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## Panel 4: Changing the Curriculum to Keep Pace with Technology

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**Transcription of 2013 *Chapman Law Review*  
Symposium: “The Future of Law, Business,  
and Legal Education: How to Prepare  
Students to Meet Corporate Needs”**

**Panel 4: Changing the Curriculum to Keep  
Pace with Technology\***

**Friday, February 1, 2013**

*Moderator:*

*Professor John Tehranian\*\**

*Panelists:*

*David S. Levine\*\*\**

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\* This transcript has been edited and excerpted. For the full video presentation, visit [www.chapmanlawreview.com](http://www.chapmanlawreview.com).

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**TEHRANIAN:** I'm John Tehranian, I'm a professor of law at Southwestern Law School, and it's a delight to be back here at Chapman.

For this session, we have three wonderful panelists whose experiences run the gamut from business to the academy and journalism to public policy. They will be providing us with an interdisciplinary examination of technology and the law school curriculum, with a particular focus on intellectual property-related issues. The recent spate of headlines about the legal profession and concerns over the future of law school has made this symposium incredibly timely. As the panelists in the earlier sessions have discussed, there is now a wide-ranging and much-needed debate occurring about the evolution of legal education. One area that has not received as much attention as it perhaps should, however, involves how the curriculum might change to keep pace with technological developments. As our panelists' talks will demonstrate, this topic raises a number of distinct sub-issues: the way in which technology can impact substantive legal doctrine, the way in which technology can impact the methodology of law teaching, and the way in which technology can impact our understanding of the law.

So, without further ado, I'm going to turn it over to David [Levine].

**LEVINE:** I'm excited to be here today to talk about something I don't talk about as much as I would like, although I think about it quite often, which is "What can we do to address these issues concretely, given what several speakers have talked about are the practical realities of what law professors are asking us to do today?" So I want to focus on this concept of "What can we do on Monday to start addressing these issues?" I've taught Internet Law and IP Survey for six years, and I've previously practiced in the area. And what I want to talk about is how I approach these issues from a course-objective perspective and

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really get down to a meta-brass-tacks approach with some suggestions that I'll make today. It's been fascinating to meet many scholars in this area, whose work I know, and talk about these issues. I think I'm going to leave it largely to them for the horizon questions of what we're going to do long term. But I'm going to address the most vexing question that I generally had when I talked to colleagues at my school and other places, which is, generally speaking, "I agree that we need to make changes, so what can I do right now to go down that path?" I'm going to approach this with that perspective.

I think I'll start off with what I say for my course objectives for my Internet Law course, and I'm heavily influenced here by my mentor and friend Eric Goldman up in Santa Clara. When I talk to my students in Internet Law, where I use a combination of textbooks, other primary sources, and public domain materials, I emphasize these points: my primary goal for them in a three-credit survey course (where I don't, to be clear, require them to have any background in computer science, or intellectual science, or anything else) is to learn how to make smart decisions in a dynamically changing environment. How do you keep up as a lawyer? How do you advise clients? But particularly when reading a case (and I do use cases heavily, although not exclusively) I want them to ask themselves: "What would you do differently for these parties?" It's understandable that most law students, when approached with that question, start thinking about what the law says and what argument they can make. And I push them heavily to think about this, as I say in class, not just based upon the law but based as relevant upon business objectives, market forces, social norms, and last but not least, rules of professional responsibility. And again, for those of you familiar with the literature, there was a reference to the law of the horse earlier, the counterpart article by Larry Lessig, who is also a mentor and friend. I'm drawing heavily on his article regarding modalities of regulation there. So, while it sounds theoretical and while I do talk in theory, my primary concern when I'm teaching a course like this is that most of my students are not in fact (as we referred to earlier) going to go straight into academia (or ever go that route), but that does not mean that they shouldn't have a theoretical grounding in the law, particularly given how dynamic the field is. I take this concept, and of course it sounds good on paper, but how do you implement it? How do you go that route? What I've challenged myself with and what I want to talk about today is "How do I attempt to meet those goals in our current academic and professional environment?"

Many speakers, and I'm not going to go down that path, have talked about the structural changes occurring in the profession. I want to make three relatively simple suggestions to law professors, keeping in mind that we still, generally speaking, have tenure standards and promotions standards that focus on teaching scholarship and service. Whether that should be the case or whether we should tweak it, I'll leave for a separate discussion. I want to take the field as it is now and say, "Okay, those are the rules. What can I do within those rules to address the structural changes and challenges facing legal education today for the betterment of students?"

This is not climate change. This is not the issue of what we're living through now, having been impacted or created thirty years ago. We don't have a situation where we have lag time. We have changes occurring now, and the question that vexes me and that I face is: "What can I do for the graduates of Elon University who are going to be out in a few months in May 2013; what can we do now to address the changing landscape?" And pedagogical change, as opposed to climate change, I think has the blessing of happening relatively rapidly (at least as compared to climate change). I have the ability within my classroom (and this is certainly a blessing of being at Elon, which endorses this type of thing) to experiment, to try new things in the classroom, see if they work, see if they don't, talk to colleagues who will support either way, and tweak it.

I've had the fortune to be able to attempt some interesting ways to approach Internet Law, without divorcing the law from its theoretical underpinnings or putting theory aside, but at the same time facing the practical questions that earlier speakers (both from the field and academics) have talked about.

What do we do? Law schools, legal educators, and, by extension, the legal profession have to reprioritize. That reprioritization requires some immediate action. Two last caveats before I get to my three, and I emphasize this, modest suggestions for what we can do now. The first is that I personally reject the notion that we need to de-emphasize one of those three traditional pillars over the other two. I firmly believe that for faculty to address these issues we need to not only remain active in all areas, but to also affirm that each activity improves performance in the other two. And while a given faculty member may excel in or prefer one particular area over another, and there could be allocated more time to address those, my view is (given where we are today, now more than ever) that we need a lot of utility players; we need a lot of faculty who are going to be adept at all three areas, because that, indeed, is the world that

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our students are entering. The world where you are not necessarily going to be a specialist, where you may not, at least initially, have the opportunity to say (as some of my students want to), “I want to focus on bio-technology patents.” My initial response is: “That’s wonderful, and I want to help you get there, but first let’s talk about how you can get some legal experience.” So too, I think in that sense faculty need to be generalists. And I say that, by the way, with a deep interest with Internet law and IP, in particular.

The second point that I want to make, and directly relevant to the topic of the panel, is that I am fortunate (and indeed it was a motivating factor for me, personally) to teach IP and Internet Law from 2005 and on and practice in it, because I enjoy the fact that it is dynamic, fast moving, theoretical, exciting, and reversal prone. I’ve never taught the course where a case that I taught that semester wasn’t literally reversed during the semester; and I, therefore, had to ask my students’ indulgence and say, “Remember that case we read last week? I don’t think it’s good law anymore. Now we’ll talk about what the law actually is.” I relish that. I enjoy it. So I do think that Internet Law and Intellectual Property, in particular, has forced not only students or law professors, but professors who would otherwise eschew what we call “practical skills,” because the area is so dynamic and fast changing. In that way, I feel blessed and fortunate to be able to do that, and I want to instill an enthusiasm for that dynamism in my students. Do I wish that students facing this could discuss it hypothetically? Of course. But the reality is this is real. Therefore, I attempt to turn Internet Law and IP, and their uncertainty and their dynamism, into a benefit that they could use in practice through addressing those issues directly and head-on in class. Those are my caveats.

Suggestion one: candor. I’m suggesting pausing (coincidentally or ironically) and listening. In 2005–2007 when I was at CIS, I experimented with virtual world teaching at the invitation of my colleague Lauren Gelman. I lectured using an avatar. I landed in a virtual world with a jet pack and began to talk about trade secret law and its impact on public transparency (there were about a half-dozen other avatars in the room who were other law professors). A few avatars wandered in; they just came across the landscape; they hung out; they kind of circled us; one of them stood on top of me at one point; and I just kept going, but then they left. I wondered, “What are they doing at that point?” They were in fact hearing what we were saying, so maybe they were just messing around. But the key idea is that they paused. They took some downtime and they listened. And I’m not sure we do

enough of that immediately in the classroom. In our zeal to react, we talk and increasingly act through concepts like engaging in experimental learning, which I laud and which I use, but that takes a lot of planning and a lot of time. A lot of planning and time that unfortunately, and I hope it will change, many faculty members simply feel they do not have the luxury of attempting.

But on Monday, a relatively easy thing to do is pause and listen. And I do this regularly through my Internet Law class through blawging. I have my students pick a current, which in Internet Law can be a couple weeks, legal issue and I have them write a five-hundred-word blawg post aimed at their hypothetical client who may not have the time to get into the weeds with them and may not be interested in the legal issue, but needs to know about it. I ask my students to blawg. I ask someone to post a reply. And then we discuss it in class. But we don't discuss it from an ivory-tower-theoretical perspective; we talk about it from the perspective of what the client would like to know about this case, and what it means for the law. It forces students, again, to pause, because I have a syllabus and we march through it (and we have cases and everything else), but in the beginning of each class, one student takes the lead (and I encourage my students to be difficult, to push back, and frankly, to get a little impatient because I want every presenter to have that feeling). At the same time, we talk about civility, and this is part of the ethics and professional responsibility point. At the same time that I want students to have that perspective, I also want them to know, as Judge Baer has written, "While our system is by its very nature adversarial, it goes without saying that such a system expects—indeed requires—a measure of civility." And so I use these types of cases. And Judge Baer from the Southern District of New York is a bit of a controversial judge; he's written a lot of long opinions, some that others may have disagreed with, but he's for that reason a good judge for a case to assign. And I say to students, "How do we work in that same concept, in discussing this area of law that your client may not be interested in, and discuss it civilly?" Discussions ensue. The pause happens. I do not test my students on anything presented in the blawg presentation, but I take the time, because in pausing and in reflecting I think we have the opportunity to restock and think through where we are, and we do this in every class.

On the scholarship side, bringing scholarship to the classroom allows for this change. And by scholarship I am talking of the more traditional professor because I think that is the audience that needs to hear more about this discussion and the audience that is going to push back and say, "When do I do these

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new exciting ways of teaching that I think are great, but I don't think I have time to do?" Those blawg posts that the students write (no I don't plagiarize them and turn them into my own articles) open a discussion about my work, and who doesn't like talking about themselves? But it allows students to focus on some of the policy issues that we think about, some of the issues of theory, and students see that that exchange can occur, that influence can happen, that you can have the ability to be involved in that dialogue, which is exactly the type of leader and thinker that law schools need to present and encourage today to have a dynamic environment. Students for that limited time in the classroom, and for many students in their limited time in law school, have the same opportunity to influence public policy enjoyed by professors. One of the things I love about the Internet is that while it does not clearly level the playing field the way we might hope, it certainly provides for a greater opportunity for access for those who might not otherwise have it than we've ever seen before. And I want students to think creatively about whether they can influence, not just courts and judgments and juries, but the world at large. Aside from its pedagogical benefits, it can help the institutional fortitude to allow a school not only to survive the current crisis that they're facing but, perhaps, thrive. I am an optimist, despite everything, because I do not think that we (meaning a majority of law professors) have really tried new and exciting ideas to address this issue due to the pressures that others have spoken about.

So on Monday, pause, and think about, and talk about what it is we're doing here. Ask your students to write a five-hundred-word blawg post (which you can put on TWEN, Blackboard, or any other place) on a topic of their choosing. I'm happy to share my thoughts, having been influenced by people like James Grimmelmann, Bruce Boyden, and others who do this as well.

So, what about service? The third pillar, and some would say the third wheel, of tenure. But the reality is that service is not valued the way it should be. And it is perhaps the hardest concept to assess. But now more than ever (again, "what can we do on Monday?") I think professors need to embrace the reality that our job in this environment and in this economy does not only extend to helping our students pass the bar exam, but indeed, to what they are going to do with their careers. Being sensitive to the fact that we have a career services office (and I'm good friends with everyone there), I tell my students I want to use all of these wonderful means of communication: the Internet, email, and social media (after you graduate when I will become



your friend, because up until then I'm not your friend). I want to use that media to allow us to continue a discussion to disprove what in fact many students may think (perhaps erroneously in most cases)—that professors don't care what happens next, or at least that they're not willing to put time into it.

On Monday, I'm suggesting to any faculty member who might want to try it that you attempt to open that dialogue simply by making that point in class and then seeing how your students react. I found it very successful and surprising how excited students are to get that information.

In conclusion, I don't profess to be saying anything terribly profound here; I don't profess to be saying anything that may change what happens down the road. But, what can we do on Monday? We can try these three modest changes and see where they lead. Thank you.

**HOWELL:** David [Levine] has focused on how we might approach teaching differently. When I heard about the panel I immediately thought, "What should we teach differently in the IP law curriculum?" because a lot has changed since way back when I was in law school, way back in the Reagan era. It's good from the point of view that people like some things staying consistent, because some things haven't changed. Parking, for example, is still a nightmare. But lots and lots in the world has changed since I was in law school, and the same for my colleagues, and personally, as someone not involved in academia, I don't have a good grasp of how it has really changed to keep up with those things, but I have some ideas and some thoughts that might be productive if they're not already being implemented.

First thing is that we are living in so much more of a global society, and the Internet is a big factor in that. You put up one of David [Levine]'s students' blog posts and it has a global audience. As much as this is an academic exercise that is geared at their classroom and the students' learning, potentially there are legal ramifications. If someone comes along and posts a defamatory comment, there are terms of service that are going to govern that, and depending where that person is, you have a whole host of strange legal issues coming into play. Back when I was in law school (and I suspect not much has changed among these lines, because the bar exam is such a touchstone for getting people out into the workplace) we didn't really consider how the global marketplace affected the law that we were learning in class every day. We learned about California law at Boalt, we learned a lot about federal law, but we did not learn what happens when someone like Kim Dotcom establishes a global upload lacquering site that is centered in New Zealand, but the United States

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government decides it's going to prosecute criminally in the United States and off we go to the races—extradition and all the rest. I think that a focus on the World Trade Organization and the various laws that operate globally in the field of intellectual property that are going to affect peoples' clients when they're out there in the work place should at least be touched upon, not only in an international law class in law school, but in the core IP curriculum. Point one: globalization.

Point two: I think we should think a little bit about the substance of intellectual property; why it exists. I think that students are often taught about getting out into the workforce and helping clients protect their rights (be it trademark, copyright, patents); that's the whole focus of the course. But as the Internet has developed we've seen a whole economic model come into play that didn't exist back when I was in law school, and that is the model of how you make a living when you're giving things away. Just in the last several months we've seen an unknown Korean singer named Psy achieve global ubiquity in large part because thousands of people have remixed and mashed up his original video, which has now over a billion views on YouTube. The model of how we give things away and still make a living out of it, I think deserves a place in the IP curriculum.

Thirdly, I would like to see the curriculum address the fact that IP is not just the province of large corporations, authors, musicians, or people making large commercial ventures off of their IP. IP today is the province of everyone today who uses Facebook, everybody who uses Twitter, and everybody who posts a picture somewhere online and has to worry about the ramifications of Facebook deciding, "According to our terms of service, AT&T loves this picture of your son sitting in front of the AT&T bus stop and wants to use it in their ad, and we've got to monetize our service somewhere and that's how we're going to do it." I think people care a whole lot about IP ramifications in their daily lives, but they don't read terms of service so they don't know if they're being taken by giving their creative endeavors to free sites online. So, there are two problems there. Number one is that IP is not really being taught as a creation of the masses; that you and I are good examples, but your neighbor down the street has IP too. The problem that it is not being taught as a universal thing is coupled with the fact that lawyers aren't being taught enough in law school (at least when I was in school) how to draft clear, understandable, and not overly broad terms of service so we get over this problem of people using tools and not understanding what actual rights they are giving away when they use them.

All of these changes are grounded in policy. And, again, back when I was in school I don't remember a whole lot of policy discussion around IP issues. The place where we got policy discussion was in Con Law and Tort Law, and even to some extent Contract Law. But in IP law where things are changing literally on a week-by-week basis, policy is everything. The courts are trying to navigate these difficult waters, and legislatures are responding from public opinion blowing from one side to another. I think it's really important towards the goal of having a civil society where we do agree on mores and implement them in a way that makes sense that those policy considerations are taught in law school from all sides of the equation (the open Internet people and the strong rights people); each side gets a voice and a lot of consideration from the students.

Finally, I would just like to end my opening remarks by saying one point on the "how we teach" aspect of this. And that is my show that I do every week has between six to twenty-five thousand listeners, and I tossed out into the ether, "What would you guys (a lot of them are law students) like to see change in the IP law school curriculum?" And the feedback that I got, which I'll share with you here, was a real desire to have current events and reality brought into the classroom; that if it's possible to get away from case law textbooks where you go back to the very old cases and follow them forward, instead try going backwards. Try sticking with the cases that are in the headlines, maybe delving into the briefing there and getting into the foundations of the law and what's being argued in court, because students certainly find it interesting and engaging for them to go at it that way.

Thank you very much.

**DESAI:** I think I'm here in part because, as some people had mentioned in the earlier panels, I wrote about the notion of a teaching law firm, and I have to say that this then turned into an independent law review article by Professor Rhee and Professor Borden, and to me that's a sign that someone else thought my wacky blog idea was worth pursuing on their own. I take that as verification, and as I'll explain later, that has come to an even more interesting fruition. But that's to come.

I followed up on that with a "mob blog" in the same year (I'd been in the academy for maybe a year and a half or two years) on Madisonian.net called, "What institution do we want law school to be?" I was able to rally four deans, including former deans and current deans at the time, such as Erwin Chemerinsky, Jim Chen, Nancy Rapoport, Rodney Smolla, and we also had fifteen law professors writing. And I want to go over what motivated me in that first post to do the "mob blog," what's changed in the

interim, and how I think law schools can leverage technology to meet practice challenges.

Now to be clear, I'm not sure we have a clue what the heck "practice ready" on day one means. That's the only thing I figured out, and no offense to anyone, but we're still figuring that out. Nonetheless, the law school curriculum absolutely needs to change. That's true. But what I'm hoping to figure out, or at least discuss in some meaningful way, is why. And maybe ways that it can change.

So, to start, why even think of a teaching hospital? I'd been teaching for a few years when Carnegie came out, and one thing that struck me, while it was very well done from one perspective, was that it rang totally false to me. I went to Yale; I went to Berkeley as an undergrad. And I now teach at Thomas Jefferson, which is not so highly ranked. The difference that I saw, in talking to many of my friends up and down the system of legal education, is that the claim that many schools were not doing clinical work and externships was wrong, because if you were not in the top twenty and certainly below the top fifty, you had to do it. And I knew too many people who were doing it. So I was wondering what was going on? And, by the way, Yale did have clinics. It was my error not using them when I was there and instead walking into an interview where a partner rightly said, "What in the world is this? I don't even know how to read your transcript." I'm replied, "I don't even know how to answer you," which is not a good sign either. Somehow I got through that.

Now, for training I was incredibly lucky. I will be honest, I loved my education, but at the same time I kind of had a feeling that it was time to get outside the walls. So I went to what was then a boutique, because I wanted to get my hands dirty. I was at Quinn Emanuel when it was only sixty attorneys. It is now the largest, I believe, pure litigation house in the country. I was fortunate. A guy named David Quinto mentored me, as did everyone there. And that was basically like a residency. I did not sleep. Even the partners who were considered to be psychotic billers were wondering what I was doing there. They bled all over my papers, but to their credit I was allowed to bleed over named-partner briefs as well, because that's how we learned. I then went in-house, and I was fortunate again. I wanted to do transactional work. One of the most bizarre things to me is that after a year or two of being a litigator, transactional attorneys claimed, "I don't know if you can handle this," and I'm thinking, "If I'd clerked for two years, I don't think you'd care." So there are really interesting divisions to think about here. But I was fortunate. I had a counsel who actually taught me how to draft a

contract, to read them the way we're talking about, and I even did a merger while I was there.

Other mistakes started to come to mind. Everyone says, "Oh! Firms, firms, firms." But I even remember when I was in law school NALP was saying close to fifty percent of all practicing attorneys are in firms of one to five. So then I started thinking about professions in general. I thought about my parents who are physicians and all my friends who are doctors, and I thought about residency. What came to mind was a sort of: "I don't sleep, but I am paid better than a resident." I felt, compared to most people at a powerhouse firm, that I could handle a case from bringing it in the doors all the way to appeals, because I'd actually done everything it entailed. I'm not saying I would have been brilliant at it. But I could say I could do it. I looked at other professions, and as some people have noted, many don't ever try to produce someone ready to go on that first day, training comes later. So that's swirling in my head, and that's where the idea for the "teaching hospital" came out. I believe it could fill a market gap; services to a lot of people who probably need to pursue what I call "preventative lawyering" (those of you who are students, there are a bunch of people out there that are absolutely abysmally unrepresented when they set up their small firms). Small business: when everyone talks about innovations, what they don't tell you is that it's actually the turnover in those businesses that drive the economy (you can check Hal Varian on this). Those people need attorneys to set it up, to talk about all the things that people have talked about today. A teaching law firm might be that middle market gap, where, yes, you would not be paid huge money, but you would learn a ton. And then you could maybe build a client base that realizes that a small contract may need an attorney (everyone thinks they can do a contract on their own, and I don't know why, it looks like English, but it's not). And if you're a really good lawyer, what I learned was that I got a little deal sheet and then I had two columns in eight-point font and that's where the real action was. I learned that the hard way, and I went to a pretty good school. A lot of average people out there who don't have legal training don't want to spend the few hundred dollars it would take to have one of you read that contract, but they could, and I think that's an opportunity for you.

So when I proposed the idea of the teaching law firm, the number of legal academics that said, "Oh-ho-ho, newbie; we thought about this one; it's never going to happen"—the usual stuff—I just said, "Well okay, I'm an IP guy; it was just an idea." And then, as I said, it was really exciting to see three years later,

“We’re going to write about it in a more public way,” and, as I will say in a moment, there have been some interesting breakthroughs.

For example, my colleague Luz Herrera at Thomas Jefferson has a solo practitioner track aimed at training those who want to do that one part of the profession that people forget, which is the thing that’s a really powerful part of our profession compared to medicine. You can hang out a shingle and the cost to do that is nowhere near what it is to be a solo general practitioner physician or dentist. It’s an Internet hook-up and some office space. While I do agree with Chancellor Strine that you should not reject the books, etc., it’s still possible. In addition, the school now has an incubator program modeled after what CUNY did. This provides some support for young attorneys to hang out their shingle, have a little structure, and a senior attorney for mentorship, plus a network plugged in (I believe it is through the family justice center there) so they can get paying clients and learn and grow their business. And here’s the best punch line: this week a friend of mine, Adam Chodorow, at Arizona State, opened a teaching law firm; he got the approval. It took him forever. I encourage anyone to contact him. He is fantastic.

So the reason everyone said “Oh-ho-ho, Deven it’s not going to happen,” is because the barriers were massive. But they’re changing. So what changed? I think the classic answer is the market. Fewer clients and firms are going to pick up training duties, and yet we have some innovations starting to crop up. I want to state firmly, however, law school and real-world training are indeed separate. There are absolutely reasons to make sure a law graduate knows how to think through any problem and can communicate the answer. Core thinking, writing, and yes, theory, enable lawyers to live up to the idea (this is where I have to disagree a little bit with Robert [Rhee]) that lawyers can translate their training into almost any field. A blend of theory, practice, and rigor allows for the creation of a fairly impressive person who can dance in the realm of legal doctrine and bring insights to disciplines other than the law. Jim Chen put it this way, “[W]e train people to become lawyers or to leverage their legal training into gainful employment in business, government, or education. Our students represent our ultimate product; their accomplishments, our greatest pride.”

Put differently, law schools may be at a point where the value offered is the training in the law and the ability to fulfill the idea that a law degree could be useful in many fields. But to live up to that vision, law schools may need to reconfigure their curriculum. We will need to keep theory as a foundation, but we

may need to expand the ways in which teaching and training occur. As law continues to permeate almost every professional endeavor, the law degree may distinguish one as having the ability to analyze the problem with rigor and strategic insight better than most; to use language better than most in an oral, written, and visual context, and then to provide and communicate a solution based on multiple inputs, including facts, theory, and different stakeholder views. This potential does not suggest that the ability to practice law will not be a core goal.

Now, law school may have drifted because of scholarship overshadowing implementation. Nonetheless, a hiring manager or partner cannot in any real sense think that a law student can be fully ready to practice. They can, however, demand that a law student have a clue, know how to jump into thickets, and hack their way out with a solution (and not just any solution, but a damn good one). So, how do we train that student to be what I call “coachable,” meaning someone with the foundations to have a fire hose of training blasted at them. As a side note, you may want to think about how well students are trained to be problem solvers before they come to law school. No offense to the students in the room, but even the so-called law students by default of today might be less trained through no fault of their own to be problem solvers and thinkers because of education at all levels prior to law school. In that sense, law is facing an issue that permeates education in general.

To talk about this a little bit more, I will go through a little bit about curriculum, and then I’ll talk a little bit about scale and costs. As a specific curriculum issue, the technology and cases that have been brought up today I think are absolutely the right way to go. But we need actual cases, as many people have mentioned, not just one exemplar which law calls “a case.” Med. schools have done this; business schools have done this. The synthetic model of med. school that is an organs system approach is a very good way to go. But as a specific recommendation in the IP realm, I would say that if you were to take what is going on and turn it into a two-semester course you could accomplish much. Sean O’Connor is doing a version of this, I believe a one-semester course, at the University of Washington.

You could start out with a business entity, a start-up group, a group of people, and have students actually understand what form they want. And then it gets crazy. What about the IP ownership? What about sweat equity? What about break-up rights? As I tell my students, it’s like a great rock band. At first, everyone loves each other. Your job: make them figure out what happens when everyone hates each other, because it’s going to

happen. You can go through raising capital, filing patents, trademarks, and copyrights (open source or not, as Denise [Howell] pointed out). Everything Denise [Howell] said could be synthesized into a course where you really think about all the options. What happens when the company matures? What about crossing the chasm and you all of a sudden need to get rid of a founder? What about the HR issues that come up? All of a sudden, labor and employment is something you get to study, all within the context of the real world. And what about the policy battles, because they're coming. More and more they show up, and it may not always be federal. It could be a city council, or it could be a state legislature. And if you think policy doesn't need theory, you're nuts. Policy is theory; it's just hidden. You're making a plea. The theory is, "It's fair, I worked on it, it's my labor, you're a thief." Believe it or not, there's a theory behind it; that's your "why." That's what you get out of theory. You know whether that's a good argument, or you know how to wield it. That's what we do when we teach theory well. But it does need to tie to something.

With all of that, we have another problem: Who's going to be able to put all that together? Who's going to grade all that? At Thomas Jefferson we actually give midterms. I give several (not just one) along with heavy feedback. Mike Madison at the University of Pittsburg assigns real partner-style memos, because he was a real partner, and he grades those. But as we talked about, there's a culture and law professors need to step up and change our incentive model. We need to get rewarded for giving you that feedback, and you all need to stop saying, "I don't want to be tested." I get it, but that's actually what you're paying for in the long run.

The problem is that feedback works for small classes, but what about big ones? Unlike the undergraduate world, we don't have TAs. So this is the third part: technology. I was at Google as academic research counsel; some of these ideas come from there, but ask anyone there, I am not a tech panacea guy. Trust me. Still, a classic question is, "How do you scale?"

One answer is MOOCs, which is a rather unfortunate and rather bovine sounding acronym for Massive Open Online Courses. This is where a master instructor reaches thousands of people. It made a splash at Stanford, and most interestingly San Jose State is now trying to implement it. The problem with MOOCs is that they're not very good for law schools or state schools as they stand. They could address costs, and the idea of self-paced classes for remedial work sounds promising. But this works really well for math and science where you can have an



objective test graded; you could run code and see if it worked. The old model—things that you may want as students when you start debating your costs issues—is feedback when you showed your work. That feedback is deep when someone says, “This is why you didn’t get it right; this is how you can improve it.” That’s going to be harder to pull off in an online environment for now. Remember, the goal is increased skills and that needs feedback.

So MOOCs are a little bit limited, but what about “Khan Academy,” where you have short clips? This can be very promising for law schools because, if certain short video clips combined with text, combined with rich case study material, allow you to do a ton of work as students, then we as professors could do more work in the classroom that is problem based. But then people have to step up, and the problem is, you have to bridge that gap. One of the problems is, what about the large class versus the small? There’s going to be a gap. And the next wave of technology might help us here.

This is where artificial intelligence and machine learning might kick in. In one study recently, they did a direct comparison between human graders and software designed to grade students’ essays. They achieved virtually identical levels of accuracy, with software in some cases proving to be more reliable in this one groundbreaking study out of Akron. In other words, as professors we could start to assign twice-a-week, once-a-week, whatever it was, essays and you could get instant feedback. If I were to do this, I wouldn’t even grade in terms of how well you did it, it would be about you learning, because at first you don’t know anything. That’s fine. At the end you’d get graded, because then you had a semester to learn.

In other ways, you might start to get adaptive learning models, where you could actually start to get a cohort if it’s big enough, where several people do ok. But let’s say three people get it, and I couldn’t get it; I would get a new version of the same material to see if I understood the other way of presenting the ideas and information—and that’s coming. This is extremely exciting.

The other piece of this would be what Kevin Werbach and Dan Hunter have called “gamification.” We could actually start to use video game type interaction so that you would be able to go through simulations. Again, the work here is huge. So, as opposed to “on Monday,” it’s—I don’t know what day to be quite honest. But I think the case work we heard before would be the first foundation for some of this.

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I want to reiterate, the idea of training a student to be practice ready is, I think, flawed. Schools can and should train lawyers to be more ready, but that readiness has to be so they can navigate a world that is changing at an astonishing pace. Neither the world nor the law sits still. The challenges facing a lawyer upon graduation will not be the same in five years, two years, or one. Overemphasis on specific near-term outcomes and the ability to jump through specialized hoops has some payoff but will defeat the reason a well-trained lawyer has value and a long career rather than an immediate job.

Cost issues and who will pay for training still need to be addressed. And the call to change law schools is partially a cost shift from clients, to firms, to schools. Given the cost for education and the lack of support for public education, we're going to have to find ways to bridge some of that gap. Nonetheless, no intelligent manager will want to hire someone who cannot learn on the job over time. As laws change, as businesses change, so too must employees. The ability to pick up and master new ideas and address and solve novel problems is the hallmark of a good attorney. Our task is to live up to training that sort of person so they can keep pace with the rapid change in IP technology in any business matter that arises in litigation or transactional work.

I took a class in high school that was called "Individual Humanities," and we read an unbelievable number of great works and drew on huge psychologists, but the core-animating concept came from Albert Einstein. When writing about education he said:

Sometimes one sees in school simply the instrument of transferring the maximum quantity of knowledge to the growing generation. But that is not right. Knowledge is dead; the school, however, serves the living. It should develop in the young individuals those equalities and capabilities which are a value for the welfare of the commonwealth. But that does not mean that individuality should be destroyed and the individual becomes a mere tool of community, like a bee or an ant. For a community of standardized individuals without personal originality and personal aims would be a poor community without possibilities for development. On the contrary, the aim must be the training of independently acting and thinking individuals who, however, see in the service to the community their highest life problem.

To me, this is what we should be training in attorneys, so that whatever you wish to be—a big firm attorney, a public defender, a prosecutor, a government attorney, or hanging out a shingle—you can choose how best to be an independently acting and thinking individual who, however, sees service to the community as your highest life problem. And to quote a different

Barkley (Sir Charles), "I could be wrong, but I doubt it." Thank you.