

Memo

To: CTW 25th Anniversary Conf. Readers

From: Ian Weinstein

Re: This Draft of Sorting for School Success and Developing Reflective Practice

Thanks for reading this draft. As some of you know, I have been working with these ideas for almost a year and this paper remains in flux.

I have already received comments from three readers to whom I am much indebted. All three, in different ways, saw the current paper as lacking focus and trying to be two different things at once. On the whole, the discussion of theories of intelligence and testing seems farther along and better developed, while the teaching section, being newer, needs more development. More importantly, I am still groping toward a real argument. This draft is too much a combination of things that interest me and still does not cohere for most readers.

By the time the conference papers are circulated, I hope to have another, significantly reorganized draft that focuses more on the teaching and programmatic payoffs of these ideas. I am thinking I will focus the argument on what I take to be the characteristic myopia of each side of the great pedagogic split between stand up and experiential teachers. Neither is better than the other and each needs the other to offer students a complete legal education. So let's all get over our claims of preeminence and think more about how to offer students a useful mix of teaching and learning settings over the course of a program of legal education.

In addition to helping us understand the deep interdependence of different modes of teaching and learning in professional education, the theoretical frameworks that I see flowing on the one hand from Binet through Piaget, Schon, Newell and Simon, Sternberg and Gardner and on the other hand from Binet through Spearman, Thurstone and into contemporary psychometrics, a current in which Sternberg is also an important participant, also help us think about how to best help students develop various aptitudes in the course of a program of legal education. I hope to extend and sharpen my teaching payoff sections by paying more attention to how we can be more intentional in addressing different kinds of aptitudes by varying settings, methods and framings.

I also note that this draft remains quite unevenly footnoted. Many of the citations need updating and many sections need attention to the relevant literature. So I have much still to do.

Finally, I note that this draft is one of two I am circulating. The other focuses on personality psychology, particularly the work of Carl Jung, and what it tells us about professional

education. The payoff of that paper, to the extent it has one, is that learning styles are quite important, but not in the way many of us may think. I no longer give much weight to the current trend to speak of matching teaching to learning styles and think it more important to understand the relationships between ideas and styles of analysis – in a classroom with heterogeneous learning styles, it is more useful to match style to idea than to student. And, learning styles are also quite important to group work and have significant applications in developing the skills of collaboration and teamwork.

These two papers started as a single project in which I planned to discuss learners through the triptych of aptitude, motivation and will. I am pretty sure that the two sections of that larger idea on which I have worked are separate papers but I remain a bit uncertain about that. If my two current drafts really are separate papers, I am still thinking about developing the third aspect, will, in a separate paper. So far, no one has liked my preliminary thoughts on the will but I think it an important concept that can be rescued from the prevalent unease it seems to engender as folks process their vague but persistent concerns about Nietzsche, who remains strongly associated with the idea, to its detriment among Americans. I continue to think that will, our students' faculty for mediating among their competing desires and acting in the world, is a very important aspect of both educational and professional success. And like aptitude and motivation, it is beyond our control as teachers but not beyond our influence.

I can even imagine all of this becoming a short book manuscript but as with this whole project, I am quite uncertain how much of an audience there is for any of this work and if anyone is interested, how I can reach them.

Thanks for your time and attention to my project.

Sorting for School Success and Developing Reflective Practice: From Educational to Professional Markets

By Ian Weinstein

Standardized testing dominates law school admissions. Once an important factor, the LSAT has become preeminent in the last ten years. Of course US News rankings are one important cause but the appeal of that system is itself a symptom of our current tendency to seek answers to complex questions in Google searches, tweets and other information tidbits like rankings. Legal education has been mesmerized by the ease, simplicity and power of modern psychometrics. Over the course of the 20th Century, tremendous advances in designing, administering and analyzing standardized academic tests have spawned an industry offering impressive, useful tools. But seduced by their power, we have lost sight of the constraints of those tests. IQ tests and their closely related cousins, including the LSAT, are good at predicting school success. But we are in the business of educating lawyers, not students. While being a good student is quite useful to aspiring lawyers, professional success requires more. This is an essay about the gap between school success and professional achievement and some steps we can take to bridge that divide.

The LSAT was first administered in 1948¹ and soon became a standard part of the law school admissions process. Over the past fifteen years, fueled by the pressures of the US News rankings, many law schools have increased their reliance on standardized test scores in their admissions processes. This increased reliance is seen in the compression of the LSAT scores of law school entering classes into the highest, narrowest range of scores the market will permit. In the old days, when a student looked around on the first day of law school, he or she would see classmates with a broader range of scores and so a broader range of chances of success in law school, at least from the statistical standpoint. Today, he or she sees someone as similar to him or herself, at least in terms of predictions of school success, as modern psychometrics permits us to measure.

Like any numerical score, a law applicant's test result can suggest greater precision and power than even this well validated instrument can deliver. The official guide to the LSAT reminds us that scores on the 180 point scale are best understood as equivalent to those in a range or band, as it is called, of six places centered on the score. In other words, a test taker who scores a 160 out of the possible 180 points is best understood as having the same performance as the group of test takers that scored 157 to 163. The test has little predictive power in distinguishing among individuals within that score band but considerable power in predicting differences in law school performance, as measured by law school grades, among hypothetical test takers who scores show broader range.

If we understand LSAT scores as representing a prediction for an individual that spans

¹American standardized testing began in the early twentieth century. The first test called the SAT was administered in 1928. Meritocracy as strike against traditional status?

a six point range of scores, as the test designers advise, it is noteworthy that of the 198 ABA approved law schools, more than three quarters reported that the middle half of their entering classes had LSAT scores within a range of six points or less.² As I read this data, at most law schools, most of the students in the entering class are, from a statistical point of view, indistinguishable from one another³ in the dimension in which we most rigorously sort them. At least as far as the LSAT can predict their grades in the first year, they are a pretty homogenous group.

Acknowledging the many flaws of the LSAT, including its excessive focus on a rather narrow aptitude, it remains the most readily available and efficient tool to predict a significant portion of the variation in law school performance. Whether the 30% of variance⁴ it captures is a lot or a little,⁵ the test is consistently measuring our students in some dimension in which we and the profession have found value over time. While others are doing the very important work of trying to improve our testing tools,⁶ the development and current use of standardized testing can also offer an illuminating perspective on the challenges and possibilities for law teachers. Our

²Add my counting

³Given that at most schools, competitive market pressures tend to strongly compress the top quarter of the class LSAT scores, we have reason to see a picture of remarkably powerful selection and sorting of incoming law students by LSAT scores.

⁴Really .23 - .46 or whatever

⁵Olivas

⁶Z&S

students have been rigorously selected, throughout their educational careers, for particular qualities of mind. Many legal educators use the idea of *smartness* as shorthand for the quality of mind that produces a high LSAT score and strong performance in law school. Some of us may also have intuitions about how that quality of mind plays out in professional achievement. I am, on the whole, not opposed to the shorthand usage that identifies the quality of mind of being smart with high LSAT scores, strong law school performance and professional success. I enjoyed an elite education and have stayed in the academy so my preference should not be surprising. But a bit of exploration into standardized testing, theories of intelligence and the development of professional judgment can bring us to a much finer grained understanding of the strengths our students bring to law school, the abilities they will need as lawyers and how we can better close the gap.

This perspective will require some attention to the differential approach of psychometrics, which some find normatively troubling. Ideas of individual difference, or the distribution of abilities and aptitudes in a cohort, often inspire vigorous debates and evoke strong reaction. Public debate in this area often tends toward polarization. While the development of standardized testing is a signal advance of twentieth century psychometrics and the theory of intelligence upon which it is based has proven quite powerful, it has also led to a good deal of essentializing, reductionism and stereotyping, much of it playing out in the very charged long running public exchanges on intelligence and race. Overreliance on (and undertheorization about) standardized testing is also found in much of the current conversation on primary and secondary education. These are timely, difficult problems but the very contentious nature of those debates need not usurp the entire field.

As educators, one of our challenges is to understand what these complex tools tell us and

what they leave open. The LSAT has become the primary sorting tool for American law students. We are, too often unreflectively, rewarding and reinforcing the particular qualities of mind it measures. We also pay too little attention to other important aptitudes, abilities and potentials, despite our ready ability to name, map and help our students develop in those areas. I do not urge that we stop attending to the quality we know as being smart. The unitary model of intelligence behind standardized testing has a good deal of force.⁷ But as we will see, that model also leaves many open questions and much room for other perspectives. As educators and gatekeepers, we should understand the competing ideas of intelligence as process⁸ and multiform intelligence.⁹ There is more to our students than their LSAT scores. But when you have a big hammer, and your other tools are small, you favor nails over screws.

Psychometrics has a complex contemporary cultural pedigree. It staked out a highly scientific, quantitative identity in the 19th Century with the theoretically attractive but ultimately

⁷I guess I don't agree with those who say there is nothing there - Gould, *The Mismeasure of Man*.

⁸Piaget

⁹The debate over unitary and complex intelligence goes back to Binet and Spearman. Today it is hotly defended as political territory. See Gottesfrend?? and Gardner, the APA report and consider hot names like Jensen and Murray. This debate has a technical side. In this aspect, Thurstone's hierarchy of subskills is sometimes seen as multiform. But that is a very insider, professional cleavage. The real divide is between those who would expand the privilege of the paper and pencil, time limited, closed information problem and those who would shrink it.

disproven work of thinkers like Gall,¹⁰ who invented phrenology and Galton, who sought to measure intelligence by gauging the acuteness of basic perceptions. Great ambition and hope characterized these thinkers, caught up as they were in the Victorian enthusiasm for making the world new by spreading the Empire and civilizing the world. Strongly influenced by Darwin as the nineteenth century closed upon the twentieth, they sought a single, broad explanatory framework for all human behavior, on analogy to Darwin's theory for the natural world. All knowledge was within their systematizing grasp; or so it seemed. Would that a person's nature or future could be assessed by measuring the physical structure of the cranium or the rapidity with which he or she responds to light and color. If only we could identify the fittest and see where the powerful force that shapes things is taking us.

By the last decade of the nineteenth century, early reductionist efforts to broadly characterize individual differences and predict behavior gave way to finer grained work.¹¹ Starting with Alfred Binet's work diagnosing mentally challenged students, some theorists turned away from seeking direct measurement of human potential in a single psychophysical sign. Unlike Galton's search for a single, fundamental measure of human potential or ability, Binet explored the narrower problem of developing tests to predict whether a child would benefit

¹⁰ whose modular view of the brain returned but whose efforts to read personality in cranial morphology were ultimately repudiated

¹¹ See e.g., John Duncan, *A Neural Basis for General Intelligence*, *SCIENCE*, July 21, 2000 at 457 (describing tests showing a correlation between people with high scores on measures of general intelligence and a specific area of strong brain activity and relating those results to the single intelligence tradition).

from placement in a regular or remedial classroom, taking a significant step toward the use of standardized testing in education. In narrowing their focus to the discrete question of school placement, Binet and Simon took a significant step toward addressing the challenge psychometricians faces in measuring a phenomenon as complex as human intelligence. Describing the important tests he developed with Simon, Binet was quite modest in his theoretical claims. Eschewing the claim that the test was a measure of intelligence, he acknowledged :

This scale does not permit the measure of the intelligence, because intellectual qualities are not superposable, and therefore cannot be measured as linear surfaces are measured, but are on the contrary, a classification, a hierarchy among diverse intelligences; and for the necessities of practice, this classification is equivalent to a measure.¹²

Binet was a pioneer. Although the first to develop a valid instrument and make useful predictions, he did not mistake the shadows on the wall for the idea itself. From the start, Binet warned us that even as we know something important through these tests, we must remember that we do not learn everything.

But as tests with some predictive power began to emerge, not everyone accepted Binet's views about the multiform nature of intelligence, the limits of these tests and the space for additional conceptions of aptitudes and potentials. While Binet argued that intelligence was a complex construct characterized by judgement, others theorized that intelligence was a single aptitude or ability. Early experimental work did not appear to produce useful data on this question until Charles Spearman, the English psychologist with a real talent for statistics who is

¹²Binet, 40-41 in *The Dev of Intell in Children*, reprinting translation of 1905 *L'Annee Psychologique*

the founder of modern psychometrics brought new tools to bear. Applying his own advances in the statistical technique of factor analysis to experimental results generated in his lab and others, Spearman found evidence to support the model of a general or superordinate mental faculty that could be measured on a single scale.¹³ He called that faculty the general factor of intelligence and labeled it *g*. Spearman's approach was observational and statistical. He relied upon factor analysis to find correlations among students' scores on tests of academic achievement in a variety of subjects. Starting from the observation that children who performed well in one school subject were more likely to perform well in others, he found that certain kinds of tests could predict student performance across school subjects, establishing the statistical case for the existence of a single factor, *g* or general intelligence. Following Binet, Spearman focused on the narrow question of school success. This area is characterized by rich data, as there are many data sets of grades for large groups of students. Although he offered some reflections about "mental energy,"¹⁴ Spearman did less work theorizing about the nature of the underlying psychological processes or constructs which *g* measures or represents.

Louis Thurstone took up Spearman's data driven approach and tried to refine the idea of *g*. He reanalyzed Spearman's data and suggested that *g* was really the product or sum of seven independent basic mental abilities.¹⁵ Further analysis did not support the complete independence of the seven factors from *g* and Thurstone's final work offered an interdependent hierarchy that

¹³C. Spearman General Intelligence, Objectively Determined and Measured, (1904)
<http://psychclassics.yorku.ca/Spearman/>

¹⁴Spearman 1924?

¹⁵List <http://www.indiana.edu/~intell/lthurstone.shtml>

accounted for both a general factor and the seven specific abilities. In other words, Thurstone showed that while there was some independent variation among scores for the seven specific abilities, a significant portion of the variation among individuals was already captured by g. Thurstone's work introduced the important idea of hierarchical or systems theories of intelligence. Those ideas remain quite influential, with most theorists agreeing that g is usefully understood as having multiple components.¹⁶ Somewhat more controversial are those who have extended Thurstone's idea and developed the idea of systems intelligence, which views intelligence as the product of multiple, independent aptitudes. As those aptitudes are understood not to correlate with g, these theories challenge the centrality of Spearman's g more directly. I discuss systems intelligence ideas below.

On this account, Binet, who was skeptical about the existence of single, unitary or general factor in intelligence, shifted the paradigm from the pursuit of general measures of human ability to the narrower question of predicting school performance. Spearman took the field back toward unitary intelligence and with Thurstone, laid the statistical foundations for the development of contemporary psychometric testing. Thurstone's work was refined by Wechsler the mid 20th Century psychometrician who gave us intelligence testing in its contemporary form; the familiar style of assessment which presents the test taker with timed, abstract problems which must be solved using only the information presented. This kind of test, in which one may be asked to arrange shapes, remember a list, extend a series of numbers or arrange hypothetical flags on hypothetical flagpoles, correlates well with school success. People who score well tend

¹⁶This is a pretty standard unitary intelligence story and is reflected in the Wechsler subcores

to perform highly in traditional school settings and vice versa. Contemporary psychometrics offers an array of instruments which offer many useful insights about student placement and students' educational needs.

But these useful tools are still haunted by Galton's 19th Century quest for a general measure of human fitness, a search strongly informed by Darwin's earth shattering hypothesis about the natural world. For the Victorians, identifying the strongest natural competitors and shaping society by advantaging the strongest offered a scientifically informed revolutionary program. As the idea played out through the late 19th and into the 20th Century, its very serious shortcomings became quite apparent. The social meaning of g and the idea of a single, stable superordinate mental ability which varies among individuals, can be measured, and may or may not be heritable to some degree, was always contested. But in the aftermath of WWII, the debate grew very hot and remains quite contentious. Spearman, trained when Queen Victoria was still fairly young and influenced by his countryman Galton, was as enthusiastic about eugenics as most of his peers.¹⁷ His devotion to g as a unitary faculty and his strong intuition of its heritability remain influential in the work of contemporary theorist such as Jensen and Gottesfrend.

Troubling as the persistence of some extreme views on the meaning of g and intelligence is, it is also useful to recall that standardized testing has played an important role in broadening access to elite education in America. Not that long ago, elite Universities and were the province of wealthy, white men. The surest path to admission was attendance at a high status prep school. While a few men from non-elite backgrounds found their way into these schools, it was only in

¹⁷Franz Boas stands out as one of the early dissenters

the Post WWII era that these institutions began to open up. Standardized testing played a significant role. Even as they continue to reinforce many different kinds of privilege and to empower a self-perpetuating elite, they have helped us move to a world of greater opportunity based more on individual merit. We still have a long way to go and we need not make common cause with extreme theorists to recognize the significant contribution this kind of testing has made.

And more importantly for law faculty in their roles as educators and gatekeepers for the profession, we can also benefit from better understanding what our students bring to the law school classroom and what they will need as lawyers. They have been rigorously selected. It could be useful to know what they have been selected for and it relates to the challenges they will meet when they leave us.

There is a strong statistical case that IQ tests, and their close cousin¹⁸ the LSAT, are valid predictors of school success. The Stanford-Binet, Wechsler¹⁹ intelligence test accounts for

¹⁸The LSAT is not designed to be and is not an intelligence test. LSAT results do, however, correlate quite well with IQ score and the LSAT, like the SAT, ACT, GRE, MCAT and other familiar tests bears a strong familial resemblance to the tests that Binet pioneered.

¹⁹ See JOSEPH D. MATARAZZO, WECHSLER'S MEASUREMENT AND APPRAISAL OF ADULT INTELLIGENCE (1972)(Updating Wechsler's work for the student and practicing psychologist). Although these sophisticated tools do return scores for separate sub parts, they are predicated on a single general faculty, with different attributes and components. The theory of multiple intelligences posits a set of separate, independent, coordinating faculties.

about 25% of the variance in school performance,²⁰ and remains the single strongest predictor of school grades. Of course a host of other factors, including family socio-economic status and its surrogates, also have predictive force but there is a strong consensus that IQ testing is the single strongest predictor of school success.

Similarly, the LSAT is the strongest predictor of school success in law school, accounting for about 25% of the variation in first year grades among admitted test takers.²¹

²⁰ Nesser et al, *Stalking the Wild Taboo*, APA Statement on The Bell Curve, p. 9 of 40 (1995)

²¹ The LSAT reliably predicts first year grades. For the group as a whole, test takers who do better on the test will also tend to receive higher first year law school grades. The magnitude of their relative success on the LSAT will also tend to predict the magnitude of their relative success as measured by first year grades. Lisa C. Anthony, Vincent F. Harris, & Peter J. Pashley, *Predictive Validity of the LSAT: A National Summary of the 1995-1996 Correlation Studies*, Law School Admissions Council LSAT Technical Report 97-01, Law School Admissions Report Series (1999)(finding the LSAT has a mean correlation coefficient of .40 with the first year law school GPAs (FYGPA) for admitted test takers, a mean correlation coefficient of .52 with the projected or actual FYGPAs of all test takers and that Undergraduate GPA (UGPA) and LSAT together have a mean correlation coefficient of .49 with actual first year grades).

The LSAT is a weaker predictor of second year grades and a poor predictor of third year grades. Donald E. Powers, *Predicting Law School Grades for Minority and Nonminority Students: Beyond the First-Year Average*, LAW SCHOOL ADMISSION COUNCIL, IV REPORTS OF LSAC SPONSORED RESEARCH (1978-1983) 261, 275 (1984) (finding the predictive validity of the

There is, of course, an important literature critiquing the LSAT and the overreliance on the test as a sorting tool.²² And while there is much room for improvement, the tendency to polarization around issues of individual difference may push some toward denying the value of psychometric testing and the underlying theory of intelligence on which it is premised, while others defend with equal passion.²³ But as that debate swirls, the data suggests that the LSAT is the single strongest predictor of first year grades, a weaker predictor of second and third year law school performance and an even weaker predictor of professional success.²⁴

If, as I am persuaded, the LSAT is measuring something significant, what is that something? As we look at that first year classroom, we know that most of the students are quite

LSAT goes down from the first to the third-year of law school, while the correlations for UGPA rise). Although first year grades are somewhat predictive of third year grades, the relationship is not as strong as might first be expected, perhaps because the most successful students in first year already have most of the benefits of high grades before they receive third year grades and so have little incentive to work for high grades, while those who did less well are still in the hunt for jobs and have a strong incentive to improve their grades. Others have argued that the shift from 1st year method to upper division methods of teaching and assessment reach different students and tend to ameliorate some of the gender, race and class bias of first year. Ask Chi.

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²³ See the Gottfredson critiques of both Gardner and Sternberg.

²⁴ While there is some evidence that IQ correlates with financial and other indicia of work success as a general matter Cite evidence collected by Gottfredson - check and cite original sources please.

similar, and significantly stronger than the general population, in their ability to retain information and reason abstractly under time constraints. They have greater verbal abilities, in the sense that they have larger working vocabularies and are better able to articulate complicated ideas than the general population. They also respond more quickly to stimulus than others and have a stronger ability to work with numbers than the general population. These are some of the central features of g. And they are no surprise. Smart people have good memories and come to correct solutions (reason well) quickly. And that is an important attribute, particularly for lawyers.

But as important as that quality of mind is for lawyers, it is clearly the central factor in school success in America. That is the essence of the strong predictive power of these tests - they predict school achievement. Being able to rapidly process information, retain it and display it in timed examinations is generally both necessary and sufficient for school success. Law students get to law school because they are successful students. But soon they will go on to a different endeavor. And the data suggests that while the quality of mind central to school success is necessary for professional success at the bar, it is not sufficient. Lawyers need to be smart, in that way, but our students will need more than school smarts to succeed as lawyers. For most students, school is a largely passive and abstract endeavor. But professional success requires a much more active stance across a wider range of functions and is also much more demanding of one's ability to link the abstract to concrete action in the world. We can add the most value to this tightly packed group of smart people if we conceptualize professional aptitude more broadly and shift our teaching toward that idea.

There is little evidence that the LSAT, or success in law school as measured by grades, is predictive of success in the profession. The studies that have been done are at best equivocal,

and some show no correlation between success in law school, as measured by grades²⁵ and success in the profession.²⁶ This is a very difficult issue to study for a number of reasons.²⁷

²⁵ It might be argued that success in law school is best measured by indicators other than grades. Although there is much sense in that notion, it does not reflect the current reward structure, which grants high status (journal positions, membership in moot court and similar organizations and academic awards) and economic benefits (lucrative summer jobs, high salary jobs upon graduation and high status positions such as clerkships which lead to high salary jobs) largely on the basis of grades, with first year grades having the major role in allocating the benefits.

²⁶ Zedeck & Schultz, Ogloff et al., *supra* note 2 at 203-20 (reviewing studies assessing law school performance and professional success and concluding that the data is difficult to interpret and does not give rise to valid generalizations); James R. P. Ogloff, David R. Lyon, Kevin S. Douglas & V. Gordon Rose, *From the Trenches and Towers: Law School Affirmative Action: An Empirical Study Michigan's Minority Graduates in Practice: The River Runs Through Law School*, 25 LAW & SOCIETY INQUIRY 395 (2000)(study showing that minority graduates of Michigan Law School had lower GPAs of about 0.9%, but satisfaction with law school and career success similar to white graduates and suggesting that grades do not predict success or satisfaction in the profession); Kidder, *supra* note 2, at 197-98 (citing the Michigan data and an unpublished study done at Boalt Hall and arguing no data supports a predictive relationship between law school grades and professional success).

²⁷ Assessing success in the profession is problematic for many reasons, including the difficulties inherent in defining success so that it can be measured. For example, the Michigan

First, there is a significant element of path dependency in professional success, which tends to obscure cause and effect. While successful law students often go on to be successful lawyers, law students with strong first year grades also have significantly better opportunities than their less successful peers. This effect is also quite strong in comparing students at one law school with students at another law school. Relative professional success reflect those opportunities, as well as any student's particular merit relative to their law school classmates, all of whom met the same narrow and well-defined admissions criteria and relative to other law students. The profession is also full of lawyers who enjoy professional success but did not attend an elite law school or excel in whatever school they attended.

Second, and more fundamentally, as important as the qualities measured by the LSAT may be, it does not measure all of one's aptitudes. Binet succeeded where other psychometricians failed because he gave up on Galton's project of predicting success in life generally and limited himself to predicting school success. While intelligence testing and its close cousin the LSAT can reliably predict school performance, timed, standardized tests using abstract problems presenting closed information sets are not strong predictors of professional success, particularly when we are trying to analyze the variation in a group that has already been repeatedly selected for school success.²⁸

While we can spread our tightly grouped LSAT performers on the first year curve, we

study, *supra* note 9, used current income, self-reported satisfaction, and an index of service contribution. Another, more promising approach is Z&S, discussed below their measures can also be used, but all are problematic.

²⁸Lubinski at 412

should recognize that the differences among those grades are less likely to track differences in the dimension measured by the test and more likely to reflect other factors. Given the prior sorting and closely grouped predictors, performance in a given law school class is a less useful predictor of professional success than admission to a given law school, particularly in the many cases in which there is greater separation among law school student bodies overall than among the members of a given law school class. Indeed, the market for judicial clerks and large firm associates is consistent with that view, as is a bit of suggestive evidence from Z & S, consistent with the hypothesis that there is greater variation among the student bodies of differing law schools than there is within a given student body. This is not wholly unexpected given the tight clustering of predictors within a given law school student body.

So, granting the predictive value of standardized testing in the realm of school success, where can we turn for insight into preparing for and predicting professional success? Psychometricians and other psychologists have long been aware of the gap between the mental abilities we can best test and the range of aptitudes we need to flourish in the world. Binet was sensitive to this question in his observation that intelligence was best understood as having multiple aspects. Binet's outlook, intelligence as complex judgment, has been developed in a vibrant body of work over the past sixty years. Descending largely through the groundbreaking work of Jean Piaget, the structural view of intelligence offers an important and useful alternative framework to the unitary view of intelligence that undergirds contemporary standardized testing.

Piaget, whose work has been significantly extended by Vygotsky and whose experimental results have been frequently criticized and improved upon, remains the towering theoretical figure in developmental psychology. A Swiss native whose research was quite active during WWII, Piaget was a child prodigy in natural history and found his way as a student into

Binet and Simon's laboratory. While scoring intelligence tests given in the lab, Binet noticed a pattern in the childrens' wrong answers. In a moment of real insight, Piaget realized the children were reasoning in uniformly different ways, according to their age. This is the kernel of Piaget's theory of the predictable stages of the development of thinking in children. Less interested than others in the differential aspect of intelligence, Piaget did not focus on the project of ordering or ranking individuals. Rather, he sought the common patterns in the development of intelligence over time and explored what those patterns tell us about the interaction between our minds and our environment through time.

Piaget's work was, by any measure, groundbreaking. He reframed the question of intelligence from the measure of a static faculty to the description of an ongoing process. Although not the first to understand intelligence at the intersection of the mind and the environment, he paid close attention to that relationship and reminded us that intelligence is an activity as much as a faculty. Piaget was less interested in testing to rank and more interested in testing oriented toward further growth and development of the individual. Piaget's extensive experimental work with children also illuminated the central role of the active mind in constructing knowledge over time. Although it has become commonplace to speak of schema, cognitive structures and to see learning as the active refinement of individually constructed mental models, Piaget was a pioneer in explicating that view of the mind. While other intellectual currents also flowed into contemporary cognitive psychology, Piaget was a central voice in the emergence of the new view of the construction of knowledge in the interaction of the mind and the environment that emerged in the mid century and came to replace behaviorism as the dominant model in academic psychology by the 1980s.

Piaget helped focus psychology on the puzzle of how the active mind constructs

knowledge. This is a particularly important question for educators of professionals, as a significant part of our project is best understood as creating an environment in which our students can construct the cognitive schema that will enable them to solve professional problems. This is the understanding of professional practice, including legal practice, as the development of expertise, where expertise is understood as the acquisition of knowledge structured to facilitate rapid, useful solving of complex problems in a particular professional domain. Experts do not just know more about their area, they are also able to access that knowledge and apply it very rapidly in their domain. The key to the expert's ability to solve problems rapidly and correctly is his or her prior construction of domain specific cognitive schema. This very Piaget inflected view of the mind was developed in theoretical terms by Donald Schon in *The Reflective Practitioner*²⁹, a rich, evocative book that sought to relegitimize expertise, an idea given a bad name by the apparent failure of so many smart people in the Vietnam era.³⁰ Schon highlighted the role of reflection in action, a somewhat mysterious mental process that gives the expert a kind of unconscious access to complex judgment.

Schon's work is strongly consistent with the more rigorous treatment of expertise in the cognitive science problem solving model pioneered by nobel prize winning economist Herbert Simon and his collaborator, Allan Newell. In their authoritative, if now dated, *HUMAN PROBLEM SOLVING*³¹, they used the model of the mind as an information processing unit to explore expertise across a range of domains. Like Schon, Newell and Simon were interested in how experts solve problems rapidly and correctly. Like Schon and Piaget, they found their answer in the idea of cognitive structures. Experts know more than others, but more importantly, their

²⁹ Donald Schon

³⁰ See Schon's introduction

knowledge is structured by their training and experience. Experts know more and also know what to do with their knowledge.

If Schon and Newell and Simon encourage us to understand the development of professional expertise as requiring the active construction of professional knowledge, what is the relationship between that project and theories of intelligence? We know that standardized tests do not predict professional success and do not purport to directly measure the development of structured professional knowledge. We also know that the theory of intelligence underlying those tests is not centrally concerned with understanding or predicting professional expertise. As we have seen, psychometrics has its own history, aims and methods. Its testing is useful in the professional school setting but the field developed to predict school success in younger people.

But it is also true that intelligence theorists have included other voices, beyond Spearman and his many productive followers. Binet, the first to construct valid instruments, also understood intelligence as complex judgment, not as a single superordinate aptitude. Piaget's generative take also opened new vistas by identifying the development of intelligence with the progressive development and organization of cognitive structures. They are two important thinkers behind the strongest contemporary alternative to *g*, theories of systems intelligence. In that view, intelligence is a complex system in which multiple aptitudes interact with each other and the environment to solve problems in the world. Two of the best known and most well developed programs in this area are Robert Sternberg's Triarchic Theory of Intelligence³² and Howard Gardner's Theory of Multiple Intelligences.³³

³¹ Newell & Simon, *Human Problem Solving* (1972).

³² Cite

³³ HOWARD GARDNER, *FRAMES OF MIND* (1993)(adding a new introduction to the first

Sternberg,³⁴ long associated with Yale and now the Provost at Tufts, has developed the triarchic theory. Largely empirically driven and theoretically well developed in a series of monographs and books, Sternberg's work has identified three aspects³⁵ of intelligence which have a substantial degree of independence from each other and good predictive force for success in certain professional domains. For Sternberg, successful intelligence, as he calls it, is comprised of analytic, practical and creative aptitudes. Traditional intelligence tests measure the analytic faculty with pencil and paper problems that are well structured, have a single right answer, can be solved using a single method and are disembodied from ordinary experience.

The practical faculty addresses a different kind of problem. In the practical realm, problems tend to be poorly defined and often require reformulation or structuring. They also often require information beyond that provided in the problem, have multiple solutions and require everyday information to solve.³⁶ Sternberg has studied practical problems through the

edition, published in 1983).

³⁴Book

³⁵Although Sternberg identifies three kinds of intelligence, the triarchic label comes from a more technical aspect of the theory. As he explains, the theory attends to the particular mental tasks required to problem solve, the nature of the mechanism for resolving problems and environmental cues. In the first arena, informational processing, he sounds like Newell and Simon. In the second area, conscious and unconscious solving, he sounds like both Newell and Simon and Jung. In the third realm, interaction with the environment, he recalls Piaget's dynamic, developmental approach.

³⁶ Sternberg's separation of the analytic and practical stands in a line tracing back to

lens of tacit knowledge, which he defines as “what one needs to know to work effectively in an environment that one is not explicitly taught and that often is not even verbalized.”³⁷ His formulation shares the interest in ill structured problems, context sensitivity and unconscious quality found in both Schon and N & S’s ideas of expertise,³⁸ a relationship he acknowledges.³⁹

Aristotle and central to the distinctively American tradition of philosophical pragmatism, in the tradition of William James and John Dewey, in being observationally developed, instrumentalist, reason-experience integrating, biologically based and highly context sensitive view of the mind. Thomas C. Grey, *Holmes and Legal Pragmatism*, 41 STAN. L. REV. 787, 801(1990) (identifying these broad themes in pragmatism). Other recent attention to pragmatism in the law includes Daniel A. Farber, *Legal Pragmatism and the Constitution*, 72 MINN. L. REV. 1331 (1988); Steven D. Smith, *The Pursuit of Pragmatism*, 100 YALE L. J. 409 (1990); *Symposium on the Renaissance of Pragmatism in American Legal Thought*, 62 S. CAL. L. REV. 1569 (1990) (presenting work by Thomas Grey, Frank Michelman, Richard Posner, Margaret Radin and Cornell West, among others); Richard Rorty, *The Banality of Pragmatism And The Poetry of Justice*, 63 S. CAL. L. REV. 1811 (1990); Richard Posner, *What Has Pragmatism To Offer Law?*, 63 S. CAL. L. REV. 1653 (1990).

³⁷Wisdom, Intelligence and Creativity Synthesized, 56.

³⁸But Sternberg’s interest in constructing valid predictive tools pushes his definition toward circularity. The thing that works in an environment that we can’t explain is not really all that much of a definition, but it is quite typical of the psychometric approach to describing mental entities - they are the thing glimpsed in the numbers, not the thing itself. We have empirical evidence that a thing we will call tacit knowledge varies in a consistent way across

Using domain specific narratives, Sternberg and his collaborators have tested for practical intelligence. For example, subjects may read a story about a problem someone faces at work and be asked to rate proposed solutions. In a performance based variation, subjects simulate a sales call over the phone and are rated on several scales. Relying upon data from a range of experiments, Sternberg argues that practical intelligence is a significant independent predictor of workplace and professional success. In particular, Sternberg has found that while scores of practical intelligence do not correlate with scores on traditional intelligence tests, they predict professional or workplace success as well, or better than, the alternative. It appears that each tool has some predictive value and that tests measuring a situated, practical use of knowledge, which may also be understood as expertise, can identify some whose strengths are not as evident in tests of g.

Sternberg's theory also gives a fundamental place to creativity, as an independent aptitude for addressing novel problems. But creativity is a bit different in its status. While the analytic and practical aptitudes are largely independent, Sternberg notes that creativity skews toward the higher end of the IQ spectrum and has more social and psychodynamic elements. It appears that creativity flourishes when one is smart enough, secure enough and lives in a place and time ready to accept change and novelty. In Sternberg's view, these conditions permit one to

these testing episodes but our ability to describe it is limited. We do not see it, only its reflection in data.

³⁹Wisdom, p.69-70

choose to be creative.⁴⁰

Sternberg's work, including his theories of Triarchic Intelligence and Successful Intelligence, are the outstanding contemporary effort to bridge the worlds of theory and fidelity to data in the psychometric approach to human intelligence. Whether or not his ambitious and wide ranging work provides a satisfactory synthesis of the field, he offers convincing evidence on the gap between predictors of school success and predictors of professional success. That aspect of his work offers some of the strongest empirical support for the widely held impression that some people underperform on school tasks relative to their professional performance while others outperform in the school realm, relative to their professional achievement. Sternberg also offers instruments and theoretical background to test for and understand the gap.

A more recent study, aimed directly at the selection of law students, builds on Sternberg's insights but looks for solutions in personality psychology, and so steps outside of the cognitive realm in which this discussion has so far been located. Marjorie Shultz and Sheldon Zedeck⁴¹ have completed the first phase of a project funded by the Law School Admissions Counsel to develop assessment tools that would provide law school admissions committees with more useful information about a candidate's potential for professional success. Exploring the widely held intuition that current reliance on LSAT and UGPA excludes a wide range of less traditional candidates who could become effective lawyers, S & Z look to data suggesting that certain personality traits predict job performance. They have begun to develop tools to measure those

⁴⁰Wisdom 124

⁴¹Shultz & Zedeck, <http://www.law.berkeley.edu/files/LSACREPORTfinal-12.pdf>

traits and so predict lawyer effectiveness. They developed these measures in three phases. First they surveyed lawyers, judges, law students and clients to identify factors viewed as important to effective lawyering and developed scales to evaluate lawyer performance. Then they identified five well known personality scales which measure the identified traits. They developed three new tests to supplement those already available. In the third phase, they administered the tests to law students and lawyers, validating the test battery through independent assessment of the subjects' lawyering effectiveness.

Their data suggests that a well designed personality instrument could add useful predictive data to the law school application folder. Applicants with lower traditional scores but promising personality profiles might well prove better risks than others in the pool with marginally higher g but markedly less congruent personality traits. S & Z offer the best current summary of the state of learning about standardized testing and law school admissions and a well developed and persuasive taxonomy of 26 lawyering skills, grouped into 8 larger categories ⁴²

⁴²**List of 26 Effectiveness Factors with 8 Umbrella Categories**

1 : Intellectual & Cognitive

- Analysis and Reasoning
- Creativity/Innovation
- Problem Solving
- Practical Judgment

2: Research & Information Gathering

- Researching the Law
- Fact Finding

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- Questioning and Interviewing

3: Communications

- Influencing and Advocating
- Writing
- Speaking
- Listening

4: Planning and Organizing

- Strategic Planning
- Organizing and Managing One's Own Work
- Organizing and Managing Others (Staff/Colleagues)

5: Conflict Resolution

- Negotiation Skills
- Able to See the World Through the Eyes of Others

27

6: Client & Business Relations - Entrepreneurship

- Networking and Business Development
- Providing Advice & Counsel & Building Relationships
with Clients

7: Working with Others

- Developing Relationships within the Legal Profession
- Evaluation, Development, and Mentoring

8: Character

which is itself a real contribution to the small set of useful lists of this sort.⁴³ But their project focuses on the predictive mission, a context that informs their turn to personality, as they seek stable psychological entities with lasting impact on one's functioning.

The educator, however, is more interested in dynamic conceptions of the mind, as they hold greater promise for helping us the ways that the students already in our classroom can change and grow. Accordingly, while S & Z's strong evidence of over reliance on the LSAT is quite congenial to this discussion, their focus on personality traits turns away from my effort to understand how systems theories of intelligence can expand our conception of the cognitive realm and in so doing, open possibilities for teaching. As we have seen in Sternberg, the systems approach to intelligence suggests that our aptitude for solving problems in the world is best understood as the sum of the interactions of a set of reasonably discrete, somewhat stable talents or abilities. To put the case as the most evocative and influential thinker in this area frames it, we should not think of intelligence as the key factor but consider the combination of multiple intelligences in any particular person.

Howard Gardner's Theory of Multiple Intelligences is probably the most popular

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- Passion and Engagement
 - Diligence
 - Integrity/Honesty
 - Stress Management
 - Community Involvement and Service
 - Self-Development

⁴³MacCrate, Best Practices, Alex

alternative to g. Gardner, a Professor in the Education School at Harvard, is among the best known academics in contemporary education. His first widely hailed ideas centered around deep learning and portfolio assessment in primary and secondary education. His work on Multiple Intelligences has been very widely cited in contemporary educational literature. More recently, his focus has shifted to understanding and encouraging exceptional performances across a range of domains.

In *FRAMES OF MIND*, Gardner offers a compelling, learned critique of unitary model of intelligence. But to me, the compelling aspect of that book is his rich, evocative description of the various really useful aptitudes. Although he would later offer other versions of this list, at that time he wrote of seven different intelligences: logical/mathematical, linguistic (oral and written), interpersonal, intrapersonal, kinesthetic, musical and spatial. Gardner's project, while closely related to Sternberg's work and drawing upon the psychometric literature, differs by focusing on specific domains. His work is richly descriptive and inventive, offering many concrete examples of how insights from different areas can work together and illuminate problems.

Gardner, however, is not a psychometrician nor does he aspire to test every hypothesis with data. Among the thinkers so far considered, Binet, Spearman, Thurstone, Wechsler, Piaget and Sternberg, Gardner may be the most well recognized in his own time and the least empirically oriented. Unlike figures such as Piaget and Sternberg, Gardner has not developed an extensive laboratory based program of study to develop a single line of thought. Although he has done experimental work, his preference has been for theory and public education. I see Gardner and Sternberg as two complimentary takes on contemporary intelligence, with Gardner offering a distinctive, theory driven approach that can permit us to see beyond the limits of our

current tests. Work in this mode can help us begin to map the contours of phenomenon that remain too complex for our current analytic tools and frameworks.

Having canvassed some ideas about intelligence and their history, I have argued that there are reasons to think unitary models have significant limitations and that systems intelligence theories can offer useful insights for legal educators. As I turn to describing some of those applications, I will approach the subject through a largely multiple intelligences inflected lens, discussing four of the seven intelligences Gardner identifies - mathematical/logical, linguistic, interpersonal and intrapersonal. Although I recognize it is a good deal of mixing apples and oranges,⁴⁴ I note the overlap between Sternberg's analytic intelligence and also add Sternberg's creative intelligence to come up with a list of five areas in which we can help our students develop their cognitive aptitudes. Consistent with Gardner's focus, I now turn to applications and discuss five different aspects of intelligence, as presented in the work of Gardner and Sternberg, and relate each to legal education. I begin with what Gardner labels as the mathematical/logical intelligence and Sternberg calls analytic intelligence.

Intelligence, understood as the mental faculty that permits us to solve problems, has long given a prominent place to analytic ability, usually identified with the ability to reason abstractly.

⁴⁴These five categories, mathematical/logical (Sternberg's analytic), linguistic, interpersonal, intrapersonal and creative are not data derived. Although I will marshal arguments for the importance of each, I will offer scant support for the independence of each, a measure held central by the psychometricians. I grant that this section of my argument is subject, as Sternberg dryly notes, to the selection problems inherent in any literature review based writing that is not empirically tested. I hope it offers a bit of the insight this sort of risk can realize.

Typically, people who excel in this area are able to perform long chains, or series, of abstract mental operations. Lawyers use logical mathematical intelligence when they construct legal or factual arguments and analyze or strategize about legal situations. Courts and other legal institutions use logic to legitimize and guide their exercise of authority. Logic is certainly important to the law, although relationship between logic and the legitimacy of law is a fundamental jurisprudential question.⁴⁵ But if we allow ourselves a little of the spirit of Galton, if we dare to ask - what general things can we say of a *smart* lawyer or a law school classroom taught *smartly* we find we want logical thinking, and a lot of it, but we want more. Logic chopping alone, no matter how fine, does not a talented lawyer make.

So, the first way I diverge from the faculty measured by the tests is in emphasizing that professional knowledge lies at the intersection of knowing and doing. The professional must know something and also know what to do with it. The intelligence test subject does not need to know anything. The general reach of the test, beyond any particular domain, is one of its great strengths. But professional knowledge is more particular, or as some might say, situated. And the lesson that flows from Schon and Newell and Simon is that context matters a great deal. Particular domains and subdomains of professional knowledge are characterized by broad and

⁴⁵ See e.g., Sunstein, *supra* note 19 (discussing analogical reasoning); Steven L. Winter *Transcendental Nonsense, Metaphoric Reasoning and the Cognitive Stakes for Law*, 137 U. PA. L. REV. 1105 (1989)(arguing that metaphor is the fundamental mode of legal thinking); Richard Delgado, *Rodrigo's Final Chronicle: Cultural Power, the Law Reviews, and the Attack On Narrative Jurisprudence*, 68 S. CAL. L. REV. 545 (1995)(discussing the argument that narrative is the fundamental mode of legal thinking).

broadly shared cognitive structures. While we each construct our own schema, a key aspect of professionalism in America is the degree to which professionals in a given field share approaches, perspectives and outlooks. So unlike the very abstract version of smartness we get from the IQ test, professional knowledge has a significant substantive component. It is a doing, but a doing focused upon a particular domain of knowledge.

And from that understanding, we come to a view of legal education that gives places of honor to both substance and process and focuses upon the interaction of the two. The law school classroom should be a place where big, important ideas in the law are subject to characteristic modes of very careful scrutiny. Law faculty must not only parse and chop; we must provide the finest ingredients. Like a chef, we offer a rather evanescent experience. How can we select the finest ideas and through skillful preparation, offer an hour and twenty minute class that will leave a lasting trace? How many of us could earn Michelin stars?

I begin with a relatively straightforward example from my own experience with first year Criminal Law. As I see the field, there are several different approaches. I teach what I take to be the most traditional, and on the numbers the most popular, type of course, using mens rea as the primary organizing theme. There are other worthy approaches, notably the statutory and historical and all are sufficiently deep and rich to structure a semester of inquiry into the area. Of course mens rea is not the only big idea in the class. I also advert repeatedly to overcriminalization, statutory interpretation, our devotion to prosecutorial discretion, the imprint of modernism on contemporary criminal law and the general tone of sordid drunkenness that pervades the cases. To my mind, these are important and interesting ideas that offer useful explanatory lenses and are readily accessible through standard casebooks and several different strands in the rich secondary literature on criminal law, procedure and theory.

My students, and some colleagues, I fear, start with a bit of a different idea about teaching and learning criminal law. I expect my students to begin with the expectation that I will teach them the criminal law in the sense of teaching them the elements of crimes. Indeed, I believe the course is still called Crimes at some schools. But when I am successful, I am able to show most of them that learning the structure of Anglo-American criminal law, the parts of crimes and how they interact, is of more long term value to the lawyer than learning the definitions of particular crimes in force in a given jurisdiction at a given time. I tell them in my work as a lawyer I have always been able to look up the applicable law and in my experience, the hard part is not figuring out the law is but figuring out how it applies to the facts at hand and what to do about all that.

But even though I cannot persuade all my students all the time, most come around, perhaps with some reluctance, to seeing my merit in my point of view. And teaching in a well theorized area of the law, in which most lawyers and academics share a common framework and language, makes the task much easier. Although we love the many arguments at the margin, when I teach criminal law, it is not that hard to invoke widely shared, powerful ideas that are well understood by a large group of professionals. Yell “mens rea” in a crowded criminal court courtroom and it brings to mind a useful concept for most every lawyer. It requires real effort, but no great imagination or insight to find big, powerful ideas for the criminal law classroom.

But some of us also teach in less well theorized areas and these can present challenges when we look for the right big ideas. Two examples from my own experience are negotiation and client interviewing. Since I first started teaching negotiation more than twenty years ago, insights from economics and game theory have really revolutionized the academic understanding of the field. Korobkin’s casebook is a paradigm example but negotiation is an area that has

moved from a skills oriented backwater to a much better theorized and much more academically sophisticated discourse. Now I only teach a four week segment on negotiation as part of a semester long lawyering skills course and my students do not read Korobkin. But I offer them an introduction to negotiation framed by the big ideas of game theory and try to elucidate how these principles, these ideas, empower the negotiator to take advantage of less well prepared adversaries and fight most well prepared opponents to an effective draw. So I mean to draw an explicit line from good ideas well understood to their professional practice.

The role of theory in client interviewing offers a third and harder case study of the relationships among rigorous thought, good ideas and the smartly taught law school class. My students and I have often struggled with the question of what kind of theory of client interviewing is useful to the interviewer. If the negotiator is helped by careful application of game theory and the criminal lawyer is aided by a sophisticated understanding of the construct of mens rea, what big idea, carefully applied, is useful to the interviewer? Although we are making progress, interviewing remains a relatively undertheorized area, closer to where negotiation was before it was adopted by quants. But I have a small idea that may serve as a final illustration of how we can best attend to that 30% of each learner that makes up the smart/not so smart piece.

In my interviewing class, I have become a bit obsessed with introductory chit chat. Greetings and context setting exchanges can be rigorously analyzed from the method standpoint and connected to useful, general theory. One reason interviewing is so hard to theorize about is that it is very data rich; so much happens, in so many dimensions in a thirty or forty minute interview that it takes a great deal of time to simply understand what happened, before one can really analyze. The work can be done but it is labor intensive and not well suited to the class hour.

In an effort to be more rigorous, I have come to work with short pieces of interviews. Introductions present interactions as short as 10 seconds and rarely longer than two minutes. It is quite possible to recite these exchanges verbatim and closely analyze their structure and content. Although we lose much richness, we gain great rigor in analysis. This style emphasizes the important theme of rejecting sloppy thinking.

Perhaps when all you have is a hammer, everything looks like a nail, but introductions and framing questions (What brings you here today or How can I help you) are also well explained by a significant body of theory. So whether one sees it through the lens of goal setting in the expertise literature, consistency bias in the cognitive psych literature, social bias in the social psych literature or sensitivity to linguistic cues of status, there is a vast literature on the cognitive and social importance of first impressions and first questions. And if I succeed in illuminating the importance of beginnings through rigorous application of both the simulation method and by bringing a little theoretical light to bear from related literature, it opens many doors to other kinds of theory about lawyer role in a democratic society. So I understand chit chat at the start of an interview to be an example of an important lawyering topic amenable to rigorous analysis and subject to explanation through important, well supported theoretical literatures.

Introducing students to important, well developed ideas central to their professional concerns addresses the substantive aspect of the mathematical logical intelligence. We should also attend to the process aspect, although it needs the least elaboration, being at the heart of g. If we accept a functional description of g - the ability to reason in long abstract chains or to put it more bluntly, to apprehend and correctly answer the question at hand, we come quickly to the core of the historic Socratic dialog. For what was Socrates up to when he constantly probed and

found logical inconsistency in his interlocutors but showing them ways in which the rigor of their arguments could be improved?

In Plato's view, as Socrates' voiced it, we begin the journey toward real knowledge with the recognition of how little we know and how hard it is to gain real knowledge. But this message is not always well received in the classroom, where we risk antagonizing students, some of whom see our constant parsing of their arguments as centrally an effort to prove that we are smarter than they are. Of course I am skeptical of that global claim but do think it is our responsibility to pay close attention to the mechanics of our students' arguments. As I have already noted, logical reasoning is not the only thing a lawyer needs to do well but it is among the things he or she needs. But that is also the thing we tend to think most about teaching, so let us move on to other intelligences.

Inspired by Sternberg's work, I consider creative intelligence next.⁴⁶ Although the common stereotype does not generally highlight the creative aspects of lawyering, finding novel solutions to problems is at the core of what we do, at least when we considering lawyering through the lens of applying general rules to particular facts. This is an important and typical lawyering challenge that involves a particular kind of creativity - the ability to imagine the range of cases that will fall, or be thought by some to fall, under a given rule. Indeed, many people stereotype lawyers for their ability to explain why any rule will result in unforeseen and tragic liability - we are the people who insist that playgrounds be rubberized and then locked because we let our anxieties inform our imagination. While this is not the only place for creativity⁴⁷ in the

⁴⁶Sternberg, Morton and Weinstein

⁴⁷Cover and generativity, MacPherson and the emergence of new law

law, it is a good starting place for the classroom teacher.

Although the impact is likely modest, we can help students name and be mindful of the creative aptitude in the first year classroom as we engage in the classic technique of varying the hypothetical, a paradigmatic case of legal imagining and worth of careful attention in the classroom. The teacher can be explicit about the activity, naming it and sometimes offering play by play commentary.⁴⁸ Students can develop their ability to identify which elements are reimagined for what purposes⁴⁹ and be conscious of the cognitive process of thinking up new situations and creating new ideas.

But varying the hypothetical is not the only imaginative moment in the law school classroom. Other opportunities to stimulate original thought come when we frame questions, apply rules and analyze the persuasive power of the opinions we read. The teacher should be mindful of how often multiple framings are sought and how frequently students are asked to imagine alternative arguments and novel or at least different rhetorical strategies. Constant

⁴⁸Going meta and being conscious of implicit process is useful, if done sparingly.

⁴⁹Mens rea in criminal law provides another ready example. As Dressler advises, I introduce the idea through Cunningham, a man who almost poison his future mother in law when he destroys a gas meter to steal the coins it holds. I ask the class what Cunningham's state of mind was with respect to the injured party and expect them to imagine that he might have wanted to expose her to the gas, known that she would have been exposed or known there was a risk. In addition, we might imagine that even if he did not know, he should have or that we don't care whether he knew or we care so much that if he did not, there is no crime. Although they do not know it in that class, most of mens rea is in those five variations.

multiplication of framings and arguments can become confusing and digressive. But taking some time to introduce the imaginative, creative, story driven side of the law and exploring that theme during the semester, can offer real value in the first year class classroom in the dimension of the creative intelligence.

And once students have their sea legs and are not so shocked by the scope for creativity in the law, much more work in this area can be done in the second and third year. In my experience, simulation work can present particularly rich opportunities for creativity. Attached as I am to the problem solving literature that stresses the importance of problem formulation, I particularly like problems such as one we use that presents the story of a homeowner troubled by a neighbor who opens a bar on property in a residential area subject to very little zoning or other local regulation. The problem presents a wide range of possible approaches, from litigating a nuisance claim to intervening in a licensing procedure, organizing the neighborhood or engaging with the local politicians. For some, working through the question of how to frame or categorize the situation can really make the point that the law offers many opportunities for creativity. Similarly, open ended, dynamic settings such as fact interviews or counseling sessions are also rich with possibilities for novel approaches. Simulation work permits the students and teachers to very consciously try a range of approaches while live client work frequently confronts the student with new situations for which there is no roadmap.

Lawyers also benefit from linguistic intelligence, the sensitivity to the meaning and ordering of words. A person with superior linguistic aptitude is able to choose and sequence words to persuade and educate others, to remember and use information and to explain and

explore linguistic systems.⁵⁰ A person may have strength in either oral or written expression and Gardner suggests that people who truly excel in one area often do not show equal aptitude in the other, suggesting a measure of independence between the two clearly related areas of oral and written linguistic intelligence.⁵¹ Much of lawyering requires skill at expressing ideas in writing and orally. Anecdotal experience also suggests a measure of independence between linguistic intelligence and logical mathematical intelligence and between oral and written abilities. We have all seen sophisticated analysis expressed in clumsy, awkward language and, probably more often, lovely flowing prose that offers weak or ill developed ideas.

Legal education offers multiple opportunities to develop oral and written skills. Of course students should write more; I have become so convinced of this, I assign two short papers to my Criminal Law Students. They welcome the early feedback and introduction to exam writing, although the papers highlight the important independent factor of speed in exam writing.⁵² So we can create more opportunities to write. And students should also present orally in small groups more. My experiences in both seminar and committee rooms tells me that this is an important, underdeveloped skill, closely related to courtroom work.

When we focus on linguistic intelligence we often interrogate particular word choices in opinions and arguments, consider the precise verbal formulations of rules or attend carefully to each other's language. And as we learn the characteristic tropes of the law, we can begin to appreciate its rhetoric; the distinctive and rich linguistic patterns characteristic of Anglo

⁵⁰ GARDNER, *supra* note 15, at 77-78.

⁵¹ *Id.* at 95.

⁵² APA Report on speededness

American law. Once again, I offer an example from the Criminal Law, which is characterized by two coexisting rhetorical structures; the Common Law and the Model Penal Code. Those who know the area are familiar with the evocative, wide array of c/l mens rea terms⁵³ and the cool efficiency of the MPC, with its sometimes demanding regularity and precision. And the clash of these two rhetorics, as when NY Courts read common law terms in MPC statutes, is an instructive story to tell over a semester.

But my favorite setting in which to focus on linguistic intelligence is in simulation. For some years, I have begun semester long simulation classes by focusing on very short snatches of simulation. The first time I simulate with a group, I often have an actor in to play the client. We start the simulation and 60 or 90 seconds later I stop it. Typically I have been the only one in the room taking notes. The students rarely notice until I ask them what happened. Inevitably, the first two, three or four students answer by characterizing the conversation we have heard. As I move through the group, suggesting that characterization is different from description, there is usually someone who can repeat some of the language we have heard. Knowing the trick and having done this many times before, I then recite much of the exchange verbatim and begin a conversation about the importance of first impressions, consistent with the views I expressed above. Much useful work is done in simply helping students hear and focus upon the words and phrases. And once that shared habit is instilled, those words and phrases become gateways to the processes that generate the words and phrases that are our professional stock in trade. A bit of mindfulness in this area can be a powerful thing. So yes, I really do think we can help people

⁵³Wantonly, maliciously, with malice aforethought, these are among the many beautiful and powerful words we use in the law. See Robinson on the power of c/l rhetoric.

tend to think before more speak. So in this way of thinking about it, one can develop linguistic aptitude by developing a habit of mindfulness or attentiveness to the language of others and one's own language.

Of course that is a very abstract formulation of how we can develop this ability. We also benefit by sharing and trying out a variety of stock verbal formulations, practicing different conversational styles by varying our pacing, presentation and other factors and by watching repeated episodes. But that is a more technical way of thinking about the work. Useful as it is, I also often find myself strongly drawn to the relational aspects of the interaction that are typically revealed in our language. I find that many students are sensitive to and interested in how we manage and express our emotions through language in client interactions. Suffice it to say that simulation and live client/real matter settings provide many rich opportunities to develop both spoken and written expressive skills. Once a teacher committed to this sort of experiential teaching, the trick is more presenting an organized body of material than it is finding great, interesting and useful bits.

So far I have argued that lawyers must develop their logical, creative and linguistic aptitudes. Now we turn to Gardner's personal intelligences. In my experience, lawyers can benefit greatly from understanding the feelings of others, as well as their own. And it is important to note that I refer to understanding those feelings - this is a discussion of the development of the cognitive realm. Although the two are so bound up that it is hard to find the line, I leave discussion of the affective realm for another day. In the cognitive dimension, Gardner imagines two separate skills - intrapersonal intelligence is the development of self-knowledge; the ability or aptitude to access one's own feelings and draw upon them as a means of understanding and guiding one's behavior, and by example to gain insight into the behavior of

others.⁵⁴ The classically minded may hear an echo of the Delphic Oracle's advice to Socrates as related in Plato's *Apology*; know thyself. The outward focused other half of this set of aptitudes is interpersonal intelligence, the "ability to notice and make distinctions among other individuals, and, in particular, among their moods, temperaments, motivations and intentions."⁵⁵ A lawyer who has insight into others' emotional states is better able to collaborate with colleagues, work with or against adversaries and persuade others.⁵⁶

Although I think there is likely wide agreement that someone can be a "people person," adept in their relationships if not the sharpest tool in the shed, I also think law schools are not often open to exploring ways of developing this aptitude. First, there is recognition of the large role of personality in this area. Personality, as a psychological category, is pretty stable and invariant. Most of us have a very hard time changing our personality and that makes many skeptical about the impact of education on interpersonal skills. But our goal is not to change our students but to give them intellectual insight into how these dimensions of human experience impact lawyering.

There are many things we can do to help our students understand and develop their

⁵⁴ *Id.* at 239.

⁵⁵ *Id.* at 239.

⁵⁶ Lawyers have long recognized the value of this, and other, intelligences. Wellman, the original skills teacher, noted, "[Cross examination] requires the greatest ingenuity; a habit of logical thought; clearness of perception in general; infinite patience and self-control; power to read men's minds intuitively, to judge of their characters by their faces, to appreciate their motives; . . ." FRANCIS L. WELLMAN, *THE ART OF CROSS EXAMINATION*, 8 (1936).

potential for rich, useful interactions with others. To start, we can name the relational dimension of the cases we study in first year classes, as others have so effectively observed in recent years. It is important to spend a little time talking about the people behind the cases and the struggles that brought them to the law. Of course the criminal law is an ideal vehicle for these observations, as almost every case presents a moment of human frailty and many are fraught with great suffering, crosscutting emotions and no small element of evil. The teacher who cannot stimulate curiosity and concern for the people in these cases should seek remediation. Finding this dimension in civil procedure is hard but manageable; in criminal law it is hard to avoid.

But we can do more than name the relational. We can also make our own reactions a part of the conversation to surface the many ways the relational and personal dimensions can effect positions and even outcomes. I do not understand the law as primarily driven by personal feeling but I think these forces play an important role. We should be sensitive to when and how legal results give weight to these factors.

Beyond the first year classroom, there is much opportunity to examine the relational and a deep body of knowledge we can bring to bear. I have already made observations about work in economics, game theory and social psychology that can offer important insights. Work on persuasion, much of it cashing out in contemporary advertising, is also more useful than I might wish. This kind of knowledge enables lawyers to make decisions less influenced by their own unconscious needs and more centered on the client's situation. These insights can be powerful tools in making predictions about and interpreting the motivations and actions of others as is already well appreciated by many legal educators.

Self-knowledge, the intrapersonal aptitude, may present as the most mystical and fraught

of this list. Taken in the Delphic sense, it can be understood as too profound for mere professional education and not the province of the law professor. After years of supervising students in our law clinic, as they sat on my couch, under my wall clock and I worried about the line between case supervision and therapy, I am quite alive to this danger.

But there is a clear need for professional self knowledge and law school can play a significant, if sometimes insufficiently intentional role in shaping it. Our assessment structure, which I discuss below, gives students one of the most powerful messages about themselves. One thing we all know about ourselves is our law school grades. Faculty members also send many implicit messages to students, about themselves, in the way we respond to their ideas and react to them in the law school environment. So in this picture of self knowledge, much of what we think we know about ourselves is communicated only half consciously. Perhaps we guard ourselves against too powerful a dose of insight into ourselves by giving having many of these exchanges in the realm of the implicit.

But too much of the limited, covert law school culture of self knowledge is judgmental and we do not do enough descriptive work. The systems view of intelligence really cries out for each of us to think pretty hard about our particular combination of aptitudes, styles, tendencies and preferences. So, in the large class, we can introduce the idea of professional expertise as multi-dimensional and even say a word about it. A brief introduction will catch the attention of a few and lengthy discussion is not likely to be of great value at this stage.

But as we construct a program of legal education, we can think about when and how we can encourage our students to reflect and exercise their powers of meta-cognition (for that is what is really operating here) upon their learning experience. We can all become more cognizant of the forms of work and mental attention available to each of us and how they can

best be deployed. The literature tells me these insights into our own aptitudes are both reasonably accessible and useful, in varying degrees, to all. For a certain kind of inward focused, intrinsically motivated learner, these ideas can seem central and very useful. For another kind of outwardly oriented learner, more engagement with the subject matter and the world may well be more welcome than this focus on the self. Each may be just as smart as the other, as measured by the powerful standardized tests which figured so largely in the first half of this paper. But we can also well imagine how those two learners, or any two learners, can be alike in that dimension and yet have such different ideas and responses from each other. Even as we restrict our gaze to the cognitive realm, there is a lot more going on than even the best test can capture and our teaching should account for it.