts, the popularity of proxies for educational justice such as standardized test scores is understandable.

One somewhat obvious but strangely controversial component of the reflexive base is that all citizens have affordable access to health care from conception to death.³⁵ For example, Rothstein (2004) explains that untreated health issues related to vision, hearing, and oral health prevent success in schools. Furthermore, environmental conditions associated with living in poverty can lead to high instances of asthma, lead exposure, and malnutrition, all of which have been connected to scholastic underachievement. Even when health care is supposedly available, whenever employees must toil under low hourly wages, missing work to access health care becomes difficult. Forcing people to make choices between paychecks and health care leads to a de facto exclusion of society's least advantaged from health care (pp. 37-45). When distracted by physical or mental ailments, one is far less likely to engage fruitfully in justificatory deliberations, or to thrive in schools where they can progress along the continuum of justificatory literacy.

Another important component of the reflexive base is access to and comfort using ICTs. Access, of course, cannot be assumed. In the AP/NWP study cited above, only 18% of teachers surveyed reported that their students have access to the technologies they need at home, and 84% of respondents indicated that they agreed with the prompt, "Today's digital technologies are leading to greater disparities between affluent and disadvantaged schools and school districts" (Purcell et al., 2013, p. 4). A different survey by the Pew Research Center found that "15% of American adults do not use the internet

³⁵ As these words are being written, the U.S. government is currently shut down as Republicans and Democrats fight over the funding of the Affordable Care Act, also known as ObamaCare. Such conflict points to the huge task of securing the reflexive base required for the operation of a minimum conception of schooling oriented toward justificatory literacy.

at all, and another 9% of adults use the internet but not at home” (Zickuhr, 2013, p. 1). Perhaps more interesting, 24% of respondents who earned less than \$30,000 per year and 41% who failed to earn a high school diploma reported that they were non-users (p. 5). Of all non-users, 19% cited the costs of devices or connections while 7% cited their complete lack of access (p. 2). Of those who reported not using the internet at home, 42% cited the associated costs and 8% cited the lack of availability (p. 12).³⁶ Given that people who do not use the Internet are excluded from digitally mediated deliberative spaces and that non-use seems to track class lines, such statistics should be troubling for justice seekers. Indeed, even if people are able to engage in social inquiry in schools, where users do not have ready access at home, such activities become compartmentalized as academic rather than internalized as everyday, content-independent, normative expectations.

Comprehensive health care, environmental safety, and access to technologies in schools and in the home are only some of the ostensibly extra-educational issues that form the reflexive base of justification-oriented schooling. The point here is not to offer a comprehensive outline of the reflexive base. Instead, it is to argue again that, unlike the outcomes of schooling, establishing the reflexive base of the minimum conception of

³⁶ The intersection of the cost of devices and connectivity and the corporate nature of the development and deployment of ICTs and related networks is a prime example of a place where public formation and justificatory deliberations need to occur. On the one hand, as discussed in chapter 3, the costs associated with devices and connectivity, or related to lack of access, are not simply monetary. On the other, no matter how one conceives of costs, they seem to be disproportionately borne by those who lack economic and political power. Such a state of affairs tends to be maintained by system-generated and lifeworld-agnostic policies. One example includes the successful lobbying efforts of telecommunications companies to prevent the development of municipal broadband networks (O'Boyle & Mitchell, 2013).

schooling *is* the place for top-down, non-democratic prescription. Indeed, without such a pre-established base, superficially democratic decision making about health care, access, environmental safety, and other such issues excludes the contributions of the very people feeling the consequences most severely. In such pseudo-democratic scenarios, the fundamental injustice that is the functional exclusion from arenas where one can press for universal and reciprocal justifications and respond to related justificatory claims infects related policies, creating disconnects between lifeworlds and systems. In other words, where deliberation fails to include all affected parties and operate under the normative requirements of universality and reciprocity, supposedly public action is only rhetorically public. Thus, assumptions underlying the technical, managerial, expert-oriented policy technologies that separate educational policy from other kinds of policymaking must be challenged via extra-democratic means. Here, the non-deliberative, consciousness-raising efforts of activist associations are crucial (see, e.g., Anyon, 2005), as they contribute to and reorient the constellation of discourses in deliberative democratic systems and reshape the common sense of social and economic policy in ways that support the development of the reflexive base of a minimum conception of schooling aimed at justificatory literacy.

An interrogatory framework: Toward a minimum conception of schooling

Hopefully, by this point, it is clear that justice is not achieved as an outcome of schooling but is embedded in and realized through a particular kind of ongoing, process-based education, one oriented toward justificatory literacy and operating according to a minimum conception of schooling. However, rather than encouraging one to abandon proxies as measures of the achievement of justice, the distance between the status quo

and this ideal of a minimum conception of schooling might lead some to double down on proxies and adopt a fatalistic, this-is-as-good-as-we-can-do attitude. Indeed, even if the reflexive base described above were established and maintained, the difficulty of tracing and regulating the consequences of associative actions is greater than ever. And, even when publics are redefined as issue-specific deliberations or when democratizing contributions are reduced to participation in associations within deliberative systems, the fact that the requisite information and communications technologies are intertwined with often-ignored and significant human and environmental costs makes it tough to know what to do. However, where the normative demands of universal and reciprocal justification guide the pursuit and practice of justice, it becomes impossible to ignore the facts that proxies miss the mark, comprehensive solutions are neither necessary nor helpful, inquiry- and communications-mediating technologies are so ingrained in our everyday lives that we are all culpable when it comes to their negative externalities, and ICT-enabled webs of interconnectivity give potentially planetary reach to almost all of our decisions, actions, and communications. Unfortunately, while it may be acknowledged that one must act, planning for or prescribing such action is impossible.

To complicate matters, in the face of the common sense of standardization and its resultant policy technologies of markets, managerialism, and performativity, the ambiguity and context dependency of aims may seem to magnify the risks of inquiry- and justification-oriented schooling. Although there are certainly examples of educators who are able to address simultaneously official aims and context-dependent pursuits (see, e.g., Gutstein, 2006) and schools that model democratic approaches (see, e.g., Apple & Beane, 2007), these success stories can serve only as inspiration, not as representations or

models of best practice. Ultimately, each educator and policymaker, in continued deliberation with her constituents and communities, must determine and pursue dynamic and unique ends in view. Unfortunately, the more ends in view deviate from official knowledge and core curricula, the more populations risk external judgment and sanction. This, of course, places a disproportionate share of the risk of deviance and sanction on communities where lifeworld/system disconnects are felt most severely. This is clearly not ideal. The important question remains, then, “What, exactly, should a justice-minded educator or policymaker do?”

A sketch of how a justificatory-literacy-promoting teacher might structure her or his efforts was offered above. However, without the appropriate administrative and policy support, regimes of comparison and performativity will continue to place undue burdens on justice-seeking teachers and their students. Thus, it is important that justice-seeking administrators and policymakers take some risks as well. At the administrative and policymaking levels, to shift emphasis toward how well schools are actually serving communities and away from how well they are supposedly preparing students to someday do so, reformers could attack proxy-based assessments of educational success directly, shifting local evaluative criteria toward the degree to which schools participate in the public reporting of students’ social inquiry and related accounts of justificatory deliberations. Activities in schools should be made transparent to community members and subject to the same justificatory requirements as any other public activity. To support this new transparency and community integration, administrators and policymakers could establish and maintain well equipped and expertly staffed ICT and design resource centers that offer technology checkouts, maintenance, security, training,

production, and communications services. More than educational technology or instructional design centers, these organizations would also need to provide free, fun, and low-stress makerspaces as well as consulting and technology modification and construction services targeted to the needs of specific communities' end-in-view-oriented social inquiry. Integrated into all of these services, staff could help make overt and minimize the costs of the use of technological objects. Additionally, to support these efforts and to help direct and guide such inquiry, administrators and policymakers could create, fully staff, and empower community integration centers to consult with teachers, students, and community members, helping all parties identify points of tension between lifeworld and system, trace consequences of associative actions to their origins, create justificatory publics, help disseminate findings and results, and operate online and in-person forums where affected parties could engage in justificatory deliberations.

Beyond these basics, specific points of action and reform will necessarily vary from context to context. However, the following intentionally non-prescriptive interrogatory framework is offered in an attempt to give at least some specificity and direction. Working through this framework and discovering where answers must be given in the negative, educators and policymakers can identify specific points of intervention that will help more closely align their specific contexts with the ideal of the justification-oriented minimum conception of schooling. Again, these questions are meant to identify possible points of intervention, not to prescribe what those interventions must look like.

- Do all community members have the time, skills, material technologies, and inclinations necessary to engage fruitfully in justificatory arenas, digitally

- mediated and otherwise, or to participate in associations that contribute to deliberative systems?
- Are classroom spaces and classroom activities designed and used to foster pursuits of social-inquiry-oriented ends-in-view?
 - Are the technologies that mediate social inquiry, both procedural and material, made explicit topics of social inquiry? If so, does their use in schools withstand justificatory scrutiny?
 - Are students taught the contingent nature of technological forms and, to support their pursuit of ends-in-view, granted the latitude to use and to modify technologies in unexpected ways?
 - Is the inclusion of content and activities that are not necessarily directed toward social inquiry – i.e., those directed toward, say, job preparation, college readiness, or broader flourishing aims (see Brighthouse, 2006) – able to withstand calls for justification?
 - Are community members who can help trace to their origins the consequences of associative actions felt within school communities – including those consequences with roots in overlapping, distributed, border-crossing publics – tapped to help students identify tensions between lifeworlds and systems and create related justificatory spaces?
 - Are students and their schools assessed according to the degree to which they actually produce, disseminate, and respond to, in digitally mediated and other spaces, a variety of reciprocally and universally framed justifications?

Again, “no” or “not really” responses to these questions suggest where teachers, administrators, policymakers, and community members might work together to transform their schools into centers of justification and support the development of justificatory literacy.

Concluding remarks

As means of conclusion, it is important to return to the point that small, interstitial changes can have, over time, significant effects, all of which can contribute to what Raymond Williams (1961) called the “long revolution.” Given the complexity and historical nature of interwoven social, cultural, political, and economic ecosystems, even the most well intentioned and thoughtfully designed comprehensive plans for change are likely to bring with them a host of negative, unintended consequences. Thus, instead of pressing for immediate, predetermined, comprehensive changes, those working toward a minimum conception of schooling rooted in the normative right to justification should embrace a multiplicity of diverse methods, or what Wright (2010) calls “strategic indeterminacy” (p. 370). Indeed, historically, a variety of hard-earned victories have succeeded in making schools more inclusive of and responsive to the needs of many underrepresented groups, including those organized around disabilities, races, genders, and ethnicities. Moreover, such efforts around schooling have often acted back on the communities in which schools are embedded, casting doubt on taken-for-granted ways of thinking in the larger society (see, e.g., Apple, 2013; Lonsbury & Apple, 2012). Beyond establishing and maintaining the reflexive base, therefore, what it is that reformers should do, exactly, should remain largely underdetermined, as long as their efforts are aimed at encouraging students to produce and respond to, in a variety of ways, calls for reciprocal

and universal justifications, i.e., helping students develop and practice justificatory literacy. Justice seeking educators do not necessarily need to be self-sacrificing heroes or revolutionaries to accomplish these aims. They just need to connect with their communities and do the best they can where they are.

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