

The Pedagogy of Online Dialogues: an empirical study of asynchronous discussions at Harvard Law School

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Until very recently, the basic technology of the law school classroom — chairs for students and a podium for the professor — have remained unchanged for over a century. Then, quite suddenly, a new era broke on law schools — PowerPoint lectures, torrential emails, Web-based instruction, and the incessant clicking of laptop keyboards in class. Now that the promised “dot-com” revolution has died, the skeptic may question whether recent innovations have improved anything at all, or whether, in taking a step forward, we have also taken a step back.²

In this paper I assess the use of online, class-related discussions in the law school setting. Such discussions are becoming increasingly easy to set up and use,³ and, as I will discuss, promise to improve the way students and professors relate to each other. Yet there has been no research to date demonstrating the benefits — or drawbacks — of using such tools in traditional law schools. My work demonstrates that one set of tools, online discussions, can complement the law school classroom if used with planning, preparation, and defined pedagogical goals. Online discussions cannot magically rectify all of the perceived ills of the traditional law school classroom, and without proper planning, may even compound them.

This paper proceeds as follows: **§1** considers the role that discussion has played in traditional legal pedagogy, with special attention to the feminist critique of its effects. In **§2** I examine how online discussion technologies afford new possibilities and how they can be realized in law schools, considering the context of (1) traditional legal pedagogy and (2) the way student knowledge, skills, and attitudes shape their participation in these discussions. I conducted a pilot study that offers some suggestive results and support for some intriguing hypotheses. In **§3** I outline the methodology of this study, which included general surveys of students, interviews with key professors and students, and analysis of actual discussions themselves. In **§4** I summarize my research findings, which I analyze in depth in **§5**. Finally, **§6** suggests preliminary recommendations for future pedagogical and technological efforts, as well as for further investigation of this area.

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² See generally Thomas, Robert H. "Hey, Did You Get My E-Mail?" Reflections of a Retro-Grouch in the Computer Age of Legal Education. 44 J. Legal Educ. 233 (1994) (recognizing the benefits of e-mail, but bemoans the resulting decline of face-to-face contact). Professor Howell Jackson of Harvard Law School describes himself as a “lapsed enthusiast” of online discussions. Personal interview, 1 March 2002.

³ In 1997 one researcher found that Villanova Law School automatically provided discussion boards to all of its courses, as well as active discussions at, *inter alia*, Columbia, Emory, and Fordham Law Schools. Michael A. Geist, Where can you go today?: the computerization of legal education from workbooks to the web, 11 Harv. J. Law & Tec 141, 169 (1997). At Harvard Law School the IT department now sets up and maintains web sites for each class that wants one through the Blackboard platform, studied herein (also the system that Villanova now uses, see <http://vls.law.villanova.edu/academiccomputing/>, last visited 12 May 2002), including a discussion board if desired.

1. The role of discussion and dialogue in legal education

How can online discussion tools⁴ improve the educational experience at traditional “bricks and mortar” law schools? A logical place to begin answering this question is wherever discussion already takes place in some form. Dean Henry Perritt, in his study of how the Internet is transforming American law schools, “unbundles” the typical J.D. program into four components:

1. classroom instruction;
2. class preparation through assigned readings;
3. occasional office visits in which students and instructor discuss course materials and deal with student questions; and
4. student-to-student discussion of materials, such as occurs in study groups.⁵

Of these four components, involve (or require) discussion in some manner. I focus on component 1 — formal professor-student and student-student interactions in the classroom — in § 1.1 below, and on components 3 and 4 — informal professor-student and student-student interactions outside the classroom — in § 1.2. Section 2 then proceeds to consider how new technology can change or improve our existing practice of dialogue and discussion in law schools.

1.1 Discussion and dialogue in the law school classroom

Any investigation of American legal pedagogy must begin with the ubiquitous practice of “Socratic dialogue” or the “Socratic method.” Though hard to define,⁶ law students and law professors seem to know it when they see it: a process of back-and-forth questioning of students on subject matter, ranging in intensity from gentle guidance to harsh humiliation. Though reportedly in significant decline,⁷ the Socratic method remains the standard against which other possible pedagogies are measured and judged.

As the reigning paradigm of legal education, the Socratic method is also the natural target of educational reform. Two major criticisms of the Socratic method include: (1) that it is an inflexible teaching method that fails to accommodate students’ multiple learning styles; and (2) that it is a teaching style insensitive to the needs of certain minority groups such as those defined by race or gender. I focus on these in particular because they are two problems that new educational tools purport to ameliorate, as I will discuss in §2.

New educational technologies also promise to address a third problem that can thwart meaningful discussion in the law school, unrelated to pedagogy: large class sizes. Certainly there

⁴ I use the term “tools” to emphasize the fact that education technology does not deploy itself but rather requires active and conscious use by faculty and students. See §2.1 for definitions of the tools I am studying.

⁵ Henry H. Perritt, Jr. The Internet is changing the face of American law schools. 33 *Ind. L. Rev.* 253, 265 (1999).

⁶ “The term “Socratic” is somewhat difficult to define, since it is often unclear what the Socratic method actually means in the context of the law school class. Most law professors have their own understanding of what the Socratic method means, particularly since this was the purported method by which the current generation of teachers was taught. For many professors, the term “Socratic” describes a question and answer method in which the professor asks a series of questions of the students, uncovering both preconceptions and cogent legal analysis.” Steven I. Friedland, *How we teach: a survey of teaching techniques in American law schools*, 20 *Seattle Univ. L. R.* 1, 28 fn 77 (1996).

⁷ See generally Orin S. Kerr, *The Decline of the Socratic Method at Harvard*, 78 *Neb. L. Rev.* 113 (1999).

are other criticisms that fall outside the scope of this study, many of which might also be addressed by other educational technologies.⁸ However, these three issues — accommodating diverse learning styles, sensitivity to the needs of minority groups, and high student: faculty ratios — are ones for which, at least in theory, online discussion tools have something to offer.

1.1.1 Class discussion and the Socratic method

If the traditional law school classroom is defined by “Socratic dialogue,”⁹ it certainly ought to be a place rich with discussion and interaction. Professor Christopher Columbus Langdell of Harvard Law School originally formulated the Socratic method in order to shift the educational paradigm from a professor imparting knowledge to students taking responsibility for figuring out the law for themselves.¹⁰ Professors ask students a series of questions in the pursuit of legal insights, along the way exposing bad assumptions, faulty logic, and the occasional student who neglected to read the assignment.¹¹ Since the early days of Langdell, supporters of this teaching style have proffered a host of benefits and justifications for it, some grounded in empirical evidence,¹² others in abstract classical theory.¹³ The following composite picture of the Socratic method in its ideal form captures the main ideas of these arguments:

Class discussions become lively and stimulating, encouraging students to prepare for class and engage in exciting and illuminating debates. At the same time, students speak frequently, helping them develop and hone rhetorical skills that are critical to effective advocacy. Finally... the method forces students to construct their own view of law (rather than discover a preexisting body) aid[ing] in the development of moral imagination.¹⁴

Idyllic in theory, the Socratic method faces significant criticism as practiced in law schools today. Surveying the legal pedagogical literature, one finds a veritable cottage industry dedicated to dismantling the Socratic method because it is pedagogically unsound,¹⁵ encourages

⁸ One of the more high-profile calls for change in law school teaching comes from the “MacCrate Report,” A.B.A. Sec. of Legal Educ. and Admissions to the Bar, *Legal education and professional development: an educational continuum, Report of the Task Force on Law Schools and the Profession: Narrowing the gap* (1992). New technologies may help bridge the gap between learning and practice by, for example, bringing professionals to the classroom virtually.

⁹ One of the most thorough surveys of law school teaching methods recently found that 370 of 383 professors, or 97%, teaching first-year courses used the Socratic method “at least some of the time;” of these, 30% used it “most of the time” and 41% used it “often.” “This data indicates [sic] that the Socratic approach remains firmly entrenched in legal education.” Friedland 28.

¹⁰ See Steve Sheppard, *Casebooks, commentaries, and curmudgeons: an introductory history of law in the lecture hall*, 82 *Iowa L. Rev.* 547, 98-9 (1997).

¹¹ See note 5.

¹² See generally Kerr at 116-8; Cynthia G. Hawkins-Leon, *The Socratic Method—problem method dichotomy: the debate over teaching method continues*, 1998 *BYU Educ. & L. J.* 1, 4-5 (summarizing several articles attesting to the benefits of Socratic education).

¹³ See, e.g., Thomas D. Eisele, *Bitter knowledge: Socrates and teaching by disillusionment*, 45 *Mercer L. Rev.* 587 (relying exclusively on philosophical theory to describe the benefits of Socratic dialogue).

¹⁴ Kerr 117-8 (citations omitted).

¹⁵ Hawkins-Leon 6 (summarizing six categories of pedagogical flaws in the Socratic method described by the educational literature).

counter-productive competition,¹⁶ involves little real dialogue but much gaming¹⁷ or “class recitation,”¹⁸ and is psychologically harmful.¹⁹ On this last point, in particular, there appears an unusual amount of rancor, with many former students describing the teaching method as an “inquisition,”²⁰ “torture,”²¹ or worse. Often, what professors perceive as dialogue is interpreted by students as a game of “hiding the ball.”²² As one professor reflects:

If students in my class were to see or to think that we were merely “rehearsing” answers during a part of our class, I think they would be contemptuous of the process... The students are apt to feel as though I were fooling them, playing some sort of trick on them; and if this is what I am doing, they want no part of it.²³

Yet despite the danger of playing what he acknowledges as a “charade,” the professor who penned the above passage goes on to describe how he does, in fact, have a “right answer” in mind; and by his own description, quizzes his students until they produce that answer.²⁴

Rather than encourage dialogue and open thinking, the Socratic method appears to shut down participation and even enthusiasm. “Maintaining too much control over students’ speech ‘not only fails to foster students’ language skills effectively, but also tends to undermine their self-esteem as learners,’ causing less-confident students to drop out of participation in discussion or volunteer exercises.”²⁵ What discussion is to be had may not be of high quality: anecdotally,

¹⁶ See Clifford S. Zimmerman, “Thinking beyond my own interpretation:” reflections on collaborative and cooperative learning theory in the law school curriculum, 31 *Ariz. St. L.J.* 957, 972 (1999) (“The Socratic method of teaching involves competitiveness insofar as it challenges the student to perform in class or else another student will be found who can.”).

¹⁷ See, e.g., David D. Garner, *Socratic Misogyny? - Analyzing feminist criticisms of socratic teaching in legal education*, 2000 *B.Y.U.L. Rev.* 1597, 1611 (summarizing various descriptions of the Socratic method as a variation of the children’s game “Hide the ball.”)

¹⁸ Sheppard 620-1.

¹⁹ See Kerr 118 (“Socratic professors are quick to criticize imperfect student answers, subjecting students to public degradation, humiliation, ridicule, and dehumanization.”)

²⁰ Sarah E. Thiemann, *Beyond Guinier: a critique of legal pedagogy*, 24 *N.Y.U. Rev. L. & Soc. Change* 17, 26.

²¹ Kerr 118.

²² See note 16 *supra*.

²³ Eisele at 597.

²⁴ The following, refreshingly honest, description of Socratic “dialogue” from the professor’s point of view will be familiar to many veterans of traditional law school classes:

“But more often than not, I do not even reach [follow-up questions], or proceed very far with them, because the student volunteering to discuss the case *has said something wrong*... As a result, I stop the student [and interject a question]... First, the student may remember, or think that they remember, *what I am referring to or getting at in my interjection*, and then he or she tries to respond, telling me and the rest of the class *what they think I have asked for. Sometimes the student is right, sometimes wrong*... [Or] I may get a quite different response. It is not really an answer, but rather is a rejection of my query... *Then the student either does not know what I am looking for... or else does not care what I am looking for*. In this situation, the student usually refuses to proceed further -- he or she may even refuse to acknowledge my follow-up question -- and simply withdraws within himself or herself and refrains from participating further. Then I begin again, seeking another student *who can tell me what I want to know*.”

Eisele 595; emphases added. Needless to say, the process is professor-centered, professor-controlled, and gives credence to the description of the Socratic method as “inquisition.”

²⁵ Thiemann 22, quoting Chris Kyriacou, *Effective Teaching in Schools* 101, 144 (1986).

some professors have found that it “encourages irrelevant discussion, encourages monopolization, and brings out the noisy and the empty.”²⁶

The Socratic method does have ardent supporters.²⁷ And surely some students benefit from its directive method of teaching. In recognition of this, most reformers call not for outright abolition of the Socratic method, but rather more diversity in professors’ portfolio of teaching methods to match the diverse learning styles of students.²⁸

1.1.2 Discussion as collaboration

Classroom discussion need not be verbal combat; it can also represent a collaborative effort akin to such activities as brainstorming sessions, peer review groups, and student / teacher conferences.²⁹ Some argue that because collaborative discussion relies fundamentally on principles of “classroom equality, shared authority, and student-centered learning,”³⁰ it is “inherently at odds with the development and structure of traditional legal education” — that is, the Socratic method as described above.³¹ As it stands, outside of clinical courses and negotiations practicum, very little collaboration is taking place on the law school campus.³² And, overall, relatively little has been written about the role of collaboration in law school education outside of the clinical setting.³³ Thus, I will briefly review the benefits of collaborative discussion, in contradistinction to Socratic dialogue.

Like other collaborative endeavors, the value of discussions inhere in the open exchange of ideas among peers. Having access to instructors and peers provide “opportunities for intellectual growth” in encountering and resolving differences of knowledge and opinion.³⁴ Proponents of more collaborative learning environments believe that learning is both a *social* and an *active* process³⁵ and argue that collaborative methods are more pedagogically effective than competitive methods.³⁶ They also note that collaboration comports with the learning styles of

²⁶ Paul Bateman, Toward diversity in teaching methods in law schools: five suggestions from the back row, 17 *Quinnipiac L. Rev.* 397, 404 (1997).

²⁷ See, e.g., David D. Garner, Socratic Misogyny? - Analyzing Feminist Criticisms of Socratic Teaching in Legal Education, 2000 *B.Y.U.L. Rev.* 1597 (recommending a “true” Socratic method with “new hands” and “new heart”); Kerr 122-3 (describing the practices of pedagogical “traditionalists” at Harvard Law School)

²⁸ Even Guinier, et.al. acknowledge the Socratic method as one among many valid pedagogical tools (74).

²⁹ Zimmerman 993.

³⁰ Zimmerman 965.

³¹ Even if the Socratic method is in decline, replacement pedagogies — pure lecturing or the panel system — are no more collaborative in nature. See generally Kerr.

³² See, e.g. Zimmerman 1002 (finding that “only a handful of law teachers have reported applications of collaborative learning in writing assignments or in the first-year law school curriculum.”)

³³ Zimmerman provides a substantial guide to the literature at 965, fn. 29 (citing 11 articles mentioning the topic of collaboration in non-clinical law school teaching).

³⁴ Robert Nalley, Designing computer-mediated conferencing into instruction, *Computer mediated communication and the online classroom vol.2: higher education*, Zane L. Berge and Mauri P. Collins, eds. 11, 12 (1995).

³⁵ See Zimmerman 959-60 (stating that collaborative learning rests on “respect for students, the belief in the students’ potential for academic success, the idea that learning is inherently social, and the understanding that learning is an active process.”)

³⁶ Zimmerman 959-60 (summarizing studies showing that collaborative methods, “when compared with a competitive learning environment, produce higher levels of student achievement, increased development of student judgment, and more positive student attitudes toward learning.”)

many students, particularly women.³⁷ Finally, educators emphasize the value of collaboration as a job skill that is in demand at modern-day law firms and other workplaces.³⁸ When discussion is collaborative, the professor creates a setting that “encourages students to contribute to the discussion and to listen to and critically consider the contributions of other class members.”³⁹

1.1.2.1 ACCOMMODATING DIVERSE LEARNING STYLES

“Recognize that students have different learning styles,” recommends one law professor to his peers, “and therefore try different teaching approaches throughout the semester.”⁴⁰ Thus, diversifying professors’ teaching methods can help them “reach more students more of the time.”⁴¹ Fostering more collaborative discussions is one important way to expand the range of teaching approaches, and may be particularly beneficial to students who seek evaluative feedback.⁴² Even a simple act such as abandoning the professor’s traditional position at the front and center of the class can foster a more collaborative atmosphere in the classroom.⁴³

Moreover, collaborative methods can themselves be used as tools to help the professor and class select among different teaching options.⁴⁴ At the very least, being receptive to class feedback can help professors gain a better sense of “the types of issues that trouble students, the ways individual students create arguments, and specific problems students face [in order to] be able to respond to students’ needs more effectively and accurately.”⁴⁵

1.1.3 Discussion across diverse populations

Related to the claim that legal pedagogy does not adequately accommodate the needs of students with diverse learning styles is the complaint that the law school classroom can generate an atmosphere uncomfortable for or even hostile to minority groups. In particular, the feminist critique of legal pedagogy frequently invokes the claim that women’s learning styles differ from men’s, and thus they respond better to different teaching methods. Studies have repeatedly and

³⁷ See Thiemann 25 (“Feminist pedagogy also adheres to the idea that learning happens by listening to, and talking with, other students.”)

³⁸ See Paul Brest, *The responsibility of law schools: educating lawyers as counselors and problem solvers*, 58 *Law & Contemp. Probs.* 5, 15 (1995) (arguing that lawyers spend much of their time working collaboratively with others in “brainstorming, group decisionmaking, engaging in complex multitask projects, and editing and being edited.”)

³⁹ Zimmerman 1006, citing Laurel Currie Oates, *Collaborative Learning: Learning Through Structured Conversation* (unpublished manuscript on file with Zimmerman).

⁴⁰ R. Lawrence Dessem, *All we really need to know about teaching we learned in kindergarten*, 62 *Tenn. L. Rev.* 1073, 1075 (1995).

⁴¹ Paul Bateman, *Toward diversity in teaching methods in law schools: five suggestions from the back row*, 17 *Quinnipiac L. Rev.* 397, 399 (1997). (“My thesis here is that we should continually strive to use diverse teaching methods such as these because in our attempts to enroll and encourage a diverse student body - and I use the term “diversity” broadly to include age, sexual orientation, culture, and ethnicity - we still may overlook the missing diversity in our teaching styles.”)

⁴² See generally Robin A. Boyle and Rita Dunn, *Teaching law students through individual learning styles*, 62 *Alb. L. Rev.* 213, 219 (1998) (finding diverse learning styles across the studied sample, some of which respond best to small-group discussion or continuous feedback). See also Zimmerman 959-60.

⁴³ See Thiemann 22-3 (quoting one female law student who felt that professors “are completely inaccessible when they are standing at the front of the room” and who responded more favorably to professors with a more conversational and casual teaching style).

⁴⁴ Zimmerman 1006.

⁴⁵ Thiemann 31.

consistently found that women are far less engaged in class discussions than men.⁴⁶ The earliest, the “Yale study” of 1986, found anecdotal evidence that women felt alienated by the Socratic method and class discussion.⁴⁷ The “Stanford study” of 1988 provided statistical evidence that women were less likely than men to volunteer or ask questions in class.⁴⁸ That same year, the “Banks I” study showed that almost twice as many women than men report never volunteering (17.6% and 9.6% respectively) while 44.3% of men and 32.1% of women reported voluntary participation on a weekly basis.⁴⁹ Guinier et. al.’s “Penn Study” six years later confirmed these statistics:

The data demonstrate that female law students are significantly more likely than male law students to report that they ‘never’ or ‘only occasionally’ ask questions or volunteer answers in class. Women, more than men, report that men ask more questions, volunteer more often, enjoy greater peer tolerance of their remarks, receive more attention from faculty during classes, get called on more frequently, and receive more post-class ‘follow-up’ than men.⁵⁰

The most recent and largest-scale study on this subject, including approximately 29,000 students across 163 law schools and conducted by the Law School Admissions Council (“LSAC”) in 1996, found that when “students were asked to compare themselves with their classmates on ... traits such as academic ability, competitiveness, public speaking ability, and self-confidence in academic situations...overall men rated themselves significantly higher than women in all areas.”⁵¹ However, this statistical discrepancy seems to exist before the women enter law school,⁵² lending credence to the idea that women may have different learning styles and needs than men which are not being met by the traditional Socratic method.⁵³

More generally, studies in the broader educational literature find that “brighter, better performing students dominate traditional modes of communication such as face-to-face by choosing the front and center classroom seats where interaction is greatest.”⁵⁴ If class discussion is a valuable aspect of the learning experience, the limitations of classroom dynamics can result

⁴⁶ See Garner 1614-31 (summarizing eight empirical studies that demonstrate women’s lower level of engagement in class discussions).

⁴⁷ Garner 1615, citing Catherine Weiss & Louise Melling, *The Legal Education of Twenty Women*, 40 *Stan. L. Rev.* 1299 (1988).

⁴⁸ Garner 1616-7, citing Janet Taber et al., *Gender, Legal Education, and the Legal Profession: An Empirical Study of Stanford Law Students and Graduates*, 40 *Stan. L. Rev.* 1209, 1210 (1988).

⁴⁹ Guinier et. al. 117, fn 41, citing Taunya L. Banks, *Gender Bias in the Classroom*, 38 *J. Legal Educ.* 137, 141 (1988) (also finding that gender shapes students’ perception of who participates in class discussion and concluding that women’s silence was a response to alienation and exclusion).

⁵⁰ Guinier et. al. 43 (drawing from a survey conducted in 1990 at the University of Pennsylvania Law School).

⁵¹ Linda F. Wightman, *Women in Legal Education: A Comparison of the Law School Performance and Law School Experiences of Women and men* 1, 53 (1996).

⁵² Wightman 55.

⁵³ However, LSAC did not find that women who did worse than expected in law school had more of their courses taught in the Socratic method, although the methodology of identifying classes so taught and the accuracy of this variable in assessing the “fit” of the Socratic method is dubious. *Id.* at 99.

⁵⁴ Karen Hartman, Christine M. Neuwirth, Sara Kiesler, Lee Sproul, Cynthia Cochran, Michael Palmquist and David Zubrow, *Patterns of social interaction and learning to write: some effects of network technologies*, Berge eds. 47, 50.

in the disproportional distribution of these benefits. Moreover, if we are to believe that the student body itself is among the most important resources law schools offer,⁵⁵ non-participation denies all students an important educational benefit: learning from each other.⁵⁶ Considering that the value of discussion inheres in the exchange of diverse ideas, it is particularly ironic that difference may itself — whether in terms of race, gender, learning style, or political viewpoint — dampen discussion and thus hamper the success of classroom dialogue.

1.1.4 Class size

Many institutions of higher education, including law schools, face high student: faculty ratios that impede more interaction.⁵⁷ In classrooms that necessitate professorial participation in every discussion — both the Socratic and the lecture-and-question methods come to mind — larger classes mean reduced opportunities for active student participation.⁵⁸ Even if each student is called on equally, as in the most meticulously controlled Socratically taught classes, the total amount of possible interaction for each student is necessarily low. Furthermore, law professors rarely utilize small group teaching methods, where students engage intently with each other, if not with the professor.⁵⁹

More than just a logistical concern, large classes also create a learning atmosphere different in kind than more intimate settings. Smaller classes better facilitate building communal bonds and trust, which in turn leads students to be more willing to “take risks in presenting and defending their ideas, voicing less popular views, and opposing majoritarian views than they might otherwise.”⁶⁰ Conversely, large classes could make it more intimidating for students

⁵⁵ See, e.g. law schools’ promotional materials. “The vitality of Yale Law School depends as much on the knowledge, experience, and expertise of the students as it does on the faculty, the library, the university, or the alumni.” Yale Law School webpage at <http://www.law.yale.edu/outside/html/Admissions/admis-jdgeneral.htm> (last visited 23 Apr 2002). “Here, they find that the student body is a diverse and talented group of men and women as bright as any group they will ever meet. We press them to learn from one another - and to appreciate one another. It is our experience that this collegial approach to learning fosters more rigorous thinking -- a reciprocal stretching of intellect -- than other, more combative models.” John Sexton, “Prospective students: welcome from Dean Sexton” at <http://www.law.nyu.edu/prospective/welcome.html> (last visited 23 Apr 2002). I was unable to find a similar official statement on the Harvard Law School website.

⁵⁶ See, e.g., Thiemann 25, citing Linda Morton, *Creating A Classroom Component for Field Placement Programs: Enhancing Clinical Goals With Feminist Pedagogy*, 45 Me. L. Rev. 19, 37 (1993) (“Feminist teaching methodology, on the other hand, “creates a student-facilitated, non-hierarchical atmosphere in which students learn about the practice of law by sharing their own experiences in the field and listening to those of others.””)

⁵⁷ Some have suggested that decreasing student-teacher interaction lowers student motivation. (McCormack & Jones, 18). However, high ratios are not universally seen as problematic. In discussing the shrinking of first-year law sections and classes from 140 to 80, Harvard Law School Dean of the JD Program Todd Rakoff notes, “I don’t know what’s ideal, but the faculty discussion leading up to [the reduction] did not take the view that smaller was necessarily better... there is also the feeling that unless you have a certain size you start losing the statistically marginal points of view, which, however, might be very interesting.” Meridith McKee, 1L-curriculum changes yielding positive results, Harvard Law Record, 26 Feb 2002, republished at http://www.law.harvard.edu/news/2002/02/26_record1.html (last visited 21 Apr 2002).

⁵⁸ Nalley 12 (“At best, discussion within such classrooms can be characterized as being between the instructor and the few students who are prepared and who have the opportunity to participate.”)

⁵⁹ One comprehensive survey showed that small group interactions take up only 4% and 3% of first-year and upper-level courses’ class time, respectively. See Friedland 27.

⁶⁰ Thiemann 30.

holding minority views to express themselves;⁶¹ they may also facilitate students hiding in the back row or otherwise tuning out.

Large classes may also be thwarting another goal of legal education reformers: providing more written feedback, more frequently, to law students.⁶² As far back as 1976, a study found that, *inter alia*, students wanted smaller classes and more feedback.⁶³ These calls have never ceased, suggesting a continuous and likely systemic failure to meet the need. Yet the very same problem that inhibits more robust *verbal* feedback — class size — also makes providing extensive *written* feedback prohibitively time-consuming. Reading and evaluating written work imposes an arduously large burden on professor's time.

1.2 Discussion and interactions outside the classroom

While formal instruction is a vital component of the law school experience, a significant proportion of the learning that takes place in law schools happens outside of the classroom, whether through independent research projects, informal conversations with faculty and peers, study groups, or clinical programs. Discussions are taking place in hallways, libraries, cafeterias, and residences — and increasingly, online. Thus, a quick look at informal professor-student and student-student interactions outside of the classroom can provide a basis of comparison for these emerging modes of communication.

1.2.1 Office hours and other faculty-student interactions

Professors recognize the importance of being available for student inquiries and discussions outside of structured class time and often meet with students during office hours, before and after class, and over the occasional meal. In fact, being available for office hours is cited by the A.B.A. as a measure of the professor's professionalism.⁶⁴

Office hours may be highly structured and require appointments or can be open to drop-in visits. However, students may find them equally or more intimidating than speaking in class.⁶⁵ Furthermore, if high student: faculty ratios present a problem for classroom discussions, they are even more troublesome for the prospect of informal meetings. Professors' time outside of class is a limited resource,⁶⁶ and as with "air time" in class, the more students there are in a class, the smaller each one's slice necessarily becomes. Moreover, long waiting lists for office hour appointments discourage students not only for logistical reasons but also because their questions may no longer seem relevant to the course, because they are anxious not to squander their "bite at the apple," or because they feel they are imposing on professors' already busy work schedules.

⁶¹ On the other hand, classes that are too small may not have any representatives of minority views. See Rakoff.

⁶² See generally the MacCrate Report.

⁶³ Ronald M. Pipkin, Legal education: the consumers' perspective, 1976 Am. B. Found. Res. J. 1161, 1184 (1976).

⁶⁴ Barry Sullivan and Ellen S. Podgor, Respect, responsibility, and the virtue of introspection: an essay on professionalism in the law school environment, 15 ND J. L. Ethics & Pub Pol'y 117, 136, quoting the A.B.A. Sec. of Legal Educ. and Admissions to the Bar, Teaching and learning professionalism: report of the professionalism committee, (1996)

⁶⁵ See Thiemann 31 (reporting that "Students repeatedly comment in law school that they do not attend office hours because they are intimidated by their professors"). Cf. Dessem at 1073 (recommending that professors arrive early to lecture because "Students who are disinclined to come by your office to ask a question may be more ready to approach you prior to class").

⁶⁶ According to Professor Daniel R. Coquillette of Harvard Law School, "Faculty time is the scarce coin of the realm here." Phone interview, 4 March 2002.

1.2.2 Study groups and peer interactions

In today's law schools, study groups are "almost a tradition that has stood the test of time,"⁶⁷ considered by many to be part of the "full law school experience"⁶⁸ where "much of the learning and self-testing of law school takes place."⁶⁹ Study groups are one of the few sources students have of evaluation over the course of the semester⁷⁰ and teach interdependence and teamwork.⁷¹ There is also evidence that study groups have a positive effect on students' educational experience in that they "generally feel more supported, more free to express themselves, and more invested in the outcomes."⁷²

However, concerned researchers have also found that certain student populations can be disproportionately excluded from the benefits of study groups, just as they are from class discussions and other opportunities for professor and peer interaction.⁷³ Part-time "flex" students have expressed an inability to attend study groups because of a lack of time or because of severely constrained schedules that do not mesh well with other students' schedules.⁷⁴

There are occasional efforts to formalize study groups by professors or law schools, often for remedial purposes.⁷⁵ As I will discuss in §5, online discussion tools can be seen as one way to encourage or formalize peer study groups.

⁶⁷ Christian D. Bareford, *Seven Habits of Highly Successful Law Students*, 37 *Duq. L. Rev.* 603, 611 (1999).

⁶⁸ Kevin H. Smith, *Disabilities, Law Schools, and Law Students: A Proactive and Holistic Approach*, 32 *Akron L. Rev.* 1, 2 fn6 (1999).

⁶⁹ Judith G. Greenberg, *Erasing race from legal education*, 28 *U. Mich. J.L. Ref.* 51, 78 (1994).

⁷⁰ Jay Feinman and Marc Feldman, *Pedagogy and Politics*, 73 *Geo. L.J.* 875, 899 (1985).

⁷¹ One commentator describes study group teamwork as "a sort of 'hunting/gathering' exercise whereby members of the group seek out rich 'food supplies' like old outlines, old copies of tests, and commercial study aids." He also finds, however, that the competitive nature of law school grades encourages study groups to then hoard their gathered information and "overshadow" any lessons of interdependence its members might have learned. Christian D. Bareford, *Seven habits of highly successful law students*, 37 *Duq. L. Rev.* 603, 612 (1999).

⁷² Sheilah Vance, *Should the academic support professional look to counseling theory and practice to help students achieve?* 69 *UMKC L. Rev.* 499, 523 (2001).

⁷³ Cathaleen A. Roach, *A river runs through it: tapping into the informational stream to move students from isolation to autonomy*, 36 *Ariz. L. Rev.* 667, 677 (1994) (finding that African-American, older women, Asian, and other non-traditional law students are disproportionately isolated from formal networks such as study groups).

⁷⁴ Amy P. Maloney, *Flexible academic programs in legal education: diversifying our law schools by creating opportunities for nontraditional students*, 67 *UMKC L. Rev.* 165, 176 (1998).

⁷⁵ See Sheppard 631 (finding that professors have become increasingly interested in encouraging these groups, as well as integrating them more closely with classes); Leslie G. Espinoza, *Empowerment and achievement in minority law student support programs: constructing affirmative action*, 22 *U. Mich. J.L. Ref.* 281, 298-9 (1989) (describing an effort at the University of Arizona School of Law to create second-semester support groups led by 2nd and 3rd-year students). Guinier et. al. also recommend that law schools arrange study groups that pair first-year with upper-level students, or weaker with stronger students (74).

2. Benefits of online discussion tools

Given the state of legal education described above, what can online discussion tools do to improve teaching and learning in traditional, “bricks-and-mortar” law schools? Much of the literature on education technology, particularly in the context of law schools, focuses on “distance education”⁷⁶ rather than the more common practice of education in everyday classrooms.⁷⁷ I draw from theories and research in this area to hypothesize about the potential benefits of online technologies. In general, I find that these benefits fall into two categories: (1) making the process of education cheaper and more efficient; and (2) transforming the nature of education by improving outcomes for students, particularly those that have been traditionally disadvantaged.

A major emphasis of this paper is on the idea that technology cannot itself induce significant change; only well-conceived and executed implementation of appropriately chosen technological tools can do so. Such a process must include identifying both an instructional problem and solution⁷⁸, making these goals clear to students,⁷⁹ providing them the motivation to participate,⁸⁰ “scaffolding” (structuring and planning) assignments for participants⁸¹, and guiding them through the process.⁸² Most of all, faculty must be willing to take the first step by incorporating these teaching tools into their courses in a thoughtful manner.⁸³ Furthermore, planning for educational technologies in the traditional law school setting must take into account

⁷⁶ See Collins & Berges 4 (calling the ability for students to “learn anything, anytime, anywhere” the “‘Holy Grail’ of instruction”); Robert E. Oliphant, Will internet driven concord university law school revolutionize traditional law school teaching? 27 Wm. Mitchell L. Rev. 841 (2000). See generally Arturo Lopez Torres and W. Clinton Sterling, Will law schools go the distance? an annotated bibliography on distance education in law, 91 Law Libr. J. 655 (1999). But see Stephen M. Johnson, www.lawschool.edu: legal education in the digital age, 2000 Wis. L. Rev. 85 (2000) (arguing that “classroom-free learning” will be quite exceptional compared with traditional and hybrid online/offline “extended classroom learning,” although the authors concentrate mostly on video-conferencing and similar technologies that are central to distance education).

⁷⁷ As of this writing, Concord University School of Law (run by Kaplan, Inc.), remains the first and only fully online law school in the U.S. The American Bar Association continues to deny accreditation to non-residential law schools, including Concord. By contrast, there are 186 accredited law schools nationwide. American Bar Association, Main Page for List of Approved Law Schools, <http://www.abanet.org/legaled/approvedlawschools/approved.html> (last visited 11 May 2002).

⁷⁸ Nalley 11.

⁷⁹ “[I]f teachers are unable to make clear to their students the value of the CMC portion of the course, students will likely reject CMC as nothing more than technological game playing. And they will be right.” Nalley 14.

⁸⁰ “Success requires that students possess skills in the use of computer technology and that they see a need to communicate.” Nalley 12.

⁸¹ Starr Roxanne Hiltz, Impacts of college-level courses via asynchronous learning networks: some preliminary results, *Journal of Asynchronous Learning Networks* 1:2 (1997) (“ALN’s can best enrich distance delivery by serving as the means to create the feeling of a true “class” or group of people who are learning together, and by structuring and supporting a carefully planned series of collaborative learning activities which constitute the assignments for the course.”)

⁸² Paul G. Shotsberger, Emergng roles for instructors and learners in the web-based classroom in Badrul H. Khan, ed., *Web-based instruction* 101, 102 (1997) (“it is unreasonable to expect [positive] outcomes without clear guidance on the use of interactive methods”).

⁸³ Across higher education, Jaffee finds somewhere between 20% and 30% of faculty are using new instructional technologies.

the fact that students primarily attend classes at and interact within a common physical campus,⁸⁴ one with pre-existing histories, pedagogies, and cultures (discussed in §1) that may also constrain the way professors and students utilize online educational tools.

2.1 Definitions

A profusion of terms and acronyms describe today's educational technologies, each emphasizing different purposes and goals.⁸⁵ For example, Computer Aided Instruction (**CAI**) sometimes describes the generic use of computers in education, although it usually implies a more limited subset of applications in which the computer, programmed by a knowledgeable professor, directly instructs the student through a series of activities such as multiple-choice quizzes.⁸⁶ Computer-Mediated Communication (**CMC**) refers to "the use of computer systems and networks for the transfer, storage, and retrieval of information among humans" emphasizing the computer as "a *mediator* rather than a *processor* of the information."⁸⁷ Web-Based Instruction (**WBI**) defines an overlapping category of systems grouped by medium (the World-Wide Web, not email) rather than instructional method and may include both interactive tutorials and peer-to-peer communications. At the intersection of these is Web-Based Conferencing (**WBC**), which uses the Web as a medium for human interaction, though this term commonly refers only to the asynchronous technology known as electronic or online Bulletin Board Systems (**BBS**). All of this contrasts with what I term "Face-to-Face" (**FTF**) instructional methods, which need not be "traditional" (e.g. lecture or, in the case of law schools, Socratic) but does involve participants being in the same place at the same time.

2.1.1 Online bulletin board systems

This study concentrates exclusively on **BBS**'s, which I define as *Web-based, text-based, communal, and asynchronous* communication systems.⁸⁸ *Web-based* systems can be accessed from any standard web browser⁸⁹ from anywhere in the world — unlike, for example, Usenet groups⁹⁰ or certain email systems — thus providing students with freedom of movement,

⁸⁴ But see Romiszowski, *Web-based distance learning and teaching: revolutionary invention or reaction to necessity?* in Khan 25, 33 ("However, there are other characteristics of CMC that are of value even if the educational process is not or should not be carried out at a distance.").

⁸⁵ These terms include, *inter alia*, "computer-mediated communication," "web-based instruction," "computer conferencing," "online learning," "Internet-based learning," and "asynchronous learning networks." See, e.g. McCormack & Jones, 1; Gerald M. Santoro, *What is computer-mediated communication*, Zane L. Berge and Mauri P. Collins, *Computer mediated communication and the online classroom vol.1: overview and perspectives* 11 (1995); *Journal of Asynchronous Learning Networks*.

⁸⁶ See, e.g., Robert Clark, *The rationale for computer-aided instruction*, 33 *J. Legal Educ.* 459 (1983).

⁸⁷ Santoro 11. Emphases added.

⁸⁸ Linda Harasim, Tom Calvert, and Chris Groeneboer, *Virtual-U: a web-based system to support collaborative learning*, in Khan 149, 150 (asserting five attributes in their study of networked collaborative learning: "asynchronous, place-independent, many-to-many, text-based[, and] computer-mediated"). These five attributes correspond closely with the four I describe, since being Web-based makes the system place-independent and assumes the system to be computer-mediated; and since "communal" implies many-to-many communications.

⁸⁹ e.g. Internet Explorer or Netscape Navigator.

⁹⁰ Usenet groups require that the user be logged into a system that "subscribes" to the particular newsgroup.

convenient, platform-independent⁹¹ access, and a quasi-permanent record.⁹² *Text-based* spaces on the Web emphasize the written word over voice or video. A BBS is *communal* in that it occupies a single, central “space” that is open and accessible to all members, unlike email-based communications that usually connect only individuals⁹³; and that keep discussions accessible, organized, and archived for future reference.⁹⁴ Finally, a BBS is *asynchronous* in that a significant amount of time may (though need not) lapse between communications, in contrast to chat rooms and instant messaging. These characteristics afford specific possibilities and advantages, as well as some drawbacks, as I will discuss in §2.4.

In BBS parlance, online space is usually divided into **forums** that define a specific purpose or topic; for example a BBS for a course on intellectual property may have three separate forums for discussing copyright, patent, and trademark law. Each forum may have one or more **threads**, discussion topics analogous to discrete, topical FTF conversations. Each participant in the thread contributes **posts** that can initiate a new thread or respond to other posts in an existing thread.⁹⁵ Some BBS’s, such as the Rotisserie described in more detail in §3.3.3.2 *infra*, provide more structured interactions and rules of participation than this generic model.

2.2 Benefits of Web-based discussions

As mentioned earlier, I group the educational benefits that educational tools may produce into two categories: (1) incremental gains in efficiency, and (2) transformations in the nature of the learning experience.

2.2.1 Efficiency gains

Supporters of CMC, CAI, and their ilk generally hope that technology will enable tremendous gains in educational efficiency with little or no sacrifice of quality. In the case of CAI, for example, educators hope to capture the instructional intelligence of a professor in a flexible and interactive computer program, theoretically allowing one professor to “teach” at limitless locations and times.⁹⁶ CMC offers a similar promise of unchaining the learning experience from the limitations of space and time by allowing students and professors to interact whenever they choose.⁹⁷ In theory, such technologies lower the transaction costs of different

⁹¹ All modern personal computers have browsers, familiar to most computer users, that can access virtually all Web-based BBS’s. By comparison, software for browsing newsgroups (such as Usenet) are becoming increasingly arcane.

⁹² Geist 171 (although somewhat confusing the idea of web-based email with web-based discussion boards).

⁹³ Steve Malikowski, *Interacting in history’s largest library: web-based conferencing tools*, in Khan, ed. 283, 85-6 (“Since all users access a single computer in a conferencing system, they can feel as if they share a single place, or even community”).

⁹⁴ Many listserv implementations also collect and publish email messages to the Web, thus blurring the line between my asserted categories.

⁹⁵ Santoro 19.

⁹⁶ See Robert C. Clark, *The rationale for computer-aided instruction*, 33 *J. Legal Educ.* 459 (1983).

⁹⁷ See Edward Barrett, *NEOS and the development of the electronic classroom at MIT*, in Berge 111, 115 (finding that in online education, “the ongoing conversation of questioning minds takes place unfettered by the limitations of four walls or the clock. Students can turn in, and others may review, at any time the products of their thinking and investigations into any subject).

aspects of the educational experience.⁹⁸ For example, a student with a rigid or restricted schedule (perhaps a mother or someone with a part-time job) who may not be able to attend a regular FTF study group can still log on to the discussion board whenever she has “down time.”

If successful, the value of such efficiency gains in distance education may be quite profound. For example, mid-career executives could earn an advanced degree without taking leave to reside on-campus or spend significant amounts of time and money traveling.⁹⁹ Even where the physical classroom remains the cornerstone of a student’s learning experience and time commitment, as in traditional, on-campus educational programs, such technologies may also offer advantages. For example, one study found that in classes where network technologies were strongly encouraged or required, professors significantly increased their electronic communication (e.g. email) with only a small decrease in traditional communication modes.¹⁰⁰

Perhaps equally important, discussion technologies may better leverage professors, a scarce and expensive resource.¹⁰¹ Theoretically, professors can process student inquiries faster online than in FTF settings such as office hours. Furthermore, if answers are provided transparently such that the entire class can access them, CSC may also reduce the number of redundant questions and answers.¹⁰² This reduction in transaction costs may increase the overall participation of students, faculty, and even outside experts once unable to be a part of class at all. CMC can also offer student study groups similar efficiency benefits. For example, the asynchronous nature of BBS’s can allow students to participate when most convenient, and synchronous online chats enable students to meet without wasting time agreeing upon and traveling to a mutually acceptable physical location.¹⁰³

However, CMC still takes *some* amount of time to use.¹⁰⁴ Professors of large classes may find themselves saddled with enormous amounts of text to review;¹⁰⁵ for example, one professor

⁹⁸ I. Trotter Hardy, Symposium: electronic communications and legal change: electronic conferences: the report of an experiment, 6 Harv. J. Law & Tec 213, 234 (1993) (finding that electronic conference participants “can also save immense amounts of time” such as that involved in traveling).

⁹⁹ Of course, such promises were made much earlier by “correspondence schools,” which for the most part enjoy very low reputations and which are specifically disallowed by the ABA. Thus, whether online distance learning programs can avoid the quality tradeoff their predecessors suffered remains an open question.

¹⁰⁰ Hartman et al. 60-4. However, this same study found that students were more likely to substitute traditional with electronic communications.

¹⁰¹ But consider the disappointing results of CAI modules, which in theory can replicate a professor’s teaching infinitely, but in practice have proven expensive, time-consuming, and too reliant on “front-loading” the effort. (See Vicki Williams and Karen Peters, Faculty incentives for the preparation of web-based instruction, in Khan 107). I am not, at any rate, studying CAI herein.

¹⁰² One common use of a BBS is as a method for professors to post answers to student questions. Jackson; Joseph Singer, personal interview, 28 February 2002.

¹⁰³ “Communication that is not time-dependent allows students to participate at times most convenient for them. It crosses time barriers, providing great flexibility for teachers and learners.” (Jill H. Ellsworth, Using computer-mediated communication in teaching university courses, in Berge I, 35). “[T]raditional university life is centered on those students who can devote a substantial amount of time to the campus and who can schedule group study and discussion sessions into their class schedules.” (Nalley 12)

¹⁰⁴ See Stephen M. Johnson, www.lawschool.edu: legal education in the digital age, 2000 Wis. L. Rev. 85, 113 (2000) (arguing that “extended classroom teaching,” even more than traditional teaching, would suffer from larger class sizes that make feedback and critique impossible).

¹⁰⁵ “[T]he amount of work for the moderator or facilitator of a course is directly proportional to the number of students, since there is no limit to the amount of time each student can ask questions and make contributions that need response or grading.” (Hiltz 1997)

interviewed for this study described how he gradually stopped using discussion boards because he found it too time-consuming and required constant monitoring on his part.¹⁰⁶ Furthermore, the convenience of CMC may not add that much value in a setting where FTF meetings are not that hard to arrange. CMC tools must offer something more to have enduring value for law schools.

2.2.2 Transformative possibilities

Technology has the potential to not only make existing practices more efficient, but also to radically transform students' educational experience, whether by heightening student motivation, improving communication among professors and students, or provoking wholesale rethinking of pedagogy. CMC can potentially transform faculty-student and peer-to-peer interactions by emphasizing and promoting different expectations and skills than interactions in "real" space. For example, asynchronous BBS's give participants time to consider their words and reasoning, while FTF conversations favor quick, reflexive thinking. Likewise, a student who writes well but has trouble verbalizing herself might find text-based BBS's more comfortable means of self-expression. Students may also feel less averse to asserting an unpopular or just "out-of-character" point of view, particularly if the BBS allows anonymous or pseudonymous contributions.¹⁰⁷ One study found that in comparison to face-to-face communication, lower-performing students communicated more with classmates and professors electronically than did the more able students.¹⁰⁸

CMC is a communication medium, *not* a replacement for professors or classes. Unlike CAI, CMC does not emulate a "fictive expert;" it instead aspires to support "the varying, complex, private, and *social* activities that make up the educational process."¹⁰⁹ I now turn to examining what this means in the law school context, and specifically how this new method of communication has the potential to reform problems in existing classroom discussions.

2.3 Advantages of BBS's in the law school environment

As suggested above, educational CMC tools offer participants a forum that emphasizes a student-directed, collaborative, and tolerant peer-to-peer learning experience. By contrast, "traditional" law school education is often seen as professor-directed, competitive, and, some critics contend, unaccommodating of the needs of different students, particularly women and minorities.¹¹⁰ In theory, providing BBS's, a form of CMC, can address and ameliorate some of these perceived shortcomings.

¹⁰⁶ Jackson.

¹⁰⁷ However, online media may also penalize qualities that cannot be observed in FTF conversations, e.g. bad spelling. The specific technology is also important: synchronous chats reward fast thinking (and typing) more than do asynchronous BBS's.

¹⁰⁸ See Hartman et. al. 71 ("The availability of electronic communication, in a sense, allowed a more equitable distribution of attention, especially from the more experienced teacher.")

¹⁰⁹ Barrett 113 (emphases added).

¹¹⁰ Cf. the more general pedagogical literature, which describes the traditional classroom as focused on teachers as the source of knowledge and correct answers; faculty control over the schedule, educational goals, and choice of speakers; and instruction of the whole class rather than of smaller groups or individuals. Jaffee; Anju Relan and Bijan B. Gillani, Web-based instruction and the traditional classroom: similarities and differences, in Khan, 41.

2.3.1 Student-Centered learning

As described in §1.1.2.1, many critics have complained that traditional law school classrooms do not accommodate students' diverse learning styles.¹¹¹ Offering a different discussion venue with different affordances may appeal to students for whom in-class discussions are not effective learning experiences.

2.3.1.1 ACCOMMODATING DIVERSE LEARNING STYLES

Researchers have found CMC well-equipped to accommodate a variety of student learning and personality needs. For example, while discussions relying on volunteers favor extroverted personalities over introverts, text-based BBS's may appeal to students who do not perform well spontaneously: "Some fairly introverted students... found that interactions with peers and professors were facilitated using CMC. They found it easier to communicate via CMC than in face-to-face situations. Also, students with certain learning styles... found that CMC enhanced their learning..."¹¹² BBS's also remove the professor from the center of attention and foster less hierarchical ways for students to access information and ideas,¹¹³ encouraging students to "read input from all other students, rather than only the ideas of the instructor and a few students."¹¹⁴

2.3.1.2 ENCOURAGING NEW VOICES

Online courses have resulted in "strong communities of friendship" where students are exposed to "a diverse range of perspectives."¹¹⁵ Implicit also in the notion of "community" is the claim that CMC can level the playing field and foster more equal participation across a diverse population. Students not only participate,¹¹⁶ but also seem to do so with roughly equal levels of participation.¹¹⁷ Researchers have also found evidence supporting the claim that CMC encourages more diverse voices to participate in class discussions in that the students who were most vocal in class were not those who participated most frequently on BBS's.¹¹⁸ One commentator, responding to Guinier et. al.'s critique of legal pedagogy, specifically suggests using BBS's as a strategy to encourage more equitable participation.¹¹⁹ In fact, at least one study

¹¹¹ See also Friedland 2.

¹¹² Ellsworth 35. See also Harasim, et. al. 150-1 (finding among the significant outcomes of an online collaborative course design: active participation by students, peer-to-peer discussion and exchange, and multiple perspectives from students and adults). See also Stephen M. Johnson, *www.lawschool.edu: legal education in the digital age*, 2000 Wis. L. Rev. 85 (2000) (claiming that "E-mail and discussion forums can benefit non-vocal learners"); Hilary McLellan, *Creating virtual communities via the web*, in Khan 189, quoting Howard Rheingold, *The virtual community* (1993) ("Some people — many people — don't do well in a spontaneous spoken interaction, but turn out to have valuable contributions to make in a conversation in which they have time to think about what to say. These people, who might constitute a significant proportion of the population, can find written communication more authentic than the face-to-face kind.").

¹¹³ Ellsworth 35.

¹¹⁴ Harasim, et.al. 151.

¹¹⁵ Harasim, et.al. 151.

¹¹⁶ Hiltz ("Students in a mode using VC were slightly more likely to strongly agree that they "participated actively in the class discussion" (p=.06)" [Note that this is not statistically significant at the p<.05 level]).

¹¹⁷ Harasim, et.al., 150-1 (finding participation to be "fairly evenly distributed among the students in the class").

¹¹⁸ Ellsworth 36. See also Hardy 213 (suggesting that by taking away visual cues, email and similar electronic communications have "leveling effects" across individuals with varying social skills); Geist 170 (believing, without presenting evidence, that "discussion groups can elicit participation from shy or withdrawn students").

¹¹⁹ Thiemann 33.

has shown that online conferencing software succeeds in achieving equal participation men and women.¹²⁰

Arguably, some of these benefits are achievable in a FTF classroom through carefully planned collaborative activities or controlled classroom interactions.¹²¹ Conversely, they are not inevitable results of implementing online learning environments, as Web-based instruction can be highly interactive or involve no interaction.¹²² Nonetheless, researchers assert that CMC tools inherently “shift a considerable amount of power, authority, and control from the faculty to the students.”¹²³ For example, in most BBS environments, students do not need to wait for the professor to call on them before speaking,¹²⁴ nor can others interrupt them in mid-sentence.

2.3.2 Peer learning

Closely related to the concept of student-centered learning is peer learning, which emphasizes what students can learn from each other through discussion and collaboration. Besides its positive pedagogical value,¹²⁵ peer learning may also reduce some of the burden on the professor to supervise student by shifting some of the responsibility for teaching and learning onto the students themselves. In fact, a successful BBS *requires* that students work with each other, because unlike methods that simply deliver information to students — whether an in-class lecture or a CAI module — the content of a BBS is at least partially generated by participants themselves. In this respect, BBS’s can be seen as analogous to student study groups that meet outside the class.

2.3.2.1 DISCUSSION

As discussed in §1.1.4, high student: faculty ratios at most law schools, especially in the first year, means less available time for each student to actively engage in dialogue with the professor or discussion with the class and peers. If these activities are integral parts of legal education, large classes are getting in the way of learning. Unlike FTF discussions, however, virtual discussions can allow the full participation of everyone, even in the biggest classes. Furthermore, these online interactions may not trigger the usual inhibitions students may face in live discussions. In fact, some research suggests that people participate more actively in electronic media than FTF settings.¹²⁶

2.3.2.2 COLLABORATION

CMC can also encourage peer-to-peer educational interactions through fostering collaboration, that is, “a purposeful relationship based on a desire or need to solve a problem,

¹²⁰ John C. Ory, Cheryl Bullock, and Kristine Burnaska, Gender Similarity in the Use of and Attitudes About ALN in a University Setting, *Asynchronous Learning Networks 1:1* (March 1997) (finding in across a sample of 1,118 college students that women participate at equal or sometimes slightly but significantly greater rates than men).

¹²¹ For example, professors employing the Socratic method can keep rigorous records to ensure that each student has equal airtime in class.

¹²² McCormack & Jones, 25

¹²³ Jaffee.

¹²⁴ Some BBS’s allow moderators to preview submissions before making them public. In the *Rotisserie*, describe in Part 3 *infra*, students cannot make posts until the professor has opened the space for participation.

¹²⁵ Harasim, et.al. 150 (“The conversations (verbalizing), multiple perspectives (cognitive restructuring), and arguments (conceptual conflict resolution) that arise in cooperative groups may explain why collaborative groups facilitate greater cognitive development than the same individuals achieve when working alone.”). See also §1.1.2 *supra*.

¹²⁶ McCormack & Jones 21.

create, or discover something within a set of constraints.”¹²⁷ The value of collaboration resides as much from the interaction among learners as from their achievement of substantive objectives.¹²⁸ Researchers have found that CMC creates an environment particularly favorable to cooperative learning,¹²⁹ with a resulting increase in student motivation.¹³⁰ Examples of online collaborative activities include assigning students to virtual project teams and partnering students together to discuss thoughts or ideas about the course.¹³¹

2.4 Drawbacks and caveats

BBS’s, and online learning in general, also have their share of problems. Chief among them is a concern that “students will not feel as if they are really part of a class when all they see of other class members is their text on a computer screen;”¹³² however, this worry is minimized in the context of this study and in most bricks-and-mortar law school settings. A recurring concern of those involved with distance education is the need to foster, among participants separated by time and distance, not just a sense of community, but the right *kind* of community — one in which intellectual exchange can flourish. As Shotsberger warns, “if learners are not comfortable with expressing their feelings and opinions... it is likely that any potential long-term benefit of the WBI will be lost.”¹³³ The fact that many students might already know each other in a bricks-and-mortar educational setting diminishes but does not eliminate this concern, since “the goal should be to create a *shared experience* rather than *an experience that is shared*. An experience that is shared is passive. A shared experience is one that is participatory — a conversation or a discussion, as opposed to a speech, a lecture, or a television broadcast.”¹³⁴ Sitting in the same room with one’s classmates may not provide sufficient grounds for a community of genuine intellectual exchange to emerge in class or online.

Finally, Jaffee (1998) hypothesizes that the degree to which faculty accept and adopt new educational technologies is strongly related to the extent to which they “reinforce or retain the central elements of the institutionalized and identity-enhancing classroom setting.” Bluntly restated, if professors were unwilling to change their pedagogical practices in the past, why

¹²⁷ McLellan 186 (emphasis removed)

¹²⁸ Thomas C. Reeves and Patricia M. Reeves, Effective dimensions of interactive learning on the world wide web, in Khan, 59, 63.

¹²⁹ See Ronald W. Staudt, Symposium: the future of the legal profession: does the grandmother come with it?: teaching and practicing law in the 21st century, 44 Case W. Res. 499, 512 (1994) (finding that an in- and after-class network fostered cooperative learning: “Each student participated in building the information available to every other student”); Linda S. Fowler and Daniel D. Wheeler, Online from the K-12 classroom, in Berge I, 83, 91.

¹³⁰ See Johnson 101 (finding that email and online discussions “can be used to facilitate collaborative student projects that empower group learners”); Hiltz (finding that 55% of the students participating in online CMC felt more motivated to work hard on their assignments because other students would be reading them, and that only 9% disagreed that reading the assignments of other students was useful); Fowler, CMC1, 94 (finding that writing for a “telecommunications project” motivates students because they have a “real audience: the kids at the other end”); Harasim, Alvert, Groeneboer, WBI 151 (“Group interaction was also motivating to students. Student interviews and feedback comments emphasized that the group interaction was intellectually stimulating and fun, and that they worked harder and produced higher quality work online.”)

¹³¹ See Curtis Jay Bonk and Thomas H. Reynolds, Learner-centered web instruction for higher-order thinking, teamwork, and apprenticeship, in Khan, 167, 172.

¹³² Steve Malikowski, Interacting in history’s largest library: web-based conferencing tools, in Khan, 283, 287.

¹³³ Shotsberger 104.

¹³⁴ McClellan 185, quoting M. Schrage, Shared minds: the new technologies of collaboration (1991)

would they do so simply because new technologies have become available?¹³⁵ Thus, in terms of the present study, the history and culture of law school pedagogy may act as powerful mediating forces that can enhance or dampen the impact that new educational tools can have on teaching and learning.

2.5 Hypotheses

On the basis of the information presented in this section, I generated the following hypotheses of how BBS's can improve law school education:

1. BBS's provide an alternative forum for self-expression that attracts students different than those who traditionally participate in class discussions, whether women, racial minorities, or students with different learning styles.
2. BBS's encourage a thoughtful and robust exchange of ideas among its participants.

¹³⁵ Cf. Brian S. Butler, Using the world wide web to support classroom-based education: conclusions from a multiple-case study, in Khan 417 (noting that most online pedagogical experiments are conducted by innovators for the benefit of other innovators; "However, mainstream educators typically have different concerns; they are more skeptical about benefits, more concerned about costs — both time and money — and less certain about how the new technology can be effectively used in educational settings. Two crucial questions are: What is the real contribution of the new technology in the classroom? How can an educator constrained by time and money effectively apply it?")

3. Conducting the Empirical Research

The present study assesses whether BBS's can produce the benefits just described in §2 in the context of law school classes. Given constraints of both time and other resources, I restricted my research to a pilot study with the following limited goals:

1. Generate preliminary evidence tending to support or refute the hypotheses deduced in §2.5;
2. Gather data inductively suggesting new hypotheses; and
3. Assess the usefulness and validity of various methodologies in seeking to address these questions.

With these goals in mind, I operationalized my hypotheses, established a research methodology to test those hypotheses, chose test subjects, and gathered the necessary data. I present the results of this research in §4.

3.1 Methodology

3.1.1 Instruments

In order to evaluate the hypotheses laid out above, I conducted a study of two specific classes at Harvard Law School (HLS) that employed two distinct forms of BBS tools. The instruments I used to examine these classes included:

1. Examining participation data recorded in the discussion artifacts themselves (e.g. who participated, how often, and at what times);
2. Analyzing the content of this participation;
3. Self-assessment by participants, including both students and professors;
4. Interviews with key informants.¹³⁶

Of these four methods, the second (content analysis) proved especially difficult to execute, and I subsequently eliminated it. I document my analytical attempt as well as the reasons for its failure in Appendix B.

3.1.2 Sample selection

I restricted the study to first year, first semester introductory courses for consistency and comparability. The first year of law school has characteristics that make “1L” courses incomparable to upper-level courses. For example, first semester students are acclimating to a new academic environment, culture, and expectations. To some extent, they display more diversity of attitudes and thinking styles than they do at graduation.¹³⁷ Focusing on a narrow

¹³⁶ See Jason Ravitz, Evaluating learning networks: a special challenge for web-based instruction, in Khan, 361, 363 (“Evaluation can be conducted by observing behavior coupled with reports of behavior, e.g. through written logs of participants, questionnaires, and computer data logs.”) and 364 (suggesting such measures as user testimonials, volume of activity, log books, discourse analysis, task phase analysis, research teams, surveys & interviews, unsolicited feedback, case studies & observation, and expert reviews). See also Hartman et. al. 56 (suggesting measurement of the total amount of communication of interaction, as well as student self-assessment).

¹³⁷ See generally James R. P. Ogloff, David R. Lyon, Kevin S. Douglas, V. Gordon Rose, Annual Nebraska survey & survey of legal education — more than “learning to think like a lawyer:” the empirical research on legal education, 34 Creighton L. Rev. 73, 91-9 (2000) (summarizing studies on transformations in law student attitudes, concluding that most are flawed, though the inconsistent evidence suggests a possible trend towards more conservatism during law school).

population allowed more in-depth study, but also restricts the study's applicability to non-1L settings.

I chose the two classes for this study by identifying classes that had been making use of web-based discussion environments through interviews with the HLS Information Technology staff and with peer informants (other professors). Of the resulting candidate list of 5 (out of a total of 21 courses), one stated that her online discussion "failed" (there was no participation), one was unaware that her class had a somewhat active discussion space, and one refused to participate. By a process of elimination, I arrived at the two courses herein — perhaps not an optimal way to select research subjects, but pragmatically, the only way in this case.

Each section is statistically representative of the HLS population, since assignment of first-year students to sections is initially random, with some balancing to prevent extreme skewing along certain demographics such as (conveniently for this study's primary focus) gender. The two courses I studied each contains an entire section, thus providing me with two-sevenths of the first year HLS class. I do not, however, claim that results for HLS can be generalized to other law schools. Further research at other schools is necessary to corroborate the validity of these findings on a larger scale.

3.1.3 Timeline

The present study is a post-hoc "summative evaluation."¹³⁸ All data were gathered in March 2002, several months after the two courses had concluded. It was not possible, therefore, to study the qualitative *process* of how professors and students integrated these educational tools into their daily experience; instead the focus is on the *products* of these tools, namely student evaluations and the artifacts of the experience itself.¹³⁹ The retrospective nature of the evaluations may somewhat dilute response accuracy; one advantage of the study's timing, however, is that students were able to evaluate outcomes in light of their first-semester grades,¹⁴⁰ particularly valuable because I had no direct access to that data.

3.1.4 Participant survey

I conducted a survey of the selected population to elicit the following data from each student:

1. Demographic information (e.g. race, gender, college major)
2. Attitudes about law school in general and the studied class in particular
3. Opinions about the class's BBS tools

The questionnaire instrument employed response blanks, Likert response categories,¹⁴¹ and an open-ended question. Several of the questions were worded differently to account for

¹³⁸ "Summative evaluation is directed toward measuring the degree to which the major outcomes are attained by the end of the course." Important variables include the effectiveness of student or trainee learning (usually measured by formal test results), efficiency (learning: time), costs, subjective reactions, and/or long-term benefits of the program. Jerrold E. Kemp, Gary R. Morrison, Steven M. Ross, *Designing effective instruction*, Macmillan College Publishing Company, at 159 (1994).

¹³⁹ Note, however, that the text captured in BBS discussions also captures aspects the learning process itself, absent the context of those discussions within the classroom and other environment.

¹⁴⁰ On the other hand, the period immediately following distribution of first-semester grades is also well-known as a traumatic period. See *Making docile lawyers: an essay on the pacification of law students*, 111 *Harv. L. Rev.* 2027 (May 1998) ("When the first-term grades eventually come out in February, it is an extremely traumatic experience for many first-year students.")

¹⁴¹ In Likert response questions, participants are presented with a statement and then asked to rate that statement, such as along an axis of agreement ranging from "strongly disagree" to "strongly agree."

differences between the two classes' BBS's and how they were used. The Likert response items asked participants to rate statements based on their level of agreement, with 5 indicating strong agreement, 3 neutrality, and 1 strong disagreement. A blank copy of the two questionnaires used is included in Appendix A.

I used slightly different distribution methods for the two surveys: for Section IV (Michelman) I handed out questionnaires in the section's second-semester Torts class and described my project in a professor-sanctioned announcement; for Section VII (Zittrain) I put a copy of the questionnaire, with explanatory cover letter, in student mailboxes. In both cases I reminded students to return them by writing notices on the blackboards of each sections' various classes for the week. As an added incentive, I offered a \$50 gift certificate to one randomly selected survey participant.¹⁴²

3.1.5 Follow-up interviews

Each survey participant was asked for his or her willingness to participate in a follow-up interview. I emailed and/or called each of these potential volunteers. Ultimately, a total of eight students, four per class, were willing to answer my questions in phone interviews and, in one case, a face-to-face interview. Although I had a certain number of prepared questions, the interviews were free-ranging and organic. Clearly, the sample of students selected for the interviews were neither random nor representative. The purpose of the interviews, as with other forms of qualitative field research, was not to produce valid generalizations but rather in-depth understanding from a few students' perspectives.¹⁴³

Along a separate track, I also interviewed the two professors who taught the classes studied herein, five other HLS professors who had made frequent use of BBS's in the past, and, as mentioned in §3.1.3, the HLS IT staff, who were responsible for implementing and supporting one of the two BBS's studied.

3.2 Overview of Subjects

Both of the classes I researched were first-year, first semester introductory courses: Property IV and Torts VII.¹⁴⁴ The technologies they employed were the BlackBoard 5: Learning System and the Rotisserie. Below I provide an overview of each class, followed by a description of their respective technical systems.

3.2.1 Context

3.2.1.1 THE "ONE-L" YEAR

The first year of law school is notorious, perhaps even legendary, as a challenging period of adjustment¹⁴⁵ and learning.¹⁴⁶ First-year students, or "One-L's," usually are assigned a slate of required courses and have little or no choice in class selection (in the case of Harvard Law School, they have one elective in the second semester). Unlike higher-level courses, professors of the first-year curriculum focus more on general legal analysis and thinking rather than

¹⁴² The prize was awarded to a student in Section VII.

¹⁴³ Earl Babbie, *The practice of social research*, 9th ed. (2001) 298.

¹⁴⁴ The roman numerals denote section numbers. See *infra*.

¹⁴⁵ See, e.g. Scott Turow, *One-L* (1977) (autobiography of the first year at Harvard Law School).

¹⁴⁶ See Zimmerman 969 ("Despite the fundamental angst inherent in the first year, and regardless of the pedagogical method or structure, one primary goal of legal education is to challenge students to think critically and develop judgment").

substantive doctrine.¹⁴⁷ These unique traits of the One-L experience may make conclusions of this study less valid for other aspects of the law school curriculum.

3.2.1.2 FIRST-YEAR REFORM AT HARVARD LAW SCHOOL

HLS substantially reformed the first year educational experience in the 2001-2002 academic year. Among the most significant changes relevant to this study was (1) grouping students into seven law “colleges” of about 80 students each, rather than four sections of 140 (though they are still commonly called “sections”), and (2) mandating individualized written feedback for every student in every class.¹⁴⁸ Smaller classes may have been successful in fostering a stronger sense of community and allowed for livelier class discussion than in previous years. One student in one of the sections studied commented, “You get to speak a lot more than you would with 140 people... Even with a purely Socratic professor, we all still got called on at least three times.”¹⁴⁹ Still, an 80:1 ratio hardly constitutes an intimate learning environment, and it would be difficult to describe speaking “at least three times” in class as substantial professor-student exchange. Thus, even with smaller first-year class sizes, BBS’s continue to offer the enticing benefit of leveraging precious professor time across a large number of students. They may also provide a convenient way for professors to provide the mandated written feedback.

3.2.2 Pedagogical Purposes

Below I describe the reasons why each professor implemented a BBS solution for his class.

3.2.2.1 PROFESSOR MICHELMAN: PROPERTY IV

Michelman conceived of the Property IV discussion board as more of an informal space where students can “have debates about issues peripheral to the course... I will get them started, but not always participate to the end.”¹⁵⁰ Rather than chart a direction for the online discussion to follow, Michelman seems to prefer to follow the path that the participants take. In the past, he relates, it will “get off focus on something, or people’s attention gets diverted,” and the discussion languishes. Accordingly, he describes his role as reactive to and contingent on the actions of students:

First, I watch it, of course. I never had to erase a message – though once or twice it got close. Once or twice I’ve intervened to head off an unpleasant situation. I haven’t had problems with flaming or people misbehaving.

Second, I get involved because posts go up that give me a perfect launching point – for example, someone else’s hypothetical can serve as a springboard for class discussion. And I will bring it up in class...

¹⁴⁷ One study found that, of the first-year teachers responding to a survey, 46% hoped to “Improve students’ thinking ability,” 15% to “Have students learn substantive legal doctrine,” and 31% had both goals. Their specific goals including teaching students to ‘think like lawyers,’ inculcating students with ‘basic fundamental theory and doctrine in the substantive area,’ and communicating the ‘black letter law.’” Friedland 20.

¹⁴⁸ See Meredith McKee, 1L-Curriculum Changes Yielding Positive Results, Harvard Law Record (21 Feb 2002), republished at http://www.law.harvard.edu/news/2002/02/26_record1.html. Harvard also substantially restructured, and renamed, the required legal writing course.

¹⁴⁹ Quoted in McKee. The possible upshot of each student speaking more in class is what McKee terms “no more gunner bingo” (the practice of shaming over-eager student participants by using their names as squares in a clandestine game of Bingo) in reducing the gulf between the participation rates of enthusiastic and reticent students.

¹⁵⁰ Personal interview, 28 Feb 2002.

Third, I get sucked in, when people are making doctrinal, definitional mistakes that are likely to be widespread. Or when somebody posts something like, “Michelman says X but...” so I’ll intervene to say that that wasn’t what I was trying to say. Or there’s an obvious query, challenge, or disagreement that obligates a rejoinder. Or, it’s just so interesting.¹⁵¹

In order to engender the right expectations for how the space might be used and his own role within it, Michelman explained to the class that “my participation is erratic and accidental.”¹⁵² In doing so, he hoped to head off student disappointment if they post thoughtful ideas and he fails to personally respond to each and every one of them.

“Why do it?” asks Michelman. “It’s another way to communicate with the class. And it’s sometimes fun.”

3.2.2.2 PROFESSOR ZITTRAIN: TORTS VII

Professor Jonathan Zittrain had a number of goals in mind for his implementation of the Rotisserie discussion tool for his first-year Torts course. As a general proposition, he states: “I’m trying to foster, as much as possible, a spirit of discussion between the students.” He had related the big-picture, career-oriented reasoning behind the need for more robust discussion for a previous study: “I mean what are [students] gonna do when they’re at a law firm or something. They’re going to have to critique other people’s work. You have to work together. And not just think of themselves as submitting something to on high and then it disappears and they get a grade. So it seems quite useful to have them thinking about others.”¹⁵³ He expressed a significant interest in reducing his own “oracular” role, echoing some of the concerns expressed by supporters of more collaborative educational methods {see above}.

Zittrain also outlined more specific goals for this particular implementation of the Rotisserie:

1. to provide “a way to ease [students] into preparation for the exam” by imposing a structure “like a compulsory study group;”
2. to induce students to “reflect on what the first semester is about... I mean thinking about themselves vis-à-vis law, their theoretical understanding of law;”
3. to gather information from students, e.g. their understanding of the materials as well as interesting ideas for class discussion.

As with Michelman’s metaphor of the conversational “springboard,” Zittrain emphasized this third goal as oriented towards forwarding in-class discussion. “It’s also helpful from *my* end to ask them questions that were mini-fact patterns...I will then walk through the answer in class. I think they find it a very nice way of integrating exam preparation with class.”¹⁵⁴

As one of the student developers who helped build the Rotisserie put it, “A lot of professors here don’t really care what the students think because its not so important, and they’re here to teach a subject matter... I think the way [Zittrain] approaches the class is that it’s a conversation. That’s fairly rare.”¹⁵⁵

¹⁵¹ Michelman interview.

¹⁵² Michelman interview.

¹⁵³ Quoted in David Eddy Spicer, Online / In Class: Melding Cyber and Realspace in a Law School Seminar, unpublished paper on file with author, 20 (1999).

¹⁵⁴ Zittrain I, 7 Mar 2002.

¹⁵⁵ Quoted in Spicer 14.

3.2.3 Capabilities of the educational tools studied

As described in §2, online learning technologies may offer possibilities that FTF conversations do not. Here I attempt to outline the salient features of the two tools studied herein, the Blackboard BBS and the Rotisserie. I refer the reader to §2.1.1 above for an explanation of some of the technical terms I will be using.

3.2.3.1 BLACKBOARD

The Blackboard 5 Learning System is a commercial “course management” software product that targets institutions of higher education as its primary market. Its purpose is thus broader than simply providing a space for intra-class communication; its purported “best-of-breed pedagogical tools” are geared towards not just “communication / collaboration,” but also “productivity,” “assessment / evaluation,” and “content management.”¹⁵⁶ Blackboard’s main selling points include not just pedagogical effectiveness but also administrative ease of deployment and maintenance.¹⁵⁷

In terms of Blackboard’s communication tools, its stated goal is to “[e]nhance interaction between students and instructors with asynchronous discussion boards and synchronous chat tools.” The specific affordances touted in marketing materials include being able to manage the board by sorting messages by author, date, and/or title, “collect” all messages in a printer-friendly format, and archive discussions at any time.¹⁵⁸ Practically speaking, professors and students (and, more relevant to other settings, teaching assistants) can use the Blackboard BBS to perform the following functions:

- Create forums with a specific name and description, for example, in an Intellectual Property course the forums may include “Copyright,” “Trademark,” etc. This feature is available to professors and teaching assistants only.
- Start a new thread by posting a message in the forum.
- Reply to an existing post. A series of replies becomes a “thread.” In the case of Blackboard, these threads can “branch” to create non-linear discussions.¹⁵⁹
- Posts may be, at the discretion of the professor, anonymous.

¹⁵⁶ Blackboard, Inc., Blackboard product strategy & vision: white paper on Building Blocks (B²) initiative, 2-3, 5 (2000).

¹⁵⁷ Blackboard.

¹⁵⁸ Blackboard, Inc., Blackboard 5 overview white paper (2000), 8.

¹⁵⁹ The concept of a “branching” thread is best explained visually as follows:

1. New thread.
 - 1-1. Reply to 1.
 - 1-1-2. Reply to 1-1.
 - 1-1-3. Reply to 1-1.
 - 1-2. Reply to 1.

Contrast a “flat” thread, which looks like this:

1. New thread.
 - a. Reply
 - b. Reply
 - c. Reply
2. New thread

A flat thread tends to mimic the social dynamics of a FTF conversation in its chronological linearity, since new contributions can only be tacked on at the end of conversation, while in a branching thread, new posts can be made at any point in the “tree” at any time.

- Attach a document to a post, allowing simple file-sharing.

Although marketed as “best of breed,” the BBS included in the standard Blackboard package is fairly primitive by current standards,¹⁶⁰ lacking common features that one might imagine would be very valuable for educational use, such as the ability to label posts with descriptors (e.g. words or icons labeling a post as a “Question,” “Suggestion,” etc), to link participants’ posts with their personal profiles, for students (not just professors) to look at what other posts a participant has made recently, or allow simple linking among threads.¹⁶¹ In other words, the Blackboard BBS studied herein has no more education-specific features than many of the generic BBS’s that most professors have access to whether or not their university subscribes to Blackboard or a similar commercial software provider.¹⁶² Lessons learned about the use of the Blackboard BBS should be helpful to most law professors using any BBS tool.

3.2.3.2 ROTISSERIE

The Rotisserie is a very specialized BBS designed specifically by Zittrain to address what he perceived as the shortcomings of generic BBS tools. As he said in an earlier study:

If there were no grade attached to it, people just ended up, you know, a very small community would form around it. That would be about it. Um, if there were some arbitrary grade attached to it, like you know, you’ve got to participate on HyperNews [the BBS used by HLS prior to Blackboard], you end up with a bunch of people moments before a given deadline suddenly realizing they need to bump up their HyperNews presence and posting kind of lengthy treatises into HyperNews unresponsive to anything that was before or that follows.¹⁶³

In response to these perceived flaws, Zittrain designed a system that enforces a particular participation procedure:

- The professor creates a discussion topic and sets parameters on discussion timeframe.
- An email robot (“the Bot”) alerts all participants (in the case of this study, all students in the class) that the discussion is now open and that they should post a response.
- Students click on the link in the email, opening the Web page with the question, and enter a response.
- A dynamic web page generated from a database displays a list of all discussion participants, together with their response, if any. Students who have not yet submitted a response have only their names displayed on the page.

¹⁶⁰ There are literally hundreds of both free and commercial BBS products on the market today, most of them offering substantially more features than the Blackboard BBS. Sourceforge.org, a development space for Open Source (and generally free) software, lists 276 BBS projects, although 170 are only in the planning phase. See http://sourceforge.net/softwaremap/trove_list.php?form_cat=20 (last visited 12 May 12, 2002). There are dozens more commercially-supported products.

¹⁶¹ Since the Blackboard site uses frames, the actual URL (Uniform Resource Locator) of the actual page that contains the discussion is hidden from most unsophisticated users.

¹⁶² Although the number of BBS’s is shrinking in the wake of the dot-com crash, there are still services such as EZBoard that, for some fee (in the case of EZBoard, about \$5-\$6 per month) will host advertisement-free discussions. See, e.g., http://www.ezboard.com/promotions/csc_admin.html (last visited 29 Apr 2002). These services do not require the user to set up the actual software itself. The more adventurous may seek to set up their own software; see note 144 supra.

¹⁶³ Quoted in Spicer 16.

- No responses may be entered after the deadline.
- Optional: Upon completion of the first phase, the Rotisserie randomly assigns each student who participated to a partner in “round robin” fashion. Students who did not submit a reply by the deadline do not receive a partner. The Bot then notifies each student by email to comment on a classmate’s response. The student would then go to the page specified in the email, read the original response, and type a reply.

Each Rotisserie question functions somewhat like a forum in a standard BBS; students initially respond not to each other but to the overall question. If the optional “round robin” rotation is used, comments attached to the original responses create something like a discussion thread. Unlike a BBS, however, the length of these threads is currently restricted to one reply, although Zittrain is working on making multiple round robin replies possible.¹⁶⁴ In this respect, the Rotisserie is currently much more limited than a generic BBS in its ability to sustain a conversation: a student cannot respond to a classmate’s critique of her post. Rather, the Rotisserie emphasizes breadth over depth. In listing every student who should have participated, the Rotisserie-generated web page makes it clear who has and who has not participated. It is as if every student were forced to raise their hand, even if he has nothing to say.

Unlike generic BBS’s, the Rotisserie scaffolds students interactions by specifying how each student should participate. In doing so, it attempts to guarantee that students will work together and provide each other feedback, in contrast to a free-form BBS, where students are under no obligation to respond to existing threads. For Zittrain, the initial design problem was shaking students’ expectation that only the professor can “evaluate and credential” student contributions, instead shifting that responsibility back to students themselves.¹⁶⁵

It is possible to designate a Rotisserie-like process using (1) a regular BBS or (2) by simply having students swap papers. The advantage the Rotisserie has over the former method is in vastly simplifying the logistics of who should critique whom; its advantage over the latter is in enabling students to conveniently read all contributions, not just the one to which they are assigned, without an enormous amount of photocopying.¹⁶⁶

¹⁶⁴ Zittrain I.

¹⁶⁵ Quoted in Spicer 21.

¹⁶⁶ The number of paper copies necessary to distribute all responses to all students grows exponentially, e.g. in a class of eight, there would need to be $8 \times 7 = 56$ copies, while in a class of 80, there would need to be $80 \times 79 = 6,320$.

4. Research findings

This section, the heart of the study, presents the major findings generated by the methods described in §3.

4.1 Naming conventions

In order to maintain participant anonymity, I have coded each as a “Respondent” or “Interviewee,” as a member of Section “IV” or “VII,” and by a number indicating the order in which each was processed. For example, “Interviewee IV-3” was the third person interviewed from Section IV. A list of the interviewees follows:

Students interviewed

INTERVIEWEE	DATE	METHOD	GENDER	RACE
Interviewee IV-1	21 March 2002	phone	male	White
Interviewee IV-2	21 March 2002	phone	male	White
Interviewee IV-3	22 March 2002	in person	female	Black
Interviewee IV-4	6 April 2002	phone	female	White
Interviewee VII-1	19 March 2002	phone	female	White
Interviewee VII-2	19 March 2002	phone	male	White
Interviewee VII-3	20 March 2002	phone	female	Asian
Interviewee VII-4	21 March 2002	phone	male	Black

4.2 Possible sources of error

Before presenting and discussing the study results, I flag several possible sources of bias or error in my research methodology that caution against drawing too many strong conclusions from my findings.

4.2.1 Survey sampling bias

Each class of 80 students yielded exactly 34 completed surveys. A 42% response rate is only fair for social science research,¹⁶⁷ making my results prone to “nonresponse bias.” I tried identifying the direction of any bias by examining the responses longitudinally for any trends in the data over time, assuming that late respondents may resemble non-respondents.¹⁶⁸ While late respondents were somewhat different than early ones,¹⁶⁹ the small size of the data sample and, in the case of Section IV, the very short tail of late responses disallows me from estimating nonresponse bias. The response rate Section IV is further reduced by several students’ omission of responses to the statements about forum participation (items 11-23), most likely because they did not participate in the discussion board at all.¹⁷⁰ This may generate even greater nonresponse bias, likely favoring higher ratings for the technology.¹⁷¹

¹⁶⁷ See, e.g. Babbie 256 (describing 50% response rate as “adequate,” 60% as “good,” and 70% as “very good.”).

¹⁶⁸ See Babbie 255.

¹⁶⁹ The only trend over time that was consistent between the two data samples was that later respondents tended to feel less adept at using the Web (slope = -0.3). None of the correlations between time and responses were statistically significant at the $p < 0.05$ level, however. But see the following discussion on open-ended responses.

¹⁷⁰ The statement, “My board contributions (if any) were of high quality” received only 21 responses of a total sample of 34. Three respondents skipped the entire section altogether.

¹⁷¹ But Interviewee IV-4 expressed eagerness to participate in this research because she vehemently *disliked* online discussions in educational settings.

I should also note at this point that the number of self-identified minorities in the survey sample (6 Black, 1 Hispanic, 5 Asian-Pacific-American) were too small to yield statistically significant data, and so I was unsuccessful in attempting to measure one dimension of diversity which I had originally hoped to include.

As described in the Methodology section, *supra*, I employed different collection methods for the two surveyed groups. Although I received exactly 34 responses from both classes, I had 29 of the Section IV responses in hand on the first day because I had personally distributed and collected surveys during a Section IV class. Mailbox-based distribution for Section VII yielded only 17 responses on the first day. This variance in distribution method may have affected the quantity and quality of free-response comments offered by students in each class. While 29 students in Section VII completed the free-response item of the questionnaire,¹⁷² only 12 in Section IV did so. I noticed many Section IV students hurrying through their responses, which may have led them to skip that item. A different explanation for this gap in free responses is that every student in Section VII participated in the Rotisserie, while only a fraction of Section IV posted to the message board (though many “lurked”¹⁷³) and presumably had less to say about it. Still, three of the 5 responses from Section IV that were returned after the first day had comments, suggesting that distribution method did discourage more free responses from Section IV.

4.2.2 Possible flaws in survey design

Despite my efforts to avoid ambiguous and biased survey items, several may be problematic. The phrasing of item 6, “I don’t want to be perceived as a ‘gunner,’” may bias against negative responses, since the term “gunner” is pejorative in the law school setting.¹⁷⁴ In fact, only 3 respondents in the entire sample of 68 rated this statement with a “Somewhat disagree,” and none strongly disagreed. Responses to this statement are also hard to interpret, that is, it is unclear *why* the respondent might not want to be perceived as a gunner. Items 7 (“I wanted to learn substantive [subject] doctrine in [class]”) and 8 (“I wanted to learn how to “think like a lawyer” in [class]”) were intended to measure some aspect of the students’ learning styles, but were ill-conceived because they assumed that educational goals indirectly measure the student’s learning style and were thus not used in my analysis.

There were two fill-in questions (respondent’s race and college major) and one open-ended question, “the most important thing you learned.” Attempts to code these responses are also subject to misinterpretation or bias.

In addition, several survey items — namely, 11, 19, 20, and 21 — were phrased differently for the two samples to account for differences in the way the online discussions were

¹⁷² The question for this section read: “What is the most important thing you learned – about property, law, law school, your peers, yourself – from participating in or reading the board?” See Appendix A.

¹⁷³ “Someone who reads in an online interaction space, but rarely or never posts. When they DO post, it is said that they are “de-lurking.” Also known as “readers”. Depending on the purpose of the interaction space, the facilitators may try and engage “readers” to begin responding and posting.” Nancy White, Glossary of online interaction. <http://www.fullcirc.com/community/interactionterms.htm#L>

¹⁷⁴ Students “lose their drive to distinguish themselves, start to share study aids, stop stressing about grades (everyone gets B’s, so why worry about exams?), and lose patience for the few “gunners” who have not seemed to learn that everybody is on the same team.” Making docile lawyers, note 134 *supra* at 2030 (1998). “The classic law school shaming ritual, played at virtually every school with which I am familiar, is variously called gunner, turkey, keener bingo, depending on the current epithet for describing obnoxious students.” W. Bradley Wendel, Nonlegal regulation of the legal profession: social norms in professional communities, 54 Vand.L.Rev. 1955, 1986. See also Turov.

handled. Items 11 and 21 only added the qualifier “if you participated,” causing problems described in §4.3.1, but items 19 and 20 involved more substantial changes in the statements themselves. These items are shaded in Table B, below.

4.3 Survey results: student attitudes and evaluations

Overall, the attitudes and opinions of the two sample populations about Harvard Law School and their classroom learning experience were very similar (see Table A). Note that in this

Table A: Survey results 1

	Section IV (Michelman)		Section VII (Zittrain)	
	Mean	STD	Mean	STD
1. I like law school.	4.0	0.9	4.2	1.0
2. I can learn a lot from my fellow students.	4.1	0.7	4.2	1.1
3. I don't like speaking in class.	3.0	1.3	3.1	1.3
4. I have nothing to contribute to class discussion.	2.1	0.9	2.1	1.0
5. I am afraid of being “wrong” when I talk in class.	3.3	1.2	3.2	1.0
6. I don't want to be perceived as a “gunner.”	3.4	1.2	3.8	0.8
7. I wanted to learn substantive [subject] doctrine in [class].	4.4	0.6	4.3	0.8
8. I wanted to learn how to “think like a lawyer” in [class].	4.3	0.8	3.9	1.0
9. [Class] was a class worth taking.	4.7	0.5	3.7	1.0
10. [Professor] was an effective [subject] teacher.	4.6	0.7	3.3	1.1

scoring method, participants score 5 for “*Strongly agree*” with the statement; 4 for “*Moderately agree*”; 3 for “*Neutral*”; 2 for “*Moderately disagree*”; and 1 for “*Strongly disagree*”.

Students agree that they can learn much from their peers (item 2) and disagree with the idea that they have nothing to contribute to class discussions (item 4). At the same time, they show a slight degree of discomfort with class participation, including some concern about being “wrong” (professor disapproval, item 5) or being perceived as a “gunner” (peer disapproval, item 6).¹⁷⁵ The only significant difference between the two classes’ aggregate feelings about law school and their class experience is that students gave relatively higher marks to Property IV and Professor Michelman than to Torts VII and Professor Zittrain.

Students’ overall evaluation of the two different technologies studied are nearly identical along almost every dimension. (See Table B). As a whole, students enjoyed using the discussion forums less than they enjoyed law school generally (compare items 11 and 1) or even the specific classes individually (compare items 11 and 9). There is, however, one notable difference between the two groups’ responses: Torts VII students seemed much less uncomfortable “sharing [their] thoughts or analysis” on the Rotisserie (average = 1.8, “somewhat disagree”) than the Property IV students felt on the discussion forum (average = 3.0, “neutral”).

* Standard Deviation, a measure of the degree of variance among the responses (the larger the STD, the greater the variance among respondents with respect to the item).

¹⁷⁵ The median and mode for both items were 4 (“Somewhat agree”).

Table B: Survey results 2

	Section IV (Michelman)		Section VII (Zittrain)	
	Mean	STD	Mean	STD
11. <i>If you participated:</i> I enjoyed using the online discussion board. (IV) ◇ I enjoyed using the Rotisserie (VII)	3.2	1.0	3.2	1.0
12. I felt un comfortable about sharing my thoughts or analysis on the [forum].	3.0	1.1	1.8	0.9
13. The [forum] helped me understand [subject].	2.7	1.2	2.8	1.2
14. The [forum] was not a good use of time compared with other things I could have been doing to prepare for class.	3.0	1.0	2.9	1.1
15. Reading other students' thoughts changed the way I thought about the issues raised by the course.	2.7	0.9	2.9	1.1
16. I feel that I am an adept user of the Web, email, and Internet.	4.4	0.7	4.1	1.0
17. The [forum] was an integral and important part of the [class] experience.	2.5	1.1	2.6	1.0
18. The [forum] helped prepare me for the final exam.	2.5	1.3	2.3	1.3
19. I tried to read every post on the discussion board. (IV) ◇ I read other people's Rotisserie responses, even when not required. (VII)	2.7	1.5	3.1	1.5
20. The discussion board would be better if there was more participation. (IV) ◇ Other people did not take the Rotisserie seriously. (VII)	3.4	0.8	3.3	1.1
21. My discussion board contributions (if any) were of high quality. (IV) ◇ My Rotisserie participation was of high quality. (VII)	3.0	1.0	3.2	1.0
22. I would like to participate in a [forum] in future classes.	3.0	1.0	2.8	1.0
23. On average, how many hours per week (estimated) did you spend participating in the [forum]?	0.6	0.5	1.0	0.6

Note: Shaded cells highlight differences in wording between the two survey instruments used.

4.3.1 Open-ended responses

Most of the respondents from Section VII and several from Section IV wrote comments in response to the prompt, “What is the most important thing you learned – about [subject], law, law school, your peers, yourself – from participating in the [forum]?” I found that these comments fell into four broad categories, with a surprising number of them criticizing or mocking classmates, as shown in Table C below.

Table C: Types of free responses

	Substance	Stories	Peers	Peers-critical*	TOTAL
Section IV	4	0	9	5	12
Section VII	13	5	15	6	29

* *Peers-critical* is a sub-category of *Peers*.

** Total responses do not match column totals because some responses fell into multiple categories.

Typical responses assigned to each category follow:

Substance: “The difference between strict liability and negligence” (Respondent VII-7)

Stories: “crazy stories about the negligent things my classmates have done” (Respondent VII-11)

Peers: “My peers [sic] views which couldn't be adequately seen in class” (Respondent IV-15)

Peers — critical: “it is possible to use a lot of words to say nothing” (Respondent IV-33)

Proportional to the total number of comments from each group, Section IV respondents were more likely to make critical remarks about their peers who participated on the discussion board, while Section VII respondents were more likely to indicate that they learned something substantive from the Rotisserie. In addition, I would characterize Section IV’s criticism of peers as more acerbic and personal than that of Section VII. The presence of 11 peer-critical comments out of 68 total responses does indicate that at least a substantial minority of students hold negative attitudes or opinions about their peers’ online discussion participation.

4.3.2 Survey patterns and correlations

Several statistically significant correlations emerge from the survey responses. I list the highly correlated variables that show up in both samples in Table D; variables that are *not* significantly correlated — in contradiction to expectations — in Table E; and correlations that

Table D: Correlations found in both samples

1	Variable	Variable 2	Section IV (Michelman)		Section VII (Zittrain)	
			R ²	p	R ²	p
a	[Professor] was an effective [subject] professor	I enjoyed using the [forum].	0.39	<.05	0.40	<.025
b	Participating in [forum] helped me understand [subject] law.	I enjoyed using the [forum].	0.56	<.005	0.74	<.001
c	I enjoyed using the [forum]	I would like to participate in a [forum] in future classes.	0.58	<.005	0.73	<.001

show up in only one sample in Table F. The tables provide the calculated R-squared relationships¹⁷⁶ between the two variables and their associated p-values.¹⁷⁷

¹⁷⁶ The R-squared value, “correlation coefficient,” or “least squares fit,” measures the degree to which the data “fit” a trendline: the higher the value, the better the trendline fits the actual data (and thus the stronger the apparent correlation).

The relationships between the paired variables in Table D are not particularly surprising; for example, students who felt that they learned from forum participation would be expected to also rate the forum highly overall. Interestingly, however, while in Section IV forum enjoyment

Table E: No correlations found

	Variable 1	Variable 2	Section IV (Michelman)		Section VII (Zittrain)	
			R ²	<i>p</i>	R ²	<i>p</i>
<i>d</i>	I can learn a lot from my fellow students.	Reading other students' thoughts changed the way I thought about the issues raised by the course.	-0.09	N/S	0.05	N/S
<i>e</i>	I can learn a lot from my fellow students.	The [forum] was an integral and important part of the [Class] experience.	-0.20	N/S	0.16	N/S
<i>f</i>	Gender (M = 0, F = 1)	I feel that I am an adept user of the Web, email, and Internet.	-0.15	N/S	0.02	N/S

correlated with high ratings for both the class and the professor, in Section VII it correlated only with high ratings for the professor (items *a* and *h*).

The paired items in Table E fail to demonstrate relationships that several of the hypotheses might suggest, e.g. that students who are open to learning from their peers would find the online discussions particularly valuable. In fact, the item “*I can learn a lot from my fellow students*” was not strongly related with any other item included in the survey.

In some of the paired items in Table F (namely *g* and *j*), the relationships are similar in both test samples, but only significant in one. In one (*h*), the relationships run in opposite directions, but only one is statistically significant. In the remainder, only one of the samples seems to demonstrate a relationship. I included items *m* and *n* with this set because one of the relationships has a low statistical significance ($p < .10$), which is noteworthy in combination with related items *j*, *k*, and *l*.

¹⁷⁷ The *p* value indicates the probability that the relationship indicated by the R-squared value is due to random chance. A *p* of less than .05 (that is, the chance that the relationship is coincidental is only 5%) is “statistically significant at the $p < .05$ level” and is generally the threshold for statistical significance in most social science studies.

Table F: Correlations found in one sample only

	Variable 1	Variable 2	Section IV (Michelman)		Section VII (Zittrain)	
			R ²	p	R ²	p
<i>g</i>	The [forum] was not a good use of time compared with other things I could have been doing to prepare for class.	On average, how many hours per week (estimated) did you spend participating in the [forum]?	-0.27	N/S	-0.33	<.05
<i>h</i>	[Class] was a class worth taking.	I enjoyed using the [forum]	0.05	N/S	0.43	<.01
<i>l</i>	Do you belong to a study group?	I enjoyed using the [forum]	0.20	N/S	-0.44	<.01
<i>j</i>	I have nothing to contribute to class discussion.	I felt uncomfortable sharing my thoughts or analysis using the [forum].	0.24	N/S	0.51	<.025
<i>k</i>	I don't like speaking in class.	I felt uncomfortable sharing my thoughts or analysis using the [forum].	0.38	<.05	0.12	N/S
<i>l</i>	I don't want to be perceived as a "gunner."	I felt uncomfortable sharing my thoughts or analysis using the [forum].	0.16	N/S	-0.38	<.05
<i>m</i>	I am afraid of being "wrong" when I talk in class	I felt uncomfortable sharing my thoughts or analysis using the [forum].	0.36	N/S (<.10)	0.11	N/S
<i>n</i>	I enjoyed using the [forum].	I felt uncomfortable sharing my thoughts or analysis using the [forum].	-0.33	N/S (<.10)	-0.03	N/S
<i>o</i>	On average, how many hours per week (estimated) did you spend participating in the [forum]?	Reading other students' thoughts changed the way I thought about the issues raised by the course.	0.40	<.025	0.18	N/S
<i>p</i>	My [forum] participation was of high quality.	I felt uncomfortable sharing my thoughts or analysis using the [forum].	-0.51	<.05	-0.17	N/S
<i>q</i>	The [forum] helped prepare me for the final exam.	I enjoyed using the [forum]	0.51	<.01	0.31	N/S (<.10)

4.3.3 Survey caveats

Besides reiterating the possibility of nonresponse bias described in §4.2.1, I would like to emphasize that statistically significant correlation coefficients do not demonstrate meaningful relationship, much less causation. In addition, several of the measurements seem to co-vary. Thus, it is impossible from a study of this nature to determine, for example, whether people who enjoyed the forum felt that participation led to a better understanding of the course materials, whether belief that the forum helps the student learn leads to greater enjoyment, whether some other factor is mediating the relationship between these two variables, or whether the relationship is meaninglessly coincidental.

4.4 Discussion content and evaluation

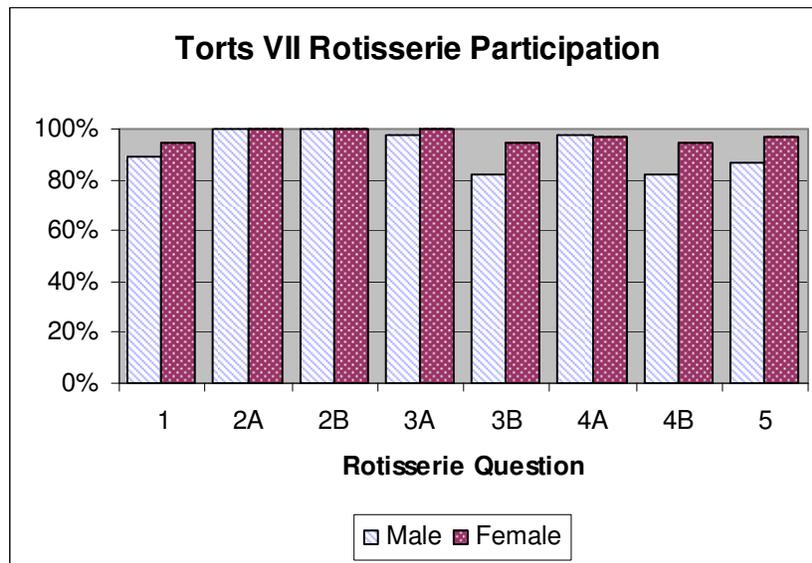
The final significant facet of this study is an analysis of the participation itself. Based on the available record of student interactions, I made the following observations:

1. Section VII's mandatory Rotisserie saw high participation rates (over 85% in all cases), with slightly more women than men involved.
2. Section IV's optional discussion board saw limited participation monopolized by a handful of male students.

Impressionistically, I found that the Section IV BBS exhibited more intellectual curiosity than did the Rotisserie, although some of these discussions involved obscure, esoteric, and occasionally hostile exchanges. However, as I found it extremely difficult to operationalize discussion quality into objective and measurable variables (see §3.1.1), I have relegated the results of my attempt to analyze the contents of these spaces to Appendix B.

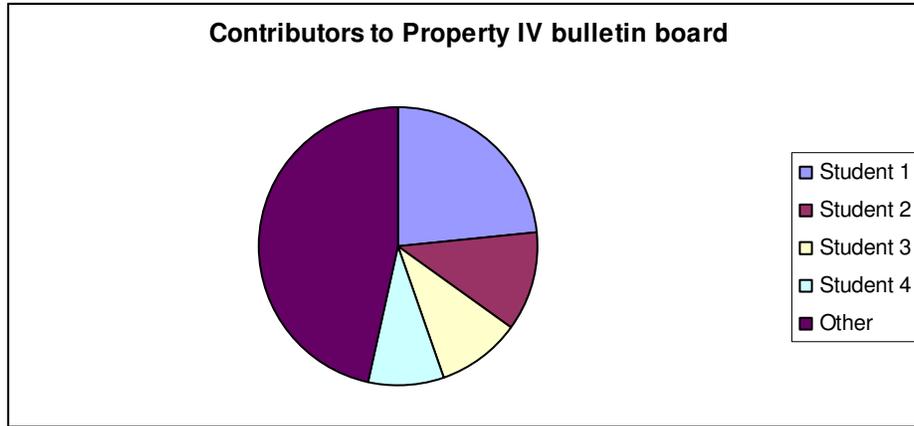
4.4.1 Participation

As expected, there were dramatic differences in participation rates between Sections IV and VII. There was also quite a contrast in the gender of the participants.

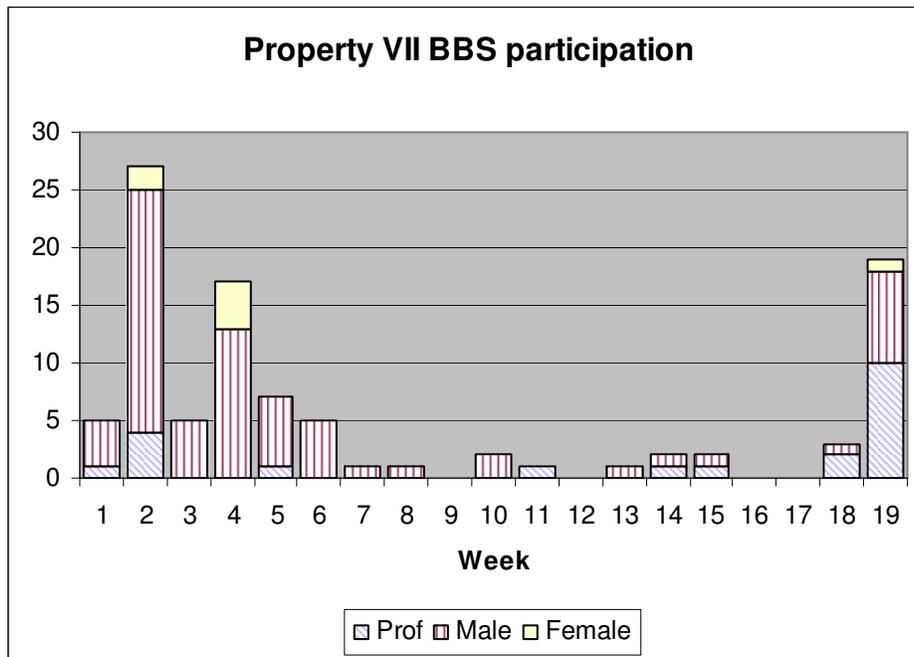


The Rotisserie was mandatory for Section VII, although Zittrain imposed no consequences for non-participation. Nonetheless, the majority of students (56) completed all of the assignments, and only 9 students skipped two or more. As I will discuss later, participation rates may have varied as a function of the nature of the assigned question as well as of time: questions 1 and 5 were “reflection”-type questions, 2 and 4 were “issue-spotters,” and 3 was intended to solicit anecdotes. Questions 2B, 3B, and 4B were all “rotations” (responses) of questions 2, 3, and 4.

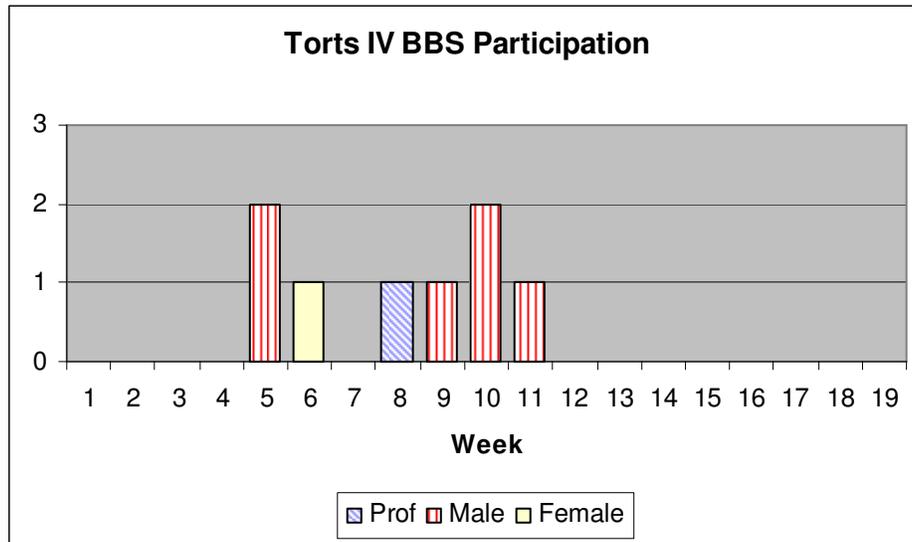
By contrast, only a total 25 students in Section IV — about one-third of the class — contributed to the online BBS. The board had a total of 79 student-written messages, excluding 24 by Michelman. The top four contributors, all male, posted more than 50% of the messages. Nine students wrote only one message each.



Longitudinally, participation in the Property IV bulletin board was heavily concentrated in the first six weeks of the class and the last two weeks, when Michelman opened a second forum on which he ran a “question-answer service” in preparation for finals.



Although not the focus of this study, the Torts VII BBS (separate from the Rotisserie) also saw very skewed participation. Like the Property IV BBS, it was an entirely voluntary space. Throughout the semester, the board saw a total of 8 posts: 1 from Professor Zittrain, 6 from men (3 from the same individual), and 1 from a woman.



4.4.1.1 GENDER

Women were slightly more likely to participate in the Section VII Rotisserie than men, but men were vastly more likely to participate in the Section IV BBS than women. Within the Rotisserie, women completed an average of 7.8 out of 8 assignments, while men completed 7.4; the correlation between gender and number of assignments completed is statistically significant ($p < 0.025$). By contrast, only 4 of the 25 (16%) student contributors to the Property IV bulletin board were female; together they generated a total of 8 out of the 79 posts (about 10%). Likewise, on the Torts VII bulletin board only one of the seven student posts was written by a woman.¹⁷⁸

¹⁷⁸ The sample size of discussion board posts across both classes is simply too small to allow statistical analysis, and thus all derived data should be treated as anecdotal.

5. Analysis

A number of themes and possible conclusions emerge from the data presented in the previous section. I hypothesized that BBS's would have the following effects in the law school classes studied:

1. Elicit participation from students who may not otherwise contribute to FTF class discussions by providing an alternative discussion space that emphasized different communication skills.
2. Provide another forum for student-student and student-professor interaction outside of the limited opportunities present in class, office hours, and informal interactions.

Section 5.1 examines the first hypothesis with respect to *who* participated. Section 5.2 examines the second hypothesis in terms of *what* they discussed. Finally, §5.3 looks at related issues of how these online spaces fit in or clash with existing structures and cultural norms at Harvard Law School.

5.1 Participants

5.1.1 Online forums do not automatically encourage women to participate...

The available data suggest that the specific structure and implementation strategy of an online discussion space have a significant effect on women's participation rates. In the case of both Property IV and Torts VII, providing an online discussion board did not by itself overcome the educational barriers described by Guinier, as one commentator has suggested.¹⁷⁹ Rather, the opposite occurred: a handful of eager male students occupied the available space and, at least in Property IV, did so in a way that seems to have repulsed their peers, both female and male. With respect to this gender imbalance, Michelman notes, "My impression is that bulletin boards have been that way in the past as well."¹⁸⁰ Respondent IV-6, a woman, noted on the survey, "I learned the same people who like to talk in class like to write on the board in their free time." Interviewee IV-4 related to me her more general frustration with discussion boards, which she first encountered as a student at the Harvard Kennedy School of Government: "I find that it's usually men, not exclusively but predominantly, just the same old people carrying on their thing *ad nauseum*."

On the other hand, survey results demonstrate no significant correlation between gender and satisfaction with various aspects of the Property IV discussion board. Respondent IV-17, a woman who did not contribute to the discussion board, commented, "I liked the board because postings about outside sources were interesting and exposed me to information I wouldn't have found on my own." Thus I would not claim that women resent online "gunners" any more (or less) than men do; I also hesitate to downplay the educational value of simply "lurking"¹⁸¹ in a discussion. Even so, it is necessarily true that active contributors shape the direction of conversation and command the instructor's attention. (In fact, one woman posited that people

¹⁷⁹ Using online classrooms "encourages students who might not participate in the classroom of upwards of 100 students to participate in conversations..." Thiemann 33.

¹⁸⁰ Email communication 22 Apr 2002.

¹⁸¹ See definition in note 169 *supra*. The educational benefit of "lurking" may be analogous to that of listening to a peer engage in Socratic dialogue. *But see* Garner 1609-10 (summarizing various criticisms of vicarious learning through the Socratic method as a "hoax").

participated primarily to impress the professor.¹⁸²) If this imbalance of participation is problematic in the classroom, as was suggested in Part I, it would also be troublesome when, as was the case here, four men supplied over half of the student contributions in an online discussion.

5.1.1.1 ... BUT WOMEN WERE MORE ACTIVE THAN MEN IN THE ROTISSERIE

By contrast, women were actually more active, relative to their numbers, than men in the Torts VII Rotisserie. No doubt Zittrain's policy of mandatory participation played a significant role in producing more participation among *all* students, but it does not explain why women would disproportionately comply. None of the data I gathered suggests an explanation for this phenomenon¹⁸³, although the fact that the Torts VII discussion board, like that of Property IV, was dominated by men¹⁸⁴ suggests that this difference may be due to (1) the mandatory participation requirement; or (2) the structure of the Rotisserie, specifically because of the way it created more intimate one-to-one pairings of students. Future studies should attempt to isolate these variables to reach a more solid conclusion.

5.1.2 Online BBS participants overlap with in-class volunteers

If online forums are intended to be a place where people who do not have the chance to speak in class can participate, it is important to determine whether those who volunteer to post online are different from those who talk most frequently in class. Unfortunately, the post hoc nature of this study prevented me from directly measuring classroom participation objectively. What data I have — individual recollections — may be biased or unreliable.

With respect to Property IV, Michelman noted that of the three top participants in the Property IV BBS, "One of those three was among the most active classroom volunteers, but maybe not the single most active. Of the other two, one was plainly above-average for volunteering but does not in my mind stand out in that respect from a sizeable number of others (of both sexes), and the other was closer to average but still above."¹⁸⁵ Several students also believed that the online and in-class volunteers overlapped considerably.

The mandatory nature of the Rotisserie reduces the relevance of this question for Torts VII, although it would have been helpful to know how active students who missed one or more Rotisserie questions were in class discussions. Interviewee VII-2 did express some skepticism on the question of whether the Rotisserie created a more diverse set of participants: "One of [Zittrain's] premises is that people who don't raise their hands in class would feel more free to express themselves in the electronic medium. Honestly I don't know if that's true." Tangentially, I would note that Interviewee VII-4 stated with respect to the Torts VII BBS — again, not the main subject of this study — "The person who put the most stuff up on our board was the person who talked most in class. In civil procedure [a course not studied herein] it was definitely the four of us. It was just us going at it."

¹⁸² Interviewee IV-4.

¹⁸³ There were several statistically insignificant correlations between gender and other variables, e.g. "Professor Zittrain was an effective torts professor."

¹⁸⁴ But as mentioned previously, the small size of the data sample (there were only 8 posts total on the board) argues against its conclusive value.

¹⁸⁵ Email communication 22 Apr 2002.

5.1.3 Students found the Rotisserie a comfortable forum environment

Survey results show a marked contrast between students' comfort level with the Property IV discussion board and the Torts VII Rotisserie. The statement "I felt **un**comfortable about sharing my thoughts or analysis on the [forum]" garnered a 3.0 mean score ("Neutral") from the former class but a remarkably low 1.8 mean agreement score (where 2 meant "Somewhat disagree") from latter (see Table B, Item 12). Further analysis (calculations *k*, *l*, *m*, and *n* in Table E) show very different correlations between discomfort with the online discussion¹⁸⁶ and other student attitudes between the two classes. Specifically, students in Property IV tended to be more uncomfortable with the forum if they did not like speaking in class ($p < 0.05$); there was *no* statistically significant relationship between the two variables in Torts VII. (See item *k*). There was a similar absence of correlation between discomfort with the Torts VII Rotisserie and fear of being wrong in class and enjoyment of the online forum (items *m* and *n*, respectively), while they were somewhat correlated in Property IV, albeit only at the $p < 0.10$ level of significance. Finally, the *more* students in Torts VII agreed with the statement, "I don't want to be perceived as a 'gunner,'" the *less* uncomfortable they felt with the Rotisserie ($p < 0.05$; see item *l*).

In summary, Torts VII students' discomfort with the Rotisserie was not only low overall, but also seems to have little relationship with other attitudes and feelings about in-class discussions. I can imagine at least three explanations for these patterns. First, making participation mandatory may make it less stressful; Interviewee VII-2, for example, felt that in setting that policy Zittrain made a conscious effort "to provide a medium where raising your hand is not present." Interviewee VII-1 echoed this idea, stating that "maybe in the first year class the best use [of the Rotisserie] is to put [students] at ease, give them a chance to express themselves without raising their hands." In an environment where being asked to speak in class can be a terrifying experience,¹⁸⁷ or where volunteers are derisively branded "gunners," students may take refuge in the fact that they are all in the same proverbial boat. The negative correlation between fear of being labeled a "gunner" and discomfort seems to suggest that otherwise-eager students use the mandate as an excuse to participate without evoking social stigma.¹⁸⁸ Conversely, students who find online discussion uncomfortable might still enjoy it if everyone else is also forced to participate.

A second difference between the Property IV discussion board and Torts VII Rotisserie that might explain these divergent comfort levels is that the latter revolved around a pre-defined question or problem, whereas the former was free-form and required participants to generate their own discussion topics. Students who ventured into the latter space were at risk not only of saying something "wrong," but of "asking stupid questions" — a risk that Zittrain eliminated by limiting discussion to topics he put forward. Michelman responded to other students' questions and statements, but started only two threads — neither of which generated any responses in turn.

A third, and far from inconsequential, difference between the two discussion spaces was the presence of a rather heated and personal exchange between two participants very early in the semester. This argument certainly gave several students a negative impression of the forum —

¹⁸⁶ The survey item read, "I felt uncomfortable sharing my thoughts or analysis using the [forum]."

¹⁸⁷ This sample showed strong, positive correlations between the statement "I **don't** like speaking in class" and ① "I have nothing to contribute to class discussion" ($p < .0005$) and ② "I am afraid of being 'wrong' when I talk in class" ($p < 0.05$).

¹⁸⁸ There was no statistically significant correlation between the statements "I **don't** like speaking in class" and "I **don't** want to be perceived as a 'gunner'" in either class. But see §4.2.2 *supra* regarding problems associated with the "gunner" response item.

which I will examine in more detail in the following section — and likely drove some students away. Whether the incident could be in part responsible for the patterns revealed by the above analysis is unclear.

5.1.4 Different Rotisserie questions appealed to different students

One distinguishing feature of Section VII's experience of the Rotisserie relates not to the technology itself but how Zittrain used it to ask three very different types of questions: reflection (questions 1 and 5), issue-spotters (questions 2 and 4), and relating law to personal experiences (question 3). Each type of question seemed to appeal to a different set of people within the group. Interviewee VII-3, who seemed particularly grade-conscious, particularly appreciated questions 2 and 4 for helping her prepare for exams. As mentioned earlier, however, several students expressed a preference for practice exams rather than the limited scope of the Rotisserie questions.

Interviewee VII-1, one of the students who did not feel the issue spotters were useful for exam preparation, described the importance of the reflection questions to her class experience:

There were these really poignant answers. Beautifully written, people who obviously spent a lot of time thinking. I was at a point in the semester where people were forgetting who they were... I thought wow, there are so many people who are thinking what I'm thinking... not solely thinking about what kind of grades they're going to get... I was feeling so good after that class.

Interviewee VII-4 noted that these “very open-ended questions... were the ones that sparked more debate” in class. However, Interviewee VII-3 failed to see the questions' value: “‘What do you think about law’ — that was the first question — I mean they were interesting, I actually went on line and read people's views, but they didn't help me with torts.” Interviewee VII-2 concurred: “I could easily think of a better use for the first and last question... not very useful if you ask me.”

Interviewee VII-2 did cite question 3 as a particularly meaningful learning experience:

That was fun. That application was fun. It really brought the point home that there is more negligence than you can account for. That one was not to get your legal juices flowing. Give you something concrete to use in class... That [question] I would actually rate higher than the other ones. It was serving a different goal, showing how personal it can be.

At least five other students commented on question 3 in the surveys (see Table C). Respondent VII-11, for example, recalls the “crazy stories about the negligent things my classmates have done” and Respondent VII-29 the “amazing amount of seriously negligently reckless behavior that the class had engaged in.” At the very least, question 3 seems to have sparked considerable interest and maybe even strengthened the sense of camaraderie among Section VII students.

It seems, then, that by offering three different types of questions, Zittrain appealed to three different types of students — those who were values-oriented, those who were grade-conscious, and those who learned by relating ideas to personal experiences. As Interviewee VII-4 concludes, “I think it depends what you want to get out of your law school experience. The people who are just thinking about exams like the closed-ended questions... That's what I think the majority of people are here to do.”

5.2 Participation

Section §5.1 analyzed who participated; this one looks at the nature of their participation, starting first with quantifying and then qualifying the discussion.

5.2.1 Participation frequency

5.2.1.1 PROPERTY IV BBS PARTICIPATION TAPERED OFF

Of the seven threads started after October 15 on the Property IV discussion board, only three received replies, all of them from Michelman himself. Interviewee IV-1, who contributed two of those topics, commented that “I wasn’t disappointed; I was just curious that there would be a response. I don’t know if it was after classes had ended, I was guessing there wasn’t the same traffic on it.” Nonetheless, he added that “I think if there’d been more action it would have fed on itself.” Unfortunately, the Property IV board is designed so that the only way participants know if their contributions are being read by other students is for peers to post something or mention them in person or in class.¹⁸⁹ I would surmise that the feeling that one is talking to oneself would quickly discourage further contributions to the discussion space (see also this next section).

5.2.1.2 ROTISSERIE ARCHITECTURE MAY HAVE LED STUDENTS TO FEEL IGNORED

Although Rotisserie participation was high, and most Rotisserie contributors received responses to their posts, several Torts VII students indicated frustration that they received no feedback at all. Interviewee VII-1 described her own participation and disappointment with a lack of reciprocity: “I only got it once. I was annoyed, particularly the first time. The first time [I responded to someone else] I got somebody I knew. So I printed it out, and put stickers on it. But then I didn’t get anything back. After that I didn’t pay that much attention to it.” Yet, in fact, she received peer feedback all three times, although the second one was not (in following the assignment’s instructions) a direct response to her post, and the third was very terse. Interviewee VII-4 provides the following hearsay account: “Sometimes he’d want us to critique other people’s responses. I kind of found out that most people didn’t get it back. You had to go find it yourself. A lot people won’t bother to do that.” Unfortunately, I did not gather any direct evidence to assess how widespread this problem may have been.

5.2.2 Perceptions of participation quality

This section relies heavily on students’ evaluation of their peers’ and their own participation; thus this aspect of the study is more subjective and anecdotal than the previous part. For my attempt to conduct an objective content analysis of discussion quality, see Appendix B.

One common criticism of discussions — and not just the online variety — is that participants fail to engage with each other. Students may, for example, contribute for the sake of meeting a requirement, posture for each other or the professor, or pursue irrelevant topics. Respondent IV-4 noted, “Some people really want to impress people with their thoughts,” while Respondent IV-12 wrote, “Lots of people think they have lots to say. Many don’t. Some do.” Interviewee IV-4 expressed her own preference for face-to-face discussions because she believed them more productive: “Personally I’d rather have discussion sections in addition to the lecture

¹⁸⁹ Blackboard does track the number of times a post has been read, but unlike many other BBS products, only administrators have access to that information.

stuff. If there was going to be some additional forum, I'd a billion times rather have something where you can engage with someone."

The Torts VII Rotisserie, where participation was mandatory, generated some feeling that students did not take assignments seriously, expressing moderate agreement (mean = 3.3) with the statement, "Other people did not take the Rotisserie seriously" (survey item 20). As noted in §5.1.3 above, two students felt that their peers took the assignments *too* seriously (they both also gave item 20 a "2 – somewhat disagree" rating). Two of the students who believed participation was insufficiently serious blamed the fact that it was not graded: "If something is not graded then people pay little attention to the assignment" (Respondent VII-33); "People either use short inconsequential assignments as silly playgrounds or fail to take them as serious academic work" (Respondent VII-1). Interviewee VII-3 also seemed to associate seriousness with the element of grading: "I don't think anyone really cared. I was just something we had to do. I don't know if it was helpful or not. There were assignments that made us look at what we had to read. I don't think... we weren't graded on it."

5.2.2.1 MANDATORY PARTICIPATION MAY DECREASE PERCEPTIONS OF DISCUSSION QUALITY

The mandatory nature of Rotisserie participation generated mixed feelings among Torts VII students. Although students did not seem to resent the participation requirement, several did feel that it fostered half-hearted or sloppy responses. Overall, there was mild agreement with the survey item, "Other students did not take the Rotisserie seriously" (3.2 out of 5, STD=1.1), and several respondents indicated dissatisfaction with the quality of participation: "Most people did it without thinking + as quickly as they could" (Respondent VII-8); "If something is not graded then people pay little attention to the assignment" (Respondent VII-33). Interviewee VII-3 asserted, "A lot of people just didn't really spend a lot of time on it... or said they didn't spend a lot of time on it. Some of the answers were crap." Zittrain himself stated that he could tell "when a student hasn't invested the time and is answering flippantly or five minutes before it's due"¹⁹⁰

It is possible that students projected the amount of time (or lack thereof) they spent on the assignment onto others; Interviewee VII-1 related her feeling that "We should have taken it more seriously. I guess you knew in the back of your mind as it was getting late, 'OK I can screw this.'" However, I found no significant correlation between scores on items 20 ("Other people did not take the Rotisserie seriously") and 21 ("My Rotisserie participation was of high quality").

Interestingly, a number of students disparaged the amount of effort their classmates put into the assignment, e.g., "My law school peers are neurotic - the Rotisserie wasn't even graded, yet people got completely stressed out about it" (Respondent VII-27); "I was surprised how seriously some students took their responses. Maybe b/c it was 1st semester 1L year" (Respondent VII-6). It seems that law school culture frowns upon "gunning," whether in class or online. I will return to the interaction between law student culture and online discussion participation later in this chapter.

5.2.2.2 POORLY WRITTEN RESPONSES MAY HAVE DISCOURAGED ROTISSERIE PARTICIPATION

Peer responses also seemed to play a role in section VII students' evaluation of the Rotisserie. Several seemed to feel that peer feedback was unhelpful or indicated a lower level of seriousness and effort than their own contributions. Respondent VII-30, for example, complained that rather than professor-student interaction, "you post an answer on a website and never get much feedback." Interviewee VII-2 recognized the symmetry of the situation, stating "the

¹⁹⁰ Zittrain 1.

feedback you got was as arbitrary as your own participation.” Others who came to a similar conclusion may have decided to cut back their own time investment. Interviewee VII-1 explained how her peers felt that the feedback “wasn’t that good” and her own belief that her responses “took me longer than it took [them].” See also §5.2.1.2 *supra*.

5.2.2.3 ONLINE FIGHTING MAY TURN STUDENTS AWAY

One significant event that took place on the Property IV BBS was the outbreak of a rather heated exchange in the second week of the semester, on 13 September.¹⁹¹ The discussion escalated from debate to personal insult in the span of 18 hours, ending with the intervention of a third party. Briefly, “Student A” posted a critique of an economic analysis of racial discrimination; “Student B” retorted with a response describing the moral and rational basis of discrimination; Student C made a substantive point here which was ignored by Students A and B; Student A responded to Student B’s critique and harped on a spelling mistake made by him; Student B replied with an ideological critique and personal attack.¹⁹² It was at this point that Student D entered the thread and called for a “little maturity, here, gents” (all students posting in this thread were male), with a hint of physical intimidation in identifying himself as a former military officer.¹⁹³

Several survey participants wrote negative comments that seemed to react to this particular exchange. “Quite a few of my peers have quite abrasive personalities,” wrote Respondent IV-13; “Students can be very immature,” added Respondent IV-31. Interviewee IV-2, Student C in this scenario, downplayed the conflict, explaining “that was more just one kid being overly sarcastic, and the other was the most conservative in the class, that was just kinda like ‘c’mon guys, you’re being ridiculous.” The incident did not seem to affect Interviewee IV-2’s own participation: he made eight posts subsequent to that thread.

Personal antagonism, or “flaming,”¹⁹⁴ is prone to erupt in an online environment where text is easily misunderstood in the absence of physical cues and where people, for whatever reason, feel less inhibition about engaging in destructive or anti-social behavior.¹⁹⁵ Though the hostility generated in such exchanges is surely not desirable, I would point out that they are, at some level, a discussion and exchange of ideas and viewpoints. Crude or vulgar as they may be, these expressions may be students’ rare moments of exposure to ideas that may be taboo to speak in a FTF classroom setting. Unfortunately, they are also destructive the community and discourage further participation.

¹⁹¹ It seems quite plausible that the traumatic events of 11 September 2001 had a hand in causing this argument; in fact, the terrorist attacks were specifically cited by one of the two antagonists.

¹⁹² “You can drop the psuedo[sic]-intellectual snobbery (multi-period game theory or whatever, give me a break). You’re like the guy on Goodwill Hunting who reads a few trendy books, parrots back what he’s read to those who haven’t, and then sits back with his arms crossed hoping that his audience will stand in awe. Go back to your books, and out of reality.”

¹⁹³ This was the only contribution Student D made to the BBS as a whole.

¹⁹⁴ “Flame: Personal verbal attacks on other Internet users, via e-mail, USENET, or mailing lists. Flame wars occur when a series of flames are sent back and forth between two or more people.” Education World Internet Glossary at <http://www.educationworld.com/help/glossary.shtml#f> (last visited 30 Apr 2002).

¹⁹⁵ McLellan 187 (finding that individuals can create “his or her own debilitating barriers to learning while turning off and even intimidating other students. The Internet context can draw out these tendencies in a few students, more so than a face-to-face learning environment.”)

5.2.2.4 FIRST-YEAR STUDENTS MAY LACK KNOWLEDGE TO ENGAGE IN SUBSTANTIVE CONVERSATION

A significant obstacle to engaging first-semester law students in serious discussion is that they are often unfamiliar with law or methods of legal analysis. Students may consequentially give particular weight to the professor's own contributions or, as Zittrain put it, "oracular voice." As Interviewee IV-3 said of Michelman's participation on the discussion board, "It was like God coming in — when no one else had an answer he did." Likewise, Respondent IV-6 noted, "I enjoyed reading Michelman's more detailed explanations of important concepts." Interviewee VII-1, a student in Torts VII, said, "The comments were decent... they were very basic. It wasn't sort of what you need to do on an exam when you have to play with the doctrine. People don't know that that's what they need to do."

5.2.2.5 LACK OF DEFINED EXPECTATIONS MAY ALSO FOSTER DISAPPOINTMENT

Even if first-year students lack the mastery of legal language necessary for certain substantive discussions, online discussions may forward other goals such as providing an "opportunity for individualized expression"¹⁹⁶ or enabling them to practice legal writing and argument. However, if students are not aware of these goals, or are unable to assess their success in meeting them, they may become frustrated with discussions that fail to meet their preconceived, divergent objectives.

Students in the mandatory Torts VII Rotisserie paid particular attention to signals from Zittrain about what constituted "good" responses. Zittrain would collect fragments of different responses and incorporate them into a PowerPoint presentation in class to provide a "model" answer. His class expressed mixed feelings about the clarity of this approach. Interviewee VII-1 said, "Really what was nice was going over it in class.... [it] gave a lot of insight into what Prof. Zittrain was looking for and how he wanted an exam answer to be formulated." Respondent VII-24 wrote, "I learned that Zittrain didn't like us to regurgitate black letter law" (VII-24). Others disagreed, finding it hard to identify his expectations. Interviewee VII-4 complained, "He didn't really tell us how he wanted us to answer questions. He wanted us to deal with it in depth. When we asked him for more in-depth answers... People just found it frustrating when he'd get questions it seemed he'd just avoid them." Others criticized Zittrain's practice of creating an "über-answer" amalgamated from individual student responses rather than a model response that fit the assignment's criteria of a 250 word limit. Interviewee VII-2 said:

The feedback [Zittrain] gave in class was inadequate in one respect: the issue was always complex, the feedback that he gave us was enough in size to cover an entire exam. I felt that 250 words were a good exercise to express yourself concisely for the exam. Don't give someone a model answer that doesn't fit under your criteria.

He went on to suggest that Zittrain might instead have analyzed entire student responses as "models for the rest of the class," although he also recognized the embarrassment that might cause the author. Interviewee VII-4 added, "We found it frustrating in terms of what he was looking for... when he was talking to us we never really had the sense that these were the answers he wanted."

¹⁹⁶ Zittrain II, 27 Mar 2002.

Explicitly laying out the purpose of each question, and perhaps modeling a response, may have alleviated uncertainty and students' frustration with their peers' responses. Respondent VII-8, for example, did not seem to understand the purpose of the 250 word limit: "I thought [the Rotisserie] was useless. You only had 250 words to describe very grand notions of the law + the tool was inadequate." This student may have accepted Zittrain's "über-answer" as the model response and became frustrated with his inability to follow it. Interviewee VII-2 also expressed uncertainty about what kind of feedback he should provide his peers during the "rotation" phase of the discussion: "My key problem with it was maybe I misread the instructions but in my view the feedback was to convince the person of a different view. A better feedback would be targeting the structure of the answer — that's kind of the focus of the course." Actual feedback students provided their peers ranged from moral encouragement ("Good job"), to comparing/contrasting the peer's response with the feedback provider's own response, to sentence-by-sentence analyses and criticism.¹⁹⁷ When asked what his intention was for the rotating phase of the Rotisserie, Zittrain himself answered vaguely, "I don't know. I could see different uses for each model."¹⁹⁸

5.2.3 Online forums and diverse perspectives

No one who responded to the surveys agreed strongly with item 15, "Reading other students' thoughts changed the way I thought about the issues raised by the course." In fact, the mean rating for this item was a tepid 2.7 for Section IV and 2.9 for Section VII. Anecdotally, however, students from both classes mentioned, both in the survey and in interviews, that the online forum exposed them to new, diverse viewpoints. As noted above in Table C, several survey respondents commented on their peers when asked what they had learned from the online discussions. Of these, four individuals in Section IV and nine in Section VII commented that they had benefited from peer exchange. Respondent VII-10, for example, wrote, "Other students interpret the same questions in very different ways;" Respondent VII-18 echoed this sentiment, writing that he had learned "[t]hat there are many different ways to approach a question;" and Respondent VII-12 stated that it "gave me new perspectives." A very enthusiastic respondent VII-16 wrote, "the diversity of opinion was incredibly valuable - particularly since everyone was required to participate the rotisserie sometimes challenged my own perspective on specific issues."

Section IV was more parsimonious with its praise; only two non-participants gave unambiguous endorsements.¹⁹⁹ "I liked the board because postings about outside sources were interesting and exposed me to information I wouldn't have found on my own" wrote Respondent IV-17; it "was a useful tool in that this class had such a strong policy slant. Certainly some interesting points came up, especially as extension of in class discussions" noted Respondent IV-32. Respondent IV-2 gave a lukewarm evaluation of what she had learned from the online experience: "Not much but see how other students think." Respondent IV-21 also provided a rather mixed review: "Read interesting arguments — otherwise, little new material was posted there..." (For a more detailed analysis of students' reception of their peers' viewpoints, see §5.2 below.)

¹⁹⁷ See also Appendix B.

¹⁹⁸ Zittrain II.

¹⁹⁹ Unsurprisingly, several active contributors also gave the BBS a high rating, e.g. Interviewee IV-2 wrote that it "Gives some people who don't speak in class the ability to make good comments. Also, allows comments that require more development than in-class comments".

5.2.3.1 FREEFORM DISCUSSION MAY ENCOURAGE LIMITED-INTEREST TOPICS

From the beginning, Michelman conceived of his discussion board as a place “for students in the course to have debates about issues peripheral to the course.”²⁰⁰ It is hardly surprising that, as Interviewee IV-1 put it, “frankly, a lot of the property law issues were so narrow, I mean people were asking questions about things they didn’t understand, it was so focused and arcane.” Interviewee IV-2, a frequent board contributor, concurred that it “allows people to talk about things that are very peripherally related.” What’s more, he adds, participants can do so without worrying that they will take the course off-track: “One of the best things about discussion boards is that you can say anything and no one interrupts; it’s less likely people will read it, but you don’t need to be patient... If you think someone’s not that smart, or has nothing to say, you can just skip it... [The board] has certain time and cost: it allows you to speak your mind, it allows others to choose to hear, which is unique in that sense.”

If many students do choose to skip what they view as irrelevant discussion, the benefits of the online resource become monopolized by a small group. Yet there is no particular reason why special-interest topics should drive away participants; to the contrary, one could also imagine a discussion board in which several different groups form to discuss topics relevant to the members of each group. Nothing of this sort happened on the Property IV discussion board, however.

5.2.3.2 ONLINE FORUMS MAY PROVIDE SAFE SPACES FOR “DISFAVORED” IDEOLOGIES

There is also some anecdotal evidence that online participants in the Property IV BBS sometimes represented perspectives that were overlooked in class. Interviewee IV-3, herself a contributor, said, “Our professors are really liberal, so we’re starting from a liberal position, so when you get really conservative views, it came out in the [discussion board]; maybe they were more comfortable.” Respondent IV-32 echoed this view of a skewed class emphasis, writing that the board “was a useful tool in that this class had such a strong policy slant.” Interviewee IV-1 related his sense that “there seemed to be a pretty good range of participation; there were a lot of people who were more comfortable in it.” He added that “it was an opportunity to hear from people you don’t always hear from, and from another forum.”

Another participant in the Property IV discussion board agreed that the online forum as a space where students could dissent from class orthodoxy:

I think that in general it’s quite clear the hierarchy in the classroom... it just isn’t open to challenge the professor or... you can say the expected, but... the professor is teaching, and the Socratic method and all these other methods just hide that fact, they know they started it and they know where they want to end up... the forum is one area where you don’t have that constraint.

(Interviewee IV-2)

Furthermore, according to Interviewee IV-3, once students whose viewpoints were disfavored in class found their voice online, they seemed more willing to express themselves in class as well. “I know once they started coming out, they carried that into class,” she said. Respondent IV-32 also noted the relationship between online and in-class discussions: “Certainly some interesting points came up, especially as extension of in class discussions.”

²⁰⁰ Michelman interview.

Respondent VII-3, an African-American male, concurred that the online discussions exposed him to the viewpoints of his peers, stating that what he took away from the experience was “Probably the great divergence in viewpoints, the naivete or ignorance of my peers of the substantial role race, class, and access to the legal system impacts American jurisprudence, and the overall conservatism of many of my peers.” Respondent VII-17, a Hispanic man, struck a more hopeful note: “It is sometimes surprising how much we all have in common.” Anecdotally at least, it seems that the online spaces studied herein gave a forum for expressing “conservative” viewpoints within an environment often characterized as very politically “liberal.”

5.3 BBS's in the law school setting

During the course of this study I also encountered a number of ways in which the use and perception of BBS technology were shaped by the law school environment itself.

5.3.1 Law students do not seem to suffer from a “digital divide”

Technical inability or fear does *not* seem to present a significant barrier to online class participation in the studied sample. The survey results indicate a high level of comfort with online media among respondents (see Table B, item 16). Additionally, there seems to be no difference in the comfort level of men and women, nor one across race, at least to the extent discernable in such a small sample. Finally, there were no statistically significant correlations between the a student's self-assessment of his or her technical proficiency and with enjoyment or use of the online discussion medium.

Future studies should attempt to confirm these findings, which were not the intended focus of this study, as well as probe for the existence of gaps among other populations, such as disabled or older / mid-career students. In addition, studies of students' actual proficiencies with online technologies might produce more meaningful results than simple self-assessments. For example, Interviewee VII-1 was unaware of the peer feedback to her contributions, as described above in §5.2.1.2, yet expressed that “The actual machinery of it wasn't difficult at all. I know very little about computers.”

5.3.2 Law students care about practical results of discussion

In the traditionally competitive law school setting, students seem to evaluate online discussion based partly on its perceived effect on the student's final grade. As Zittrain noted, “1Ls are, from day three, orienting themselves towards the exam.” However, both classes generally disagreed with the statement, “The [forum] helped prepare me for the final exam” (see Table B, Item 18). Calculation *q* in Table F also shows, in the case of Property IV, some relationship between enjoyment of the forum and its perceived value in the student's finals preparations.

Perhaps because one of the explicit goals of the Torts VII Rotisserie was to help students prepare for final exams, several students in that class linked their evaluation of the forum to their performance in class finals. (This awareness may also help to explain why the Torts VII class gave the Rotisserie lower marks on item 18 than did Property IV.) Interviewee VII-3, for example, seemed to assess the Rotisserie by its perceived effect (or lack thereof) it had on her grade for the class. “It [the Rotisserie] was probably good for me. Again, looking at my grade I don't know.”²⁰¹ Respondent VII-9 wrote, “Practice with exam-like hypotheticals was very useful

²⁰¹ Compare Zittrain's intent to remove the need for students to rely on the professor to validate the conversation: “People think generally when other students say something it might have entertainment value but it's unlikely to be

- not absolutely necessary to do through rotisserie but if that was easiest for prof (time/effort) then good. I did enjoy other Q's - but they weren't as "educational." Interviewee VII-1, however, seemed to find the exam-oriented question less authentic than a practice exam she took for a different class that semester: "What I liked about doing this practice exam... none of us had any experience sitting down in a time-sensitive setting and doing this thing. I guess the torts question gave you that, but maybe you didn't notice."

5.3.3 Law student culture may discourage participation

Whether because of competitiveness, insecurity, or some other drive to conformity, the cultural norms of a law student's peer group may influence that student's educational experience in profound ways. Social disapproval of "gunners" is a powerful way to ensure conformity within a competitive environment in the classroom.²⁰² As Guinier, et. al. found, the informal learning environment may be just as significant in alienating students, and women in particular, as formal pedagogical practices.²⁰³ This study suggests that peer control and disapproval can extend onto the online environment. As Table C illustrates, a number of students in both classes made disparaging remarks about peers who seemed eager to participate in discussion.

Some students may feel the need to assert moral or social superiority over their more academic peers. As Interviewee VII-3 put it, "the discussions on [the Rotisserie] are way too lengthy. I think most of us are way too busy... most of us who actually have a life are way too busy to take advantage of that." Respondent VII-6 implied that his classmates' eagerness reflected naiveté: "I was surprised how seriously some students took their responses. Maybe b/c it was 1st semester 1L year." Respondent VII-27 called her peers "neurotic" and criticized the way they "completely stressed out about it," adding, "Rotisserie was a big waste of time." Both students may also be asserting the commonly-held belief — common soon after the receipt of students' first-semester grades²⁰⁴ — that spending more time on schoolwork does not affect a student's academic performance.

The Property IV discussion board garnered even more scorn from survey respondents than did the Rotisserie, possibly because of its voluntary nature. Some of the comments seemed almost spiteful: "Lots of people think they have lots to say. Many don't. Some do" (Respondent IV-12); "it is possible to use a lot of words to say nothing" (Respondent IV-33). Others seemed to have a sense that people who participated were doing so to garner attention, as indicated by Respondent IV-4's comment, "Some people really want to impress people with their thoughts" and Interviewee IV-4's claim, "All that anyone's doing is trying to get [the professor's] attention. It was just room for the gunners to say their piece." Interestingly, one of active Property IV discussion board participants did not seem to shy away from these characterizations of his own

something that's going to be on the exam and they need to know or something else until, again, they see how the professor reacts." Spicer 23.

²⁰² See Wendel 1986 ("Every law student is familiar with shaming rituals used by the community to control deviant members, with "deviant" being understood as meaning "talks too much in class, sucks up overtly to professors, seems unduly impressed with himself," and so on. The classic law school shaming ritual, played at virtually every school with which I am familiar, is variously called gunner, turkey, keener bingo, depending on the current epithet for describing obnoxious students."); Guinier et. al. at 48 (Finding, "Other women reported suffering from hissing, public humiliation, and gossip simply for speaking aloud in class"). See generally Making docile lawyers.

²⁰³ Guinier, et.al. 74.

²⁰⁴ Recall that the survey was conducted two months after the first semester, shortly after students received their grades.

and others' participation: "The discussion board provided an alternative forum for people to show they're smart, to show they're thinking about the material" (Interviewee IV-2).

5.3.3.1 DISCUSSION FORUMS VS. STUDY GROUPS

Study groups are another aspect of law student culture that can profoundly affect a student's educational experience (see §1.2.2 *supra*). In Torts VII, belonging to a study group was negatively correlated with enjoying the Rotisserie ($p < 0.01$); in Property IV, the correlation was positive but not statistically significant. (See Table F, calculation *i*). The survey also showed that 35% of respondents in Property IV and 67% of respondents in Torts VII belonged to a study group, which may have met weekly for several hours or only a few times at the end of the course for exam review. It is unclear why the students' participation rates in study groups varied so widely between the two classes; thus the aforementioned statistics should be viewed with some skepticism.

Very tentatively, I would suggest that students in Torts VII who already belonged to a study group may have seen the Rotisserie as a redundant burden, while students in Property IV may have viewed it as supplemental. Interviewee IV-2 saw the discussion board and study groups as serving separate purposes: "the study group had a certain purpose, it's studying, it's not sort of the exploring, it's not the grappling, you don't deal with the same concerns there." Zittrain, on the other hand, explicitly described the Rotisserie as "like a compulsory study group."²⁰⁵ Note, however, that many study groups cover more than one course since each section takes all of its first semester courses together (as several students indicated in their survey responses), and thus other factors may be involved here.

5.4 Summary

In broad strokes, the present investigation found that in the two classes studied, online discussion environments did present students with another opportunity for dialogue and interaction with each other and/or with the professor,²⁰⁶ but that not all students used or appreciated the space equally. In particular, I found that male students who were already active in class discussions monopolized the free-form BBS of Property IV. By contrast, female students, who as a group are supposedly alienated from the traditional law school classroom (see §1.1.3), were slightly more active in the mandatory Rotisserie of Torts VII. Furthermore, students who are generally uncomfortable with class discussions (including those who believe they have nothing to contribute, or who are concerned about being "wrong") seem to be less uncomfortable with using the Rotisserie.

I obtained significantly less evidence — and less reliable evidence — pertaining to my second hypothesis about the quality of participation itself. Survey results and interviews suggest that students were not entirely pleased with the online discussions, and as a whole they rated the forums lower than their classes or law school as a whole (see §4.3 *supra*). Nonetheless, there is some anecdotal evidence that these discussions involved the exchange of relatively diverse viewpoints, perhaps some that would not have surfaced in regular in-class interactions. There was also evidence that providing more structure and clearer expectations might have improved students' perception of both online tools.

²⁰⁵ Zittrain I.

²⁰⁶ It is important to emphasize that, due to the nature of subject selection described in §3.1.3, there are also classes that offered an online forum but where *no one* participated.

Finally, I found that the law school 1L culture influenced the online environment, particularly in terms of students' negative attitudes towards "gunners." Some students in both classes seemed resentful of their classmates' online participation, even when it was required by the professor.

6. Conclusion

This study conveys a simple but important conclusion: online discussion tools do *not* automatically free participants from the problems, particularly “cultural” ones, of face-to-face interactions. Without careful planning and structuring, they may even reproduce and reinforce inequalities in the classroom setting — by, for example, giving active participants even more opportunities to discuss and interact than their more reticent peers. On the basis of this finding, this section suggests (1) how professors can better implement BBS’s in their own classes, assuming a commitment to encouraging more equal and diverse participation; (2) what technical features or innovations may be necessary in BBS’s themselves; and (3) areas where more research is necessary.

6.1 Practical suggestions for running online discussions

Online discussion environments are simply spaces for human interaction, in many ways no different than physical environments. They can be as structured or unstructured as classroom activities and can produce free-form or rigidly controlled interactions. It may be helpful to think of online BBS’s as analogous to physical classrooms in that they do not dictate a pedagogical approach, much less specific results.²⁰⁷ The configuration of this space can tend to support or obstruct different methods of teaching, much as a classroom with chairs bolted down in a semi-circle around a podium is more conducive to professor-centered lecture and dialogue than group discussions.²⁰⁸ Even in such a space, however, the professor can remove herself from the center of attention, or have students turn to face each other for collaborative activities. Likewise, the structure of online discussion tools do not always obligate a particular teaching method.

The two classes studied herein provided some examples of how online discussion can work:

1. Open, voluntary, unlimited discussion on any topic
2. Solitary generation of primary materials (reflections, anecdotes) for later, face-to-face discussion
3. Collaborative writing (using peer review)

Although the actual structure of discussions in both classes studied matched the affordances offered by their respective technologies (e.g. the Property IV generic BBS supported a more generic discussion of type 1 above, while the Rotisserie was specially designed for discussions of types 2 and 3 above), I do not want to overemphasize the role of the technology itself. It is, for example, possible to implement a Rotisserie-like discussion using a generic BBS. (The converse, admittedly, is not true: the Rotisserie currently cannot handle free-form discussions).

6.1.1 Setting goals for online discussion

I do not presume that all professors would perceive the Torts VII Rotisserie discussions as normatively “better” than the Property IV BBS discussion. After all, I did not compare the two on several important factors, including the intellectual content of students’ contributions. Rather

²⁰⁷ Andrew Dillon and Erping Zhu, *Designing web-based instruction: a human-computer interaction perspective*, in Khan 221, 223 (“The Web is just another technology through which instructors can reach learners and deliver instruction. There is nothing magical about this new technology that requires us to reinvent instructional design”).

²⁰⁸ Cf. Boyle and Dunn 219 (summarizing criticisms of the physical structure of law school classes).

than become mired in an ideological wrangle over the purpose of legal education and the merits of laissez-faire competition and “sorting,” I would make the more general observation that a professor should be clear about her pedagogical goals in providing an online discussion space and, ideally, have a way to measure whether those goals are being achieved.²⁰⁹

6.1.2 General suggestions

- Explain the purposes and goals of providing the online discussion space, and set expectations for its use, including participation rate, scope of allowed topics, and acceptable behavior. Failing to make students aware of these goals may cause students undue anxiety or uncertainty about how they “should” participate (see §5.2.2.2 and §5.2.2.5).
- Police forums for incivility, or empower others to do so.²¹⁰
- Closely integrate online with in-class discussion. Refer to points made online as if they had been offered in class. One of the professors with a very active discussion board (over 800 posts) but who declined to participate in this study stated, “There is rarely a class where I don’t refer to posts in class. One of my techniques is to bring discussions into class.” This not only reminds students that there *is* a virtual discussion space, but also legitimizes that space as important to the goals of the course, as was mentioned by several of the students in this study.
- However, be aware of the social resentment of both in-class and online “gunners” among 1Ls and try to distribute attention among many students rather than singling out active online participants.

6.1.3 Achieving equity in online BBS participation

Responding to many of the criticisms of traditional law school classes cited in §2, I want to focus on practical steps law professors can take to create a more comfortable, inclusive, and equitable online discussion environment. I want to emphasize that these suggestions can be implemented using any BBS, although some more easily than others. (I will turn to technology suggestions in §6.2.) Because these suggestions are derived from the scope of the present study, they may be most relevant to professors teaching in the first-year curriculum.²¹¹

6.1.3.1 MANDATORY PARTICIPATION

The mandatory nature of discussion, more than just a “good idea,”²¹² may have several salutary effects in removing the need for participants to raise their hand, as students herein have remarked. To some extent requiring participation, as Zittrain did in the Rotisserie, echoes Guinier et. al.’s “intriguing method of running classroom discussions” in which no student is

²⁰⁹ At some future point, however, it may be the case that BBS’s will become ubiquitous enough to all law school classes such that professors need to take action to *disable* them from classes. Professors would no more need to consider the pedagogical purpose of BBS’s than they do students’ informal interactions in the school’s hallways — which is not to say that professors should not, or do not already, do so. See §1.2.2.

²¹⁰ According to Michelman, whose BBS hosted the fight described in §5.2.2.3, “I never had to erase a message — though once or twice it got close. Once or twice I’ve intervened to head off an unpleasant situation.” Interview.

²¹¹ Jackson, the “lapsed enthusiast” (see note 1 *supra*) found that bulletin boards “work well in first year sections where the students are more focused on the class and the materials. I find that in upper-level courses, the students focus on extracurriculars. Spending time in online discussions is not their ‘lifestyle choice.’” My own personal experience with upper-level courses in Constitutional law and Intellectual Property law both support and contradict this claim.

²¹² Malikowski 288

called on until 75% of them have raised their hands.²¹³ The following benefits may result from such a requirement:

- Reducing the stigma associated with appearing over-eager to participate
- Encouraging higher participation rates from women
- Generally reducing the possibility of bias involved in selecting specific participants
- Providing all students with an equal opportunity to practice and hone reasoning and writing

Finally, in freeform discussion settings, mandatory participation may ensure the “critical mass” necessary to spark the genuine exchange of ideas. As suggested in §5.2.1, the feeling of an empty or unresponsive discussion space — much like an “awkward silence” — discourages participation.

6.1.3.2 “SCAFFOLD” DISCUSSIONS

Providing students with grist for the discussion mill — for example, a policy question or hypothetical — removes the risk students feel of (1) asking a “bad question” or (2) being perceived by classmates as a “gunner.” On the other hand, without a policy of mandatory participation (see above), students may be too intimidated to engage the professor in dialogue, or be seen as “kissing up” or “showing off.” Ideas for initiating a discussion or simply eliciting responses include the following:

- Posing a real or hypothetical situation for problem-solving or “issue-spotting” (e.g. Questions 2 and 4 in the Torts VII Rotisserie)
- Eliciting “response papers” (e.g. Rotisserie Questions 1 and 5)
- Eliciting personal, professional, or hypothetical situations reflecting some facet of the course materials (e.g. Rotisserie Question 3)
- Soliciting students’ opinions on the most difficult or most confusing part of the course materials (e.g. the second forum in the Property IV BBS)

As described previously, professors can use responses to gauge students’ progress, identify problem areas, or simply stimulate more interest in the topic.

6.1.3.3 CREATE SMALL GROUPS

If students in large courses can participate in only a small fraction of class discussions, moving them online may not solve the problem. In a mandatory discussion, for example, there would be too many posts on any board for one person to be expected to read.²¹⁴ One way to address this problem is to assign students to smaller groups. For example, two of the Section VII Rotisserie questions involved randomly pairing students together. Similar grouping can be achieved in most BBS’s by assigning students to groups, and then creating and designating a forum for exclusive use by each group.

The creation of smaller groups would not only reduce the amount of “noise” and the feeling of being overwhelmed by potentially hundreds of messages, but also has the potential to create community and mutual accountability. This sense of responsibility to the group may possibly have been a factor in encouraging more women to participate in the Rotisserie when students were paired up and asked to respond to each others’ replies. Rotating these pairs enables

²¹³ Guinier, et.al. 72.

²¹⁴ That much text may be too much for professors to read as well, as Jackson, note 1 *supra*, and Zittrain (describing the results of a Rotisserie interaction as a “huge pile of text”) both suggest.

students to encounter new ideas, but it may also reduce the student's feeling of obligation to respond to his peers.

6.1.3.4 USE TEACHING ASSISTANTS AS MODERATORS

In most large classes, professors simply will not have the time to be involved in every discussion, correct mistakes, or steer discussion towards more fruitful avenues.²¹⁵ In fact, such involvement may be counterproductive in causing students to feel intimidated or controlled.²¹⁶ However, as discussed in §5.2.2.4, first-years students may end up playing a game of “the blind leading the blind” since most will not have mastery of, or even familiarity with, legal argumentation and language.²¹⁷ Thus, one study participant suggested using teaching assistants to provide feedback (Interviewee VII-2). Upper-level students can serve as a medium between student and professor as well as non-threatening sources of correct information.²¹⁸

6.2 Improving online discussion tools

Although I believe that professors can successfully use generic BBS's to facilitate meaningful discussions in their classes, technology providers should give more thought to how to improve the architecture of online spaces to promote and encourage positive outcomes. Unfortunately, as Zittrain noted in describing the need for technologies such as the Rotisserie, existing BBS's were not designed for educational purposes but rather the generic needs of online “communities.”²¹⁹ Blackboard's built-in BBS is not only generic, but also primitive compared with other systems available on the market (see §3.3.2.1).

By contrast, the Rotisserie was designed with a very specific type of interaction in mind: one-on-one discussion. It can track student participation, allowing professors to easily monitor, if necessary, compliance with mandatory posting requirements. The Blackboard BBS does not include an option to track user activity to ensure that students are complying with required participation.²²⁰ Furthermore, the Rotisserie makes it apparent who has not participated by displaying *all* students' names whether or not they have participated, making non-participants rather than volunteers stand out.

The Rotisserie demonstrates how education technology can be designed to support and encourage specific pedagogical goals — in this case, a limited, one-on-one dialogue visible to other members of the community. One can imagine a variety of other specialized BBS's that

²¹⁵ See *id.*

²¹⁶ Interviewee IV-1 recommends that professors “should fight their natural instinct to sort of answer and control conversation as they do in class. Just from my own teaching experience it's a tradeoff. If you interrupt whenever someone is wrong there's no point in discussion.”

²¹⁷ But see John R. Kramer, “Extra-curricular programs” in the MacCrate Report: building the educational continuum (conference proceedings), 74-8 at 77 (“Student-edited law journals are the only inexpensive way for students to obtain close supervision of their writing. One or two incompetent writers training another incompetent writer. At least they are focused on producing written material, and there is close supervision, even if by less competent people than we like to think of ourselves as being, although maybe we're not that competent either. This is in addition to all those writing seminars where... the students write their papers in the last three or four days and the feedback from us is next to non-existent.”)

²¹⁸ See Bonk & Reynolds 174 (suggesting that upper-level students can provide first-years with “cognitive apprenticeship” opportunities).

²¹⁹ Zittrain Interview I.

²²⁰ A search for posts by a specific user is available, but would have to be executed individually for each member of a class.

codify and simplify other pedagogical methods. For example, the system could allow a professor to assign roles to students such as presenter, discussant, or discussion moderator, then provide individuals with the interface and tools they need to carry out their assigned tasks (such as summarizing main points).²²¹ For role-playing scenarios or highly sensitive discussions, pseudonyms may be appropriate.²²² Finally, software resembling the document management systems used by large law firms would provide students with both a collaboration space for law school work and authentic preparation for the workplace.²²³

To reiterate my main point, however, the ultimate ability to execute any of these activities online depends more on professor commitment than technical capabilities. Tools such as the Rotisserie make structured discussions easier, but are not essential to the success of an online discussion activity.

6.3 Suggestions for further research

This pilot study has generated some suggestive results, but more research is needed for firmer conclusions. In particular, I would flag the following questions as meriting more in-depth study:

- How do online discussions supplement, supplant, or interfere with the traditional law school study group?
- What types of questions or discussions appeal to students of different learning styles?
- How are gender or cultural differences expressed in the online environment, and how does that affect students' participation?
- What exactly explains the different attitudes and participation rates between the Rotisserie and the BBS — the mandatory participation requirement, the provision of a discussion topic, the pairing of students, or some other factor?
- In both voluntary and mandatory discussions, what factors lead an individual to decide to post a message? Is there a common “turning point” moment? What prevents people from participating?

The size and composition of the study population prevented drawing statistically significant data about sub-groups of students defined by characteristics other than gender, e.g. race, age, English as a second language, etc. More data segmented along these lines could also prove illuminating.

Finally, this study raises important questions about the culture of first-year law students. Guinier et. al. report that many women suffered “from hissing, public humiliation, and gossip simply for speaking aloud in class.”²²⁴ The present research suggests that such forms of peer harassment may both target and originate from men and women. Students from Property IV did not hide their disdain for the predominantly male participants in their online discussion board. Whether rooted in competitiveness, conformity, anti-intellectualism, or some other ethos, this cultural phenomenon deserves closer study as a matter of more general legal pedagogy.

²²¹ See Shotsberger 102. Blackboard offers the role of “T.A.,” but it is primarily an administrative one that merely allows the individual to create, modify, or erase forums.

²²² See Bonk & Reynolds 170 (finding that “the anonymity of pen names and pseudo-roles during electronic discussions encourages student idea experimentation and risk taking disclosures”).

²²³ Professor Joseph Singer imagines a system for drafting, exchanging, commenting, editing, and discussing mock briefs for his upper-level Constitutional law seminar. Singer Interview.

²²⁴ Guinier, et.al. 48.

6.3.1 Suggested Methodologies

This study employed user surveys and key user interviews, and made a brief attempt at content analysis of the discussion content itself. I would like to make a few observations and suggestions about methods for future research in this area.

6.3.1.1 CONTENT ANALYSIS AND THE PROBLEM OF VALIDITY

My preliminary attempt to conduct content analysis of the materials found in online discussions proved disappointing and frustrating because of the problem of *validity*.²²⁵ In the present study, an inability to generate objective, measurable, and most of all *reliable* measures of the quality of discussion stymied more ambitious content analysis of the significant work product generated by the two Harvard Law School classes. In other words, no one has been able to really articulate in objectively measurable terms what constitutes a “quality” discussion of legal issues in the law school context. All is not hopeless, however. I encourage future researchers interested in evaluating the actual content of law school discussion boards, and who have considerably more training in content analysis and access to resources than I do, to collaborate closely with the professor whose course is being studied in order to derive rubrics for identifying high-quality educational interactions. This would allow for far more objective analysis of discussion content than was possible here.

6.3.1.2 CLASS OBSERVATION

One substantial shortcoming of this study — dutifully pointed out to me by several of its subjects — is that it considered the artifacts of online interaction in isolation from the context of the course, and in particular without analyzing the relationship between online and in-class discussions. However, virtual and face-to-face communications overlap and mutually influence each other. Many of my interviewees noted how online discussions were woven into class discussions, and conversely, several students extended topics brought up in class into the virtual space. It would be instructive to identify *how* online and FTF discussions can or should be integrated by conducting an in-depth, side-by-side qualitative study, perhaps including content analysis of both in-class and online discussions.

6.3.1.3 OUTCOMES ASSESSMENT

The present study did not look into the “bottom line” question about the use of online discussion technologies: does it improve students’ educational outcomes? Significant obstacles to answering this question include maintaining student privacy, the incomparability of grades across different classes taught by different professors, and the inability to create randomized control and experiment groups. Assuming some way of overcoming privacy concerns, the ideal study would have a controlled experiment with two different classes, one an experimental group that would be obligated to participate in an online discussion, and the other a control group — taught in the same semester by the same professor — that would not. A less ideal but more realistic option would be to study two courses taught by the same professor in different semesters.²²⁶ In either case, such an experiment would alleviate the problem of valid outcomes

²²⁵ See Appendix B.

²²⁶ The control group should be given an alternative assignment to ensure that any variance between the two groups is not due to the experimental group’s spending more time with course materials as a result of online participation.

assessment, since the researcher would not need to understand the “black box” of the professor’s grading method, assuming that method is reliable.²²⁷

In conclusion, more qualitative (in-depth case studies), quantitative (large-scale surveys), and mixed-methodology (e.g. content analysis) research is necessary into this growing and important area of legal pedagogy.

6.4 The last word

This paper has examined the use of online discussion boards in two first-year classes at Harvard Law School. Along the way I have considered the state of American legal pedagogy and of educational technology. I conclude that emerging tools may not be the “magic bullet” that solves recognized problems facing law schools today. At the same time, I hope that the explosion of new possibilities that these technologies represent, as well as the need to consciously design online learning spaces, will provoke legal educators to re-examine the pedagogical choices they make and how those choices affect the educational experience and outcomes of their students.

²²⁷ In other words, the professor consistently gives the same grades to exams of comparable quality. The reliability of law school grades has been in question for some time. See generally Greg Sergeienko, *New modes of assessment*, 38 *San Diego L.Rev.* 463 (2001).