

## COGNITIVE CLASSIFICATION OF LEGAL PRINCIPLES: A NEW APPROACH TO INTERNATIONAL LEGAL TRAINING

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### ABSTRACT

*There is an uneasy relationship between the rigid classification of legal doctrines and the increasing market demand for adaptable legal thinking. To help reconcile this stress point, this article proposes placing more emphasis on “legal principles” as a tool in modern legal training. First, it shows the “portable” quality of legal principles by focusing on their common presence across doctrines, jurisdictions and legal professions. Second, it draws on the “cognitive theory of expertise” in order to show that lawyers think by “chunking” their knowledge at various levels of abstraction, and that each “legal principle” falls somewhere along this continuum of chunking. As a result, legal principles can have their own classification system, similar to existing doctrinal classifications but more practical in today’s competitive world due to their “portable” nature.*

### ÖZ

*Hukuk doktrinlerinin katı sınıflandırması ile modern küresel piyasada talep edilen uyarlanabilir hukuksal düşünce arasında gergin bir ilişki bulunmaktadır. Bahse konu çelişkiyi gidermek amacıyla bu makalede, bir modern hukuk eğitim aracı olarak “hukuk ilkeleri” üzerinde daha fazla durulması önerilmektedir. Bu bağlamda ilk olarak hukuk*

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*ilkelerinin doktrin, yargı yeri ve meslek gözetilmeksizin uygulanabilirliği ve dolayısıyla bu ilkelerin “taşınabilirlik” özelliği öne çıkarılmaktadır. İkinci olarak, “kognitif uzmanlık teorisi”ne dayanarak, avukatların değişik derinliklerdeki bilgilerini bir nevi “harmanlama” yöntemine dayandırarak kullandıklarını ve aslında her bir hukuk ilkesinin bu süreç içinde belli bir “harmanlama” noktasına denk geldiği önerilmektedir. Sonuç olarak, hukuk ilkelerinin “harmanlama” teorisi çerçevesinde kendilerine ait bir sınıflandırma sistemine sahip olabileceği, hatta bu hukuk ilkelerinin “taşınabilirlik” özellikleri sebebiyle mevcut doktrin sınıflandırmasından daha pragmatik bir nitelikte olabileceği savunulmaktadır.*

**Keywords:** *Cognitive theory, legal expertise, classification, legal method, international legal education, legal principles.*

**Anahtar Kelimeler:** *Kognitif teori, hukukta uzmanlık, sınıflandırma, hukuk yöntemi, uluslararası hukuk eğitimi, hukuk ilkeleri.*

## I. INTRODUCTION

The uneasy relationship between the doctrinal rigidity of law and the increasing market demand for adaptable legal thinking is striking. While the history of legal scholarship is rooted in taxonomy (the science of classification) of doctrines, the increasingly global and interactive market requires legal minds that can transcend various disciplines, jurisdictions and languages. To help reconcile this stress point in our systems of legal thinking, this article proposes placing more emphasis on “legal principles” as a tool in modern legal training, and suggests that legal principles are themselves amenable to being classified in much similar fashion to the classification of doctrines.

The pragmatic goal of this article is to suggest an effective model for modern legal training. The classification of legal principles is a conduit to reach that goal. Two defining features of legal principles make them an attractive conduit in this sense. First, legal principles are “abstract” because they require a higher-order cognitive interface between other legal concepts such as doctrines and institutions. Second, legal principles are “portable” in the sense that they transcend jurisdictional, professional and doctrinal boundaries. This article will study three selected legal principles (proportionality, comparativism and arbitration) in order to illustrate those qualities.

This article will also propose a new classification system for legal principles, based on the “cognitive theory of expertise.” Existing theories of expertise in cognitive science have studied expertise in many different domains (including chess, sports, music, military and sciences), with their primary focus on the cumulative “chunking” of knowledge, but not in the domain of law. However, because lawyers also think at various levels of “chunking” legal

knowledge, their cognitive processes may fit very well in this theory. Whether they do ultimately fit is an empirical question, but this article uses the framework in order to classify legal principles. In particular, it argues that each legal principle falls somewhere along the continuum of cognitive chunking. For example, proportionality is a “basic” principle, comparativism is a “composite” principle and arbitrage is a “complex” principle – these labels referring to the cognitive complexity of each principle. Thus ultimately, this article will offer a new principles-based classification, which promises to be more “portable” than the rigid doctrine-based classification.<sup>1</sup>

The pragmatic implications of this article should be clear. We are living in a world of increasing connectivity among jurisdictions, legal professions, and doctrinal disciplines. The doctrinal taxonomies created in earlier centuries simply did not have such concerns to address. A new classification strongly founded in the cognitive processes of lawyers, and appropriately focused on cross-jurisdictional elements, can increase lawyer productivity in the global market. This goal should be central to the objectives of law faculties and law firms, among other legal institutions interested in developing competitive legal minds.

This article is organized as follows. Part II connects the definitions of “cognitive classification” and “legal principles”. Part III reviews academic literature to show that (i) cognitive approaches have lost their popularity in the analysis of law; and (ii) a taxonomy of legal principles with a cross-jurisdictional model has never been attempted. Part IV discusses the cognitive theory of expertise as a suitable model for classifying legal principles. Part V shows how three selected legal principles fit into the “cognitive classification” system and illustrates their “portable” quality across different doctrines, jurisdictions and professions. Part VI concludes.

## II. CONNECTING “COGNITIVE CLASSIFICATION” AND “LEGAL PRINCIPLES”

The “cognitive theory of expertise” studies the cognitive processes through which a novice becomes an expert in a given domain (such as chess, music or

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<sup>1</sup> In fact, a fresh model of taxonomy can be more constructive than further analysis of existing models, partially because it would not be constrained by the historical boundaries of the existing taxonomies. See e.g., Heikki Pihlajamäki, *Against Metaphysics in Law: The Historical Background of American and Scandinavian Legal Realism Compared*, 52 AM. J. COMP. L. 469, 469 (2004) (arguing that “[o]ne of the problems with the traditional classifications is that they are too history-based to cope with apparent similarities with some of the world’s legal systems which historically have little in common. The benefit of the newer taxonomies is that they are not solely built on history.”).

law). This theory posits that experts think at more abstract levels than novices, and that they reach such high levels of abstraction by “chunking” together various pieces of pre-existing knowledge. For each domain, those individual pieces are different. Chess players “chunk” board configurations while musicians “chunk” musical notes. Since cognitive theory has not studied legal thinking as a domain of expertise, it is unclear what we “chunk” as we become expert lawyers. This article proposes that we “chunk” legal principles, and thus proposes a classification of legal principles to make our “chunking” easier. This pragmatic proposal is labeled as “cognitive classification” in this article.

Why are legal principles more suitable for “cognitive classification” than legal doctrines? It is because they are portable, abstract and teachable. First, they transcend doctrinal, jurisdictional and professional boundaries. Their portability affords a user of legal principles a more adaptable craft – a vital quality in the modern legal market.<sup>2</sup> Second, they facilitate legal analysis because of their abstract quality. An expert in command of these abstractions analyzes legal problems more efficiently than a novice who takes concrete and inefficient steps.<sup>3</sup> Third, legal principles are easy to teach because they are prone to internal organization within their abstract system.<sup>4</sup> Legal principles can be made more cognitively accessible to students by an intelligible taxonomy in line with the cognitive processes of expertise. This article will illustrate each quality (portable, abstract, teachable) by studying three core legal principles in Section V below.<sup>5</sup>

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<sup>2</sup> See e.g., David S. Clark, *Transnational Legal Practice: The Need for Global Law Schools*, 46 AM. J. COMP. L. 261 (1998) (arguing that the growing demand for global lawyers necessitates a more global approach toward education in law schools across the world).

<sup>3</sup> Legal systems have evolved, at least intellectually, by achieving leaps in abstraction. For example under common law, the shift from formal writs (eg. *assumpsit*) to general obligations (eg. *contract*) was a significant leap in abstraction, with all its attendant practical benefits. Similarly under civil law, the abstractions achieved by Roman law vis-à-vis preexisting legal systems were significant. This article suggests that by placing more emphasis on abstract legal principles, we can achieve still further progress in the law.

<sup>4</sup> It has been shown in other disciplines that abstract organization is a preferred method of education. See e.g., Pat Langley, *Concrete and Abstract Models of Category Learning*, in PROCEEDINGS OF THE TWENTY-FIRST ANNUAL CONFERENCE OF THE COGNITIVE SCIENCE SOCIETY 288-94 (Martin Hahn & Scott C. Stoness ed., Lawrence Erlbaum Associates 1999) (arguing generally that abstract learning is more effective than concrete learning in various respects); Michael Mitchelmore & Paul White, *Abstraction in Mathematics and Mathematics Learning*, 3 PROC. OF THE 28TH CONF. OF THE INT’L GROUP FOR THE PSYCHOL. OF MATHEMATICS EDUC. 329 (2004) (arguing that a key component of learning mathematics is the formalization of empirical real-world concepts into more abstract concepts).

<sup>5</sup> The principles studied, *infra* Part IV, are proportionality, comparativism, and arbitration.

### III. THE COGNITIVE MODEL IN LEGAL ACADEMIC LITERATURE

Since Langdell's modern taxonomy of concrete legal doctrines in the 1870s, the legal academia has flirted with the idea that abstract legal principles have an important place in the lawyer's cognitive process. This concept is referred to as the "cognitive model" in this article. However, as shown in the review of academic literature below, (i) the cognitive model has suffered in popularity since Langdell's time and (ii) no single unified legal theory has been offered that espouses the cognitive classification of legal principles.

#### A. Formalism – Denial of the Cognitive Model

The legal movement of formalism marks the height of doctrinal taxonomy and the denial of the cognitive model.<sup>6</sup> As a formalist, Langdell is best known for two elements in the legal discourse – the scientific method for understanding the law and the case method of study as a means of achieving this understanding.<sup>7</sup> His concept of legal science entailed "a comprehensive scheme of classification in which every individual case might be fit under its controlling rule in much the same way that a biologist fits individual birds, fish, and so on under their appropriate species-types."<sup>8</sup> For example, in a typical top-down exercise of classifying doctrinal rules, (i) public law would be juxtaposed against private law; (ii) within private law tort would be juxtaposed against

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<sup>6</sup> There existed extensive legal taxonomy projects long before Langdell, such as the Roman law codification projects. However, the focus of this article is modern legal thought and education.

<sup>7</sup> There were parallel movements in European legal education during Langdell's time. See Laura I. Appleman, *The Rise of the Modern American Law School: How Professionalization, German Scholarship, and Legal Reform Shaped our System of Legal Education*, 39 *NEW ENG. L. REV.* 251, 253 (2005) (illustrating that, during Langdell's time, "law's 'scientific methodology,' and even the concept of 'thinking like a lawyer,' was, in truth, a combination of German scholastic methods, theories of 'legal science,' and English common law materials."). Meanwhile, during Langdell's innovations in U.S. legal education, the scientific method was also being emphasized by German scholars such as Leopold von Ranke, who also argued absolute fidelity to sources of law. *Id.* citing Humboldt University website, available at <http://www.geschichte.hu-berlin.de/galerie/texte/ranke.htm>.

<sup>8</sup> Anthony Kronman, *THE LOST LAWYER: FAILING IDEALS OF THE LEGAL PROFESSION 170-71* (The Belknap Press of Harvard University Press 1993). It has also been suggested that Langdell's organic conception of the law should be viewed in the context of Charles Darwin's "The Origin of Species," insofar as the evolution of species can be seen as parallel to the nature of laws as immutable, but at the same time alterable and contingent. See Appleman, *supra* note 7, at 284 (citing David S. Clark, *Tracing the Roots of American Legal Education – A Nineteenth Century German Connection*, in 1 *THE HIST. OF LEGAL EDUC.* 499 (Steve Sheppard ed., 1999)).

contract; (iii) within contract law a true contract would be juxtaposed against a quasi-contract; (iv) so on indefinitely.<sup>9</sup>

Langdell's principles signify the height of taxonomization because of their formal approach to law. This formalism been compared to the system of axioms and corollaries in the science of geometry. The elementary principles on which a legal doctrine is based (for example in contract law, the principle that contract formation requires a "meeting of the minds") are analogous to geometric axioms.<sup>10</sup> The subordinate principles in each doctrine (for example whether consideration is required for a meeting of the minds) are analogous to geometric corollaries. The result is a well-ordered system of rules that offers the best description of that branch of law. Cases fit into a rational geometry that can be deciphered with little experience, and those cases that do not fit into this system must be purged as mistakes.<sup>11</sup>

Langdell's model of legal geometry does not comport with our modern goals of legal training for two reasons. First, it does not rely on experience. Langdell's legal axioms can be understood by the sole use of logical thought and case law, just as geometry's starting point is a set of axioms which do not require experience to understand.<sup>12</sup> In a universe where experience is not valued, the cognitive model clearly suffers in popularity.

Second, Langdell's method does not work internationally because different legal systems have different axiomatic starting points. For example, consideration is a fundamental requirement of contract formation under Anglo-Saxon systems but not under Roman-based systems.<sup>13</sup> Without experiencing other legal systems, Langdell's model of education becomes difficult to apply to today's interactive legal world. This is especially true because in most countries case law is not recorded as extensively as in the common law systems, making it difficult to taxonomize case law. So if some taxonomy is going to help legal training, it cannot be the taxonomy of legal rules derived from axioms found in case law, but the taxonomy of some other cross-jurisdictional concept – such as legal principles.

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<sup>9</sup> Duncan Kennedy, *From the Will Theory to the Principle of Private Autonomy: Lon Fuller's "Consideration and Form,"* 100 COLUM. L. REV. 94 (2000).

<sup>10</sup> Kronman, *supra* note 8, at 171.

<sup>11</sup> *Id.* at 171.

<sup>12</sup> *Id.* at 172.

<sup>13</sup> *See, e.g.* Turkish Code of Obligations, art. 1-10.

## B. Inquiétude – Acknowledgement of the Cognitive Model

Soon after Langdell, René Demogue acknowledged a concept akin to the cognitive model in Europe. Demogue, who belonged to a group of jurists sometimes referred to as the “jurists inquiets” (the worried or anxious jurists),<sup>14</sup> embarked on a theoretical project of taxonomizing the basic concepts in legal thought.<sup>15</sup> Specifically, he suggested that there is a limited number of basic concepts that animate the design of private law rules, namely (i) static and dynamic security; (ii) economy of time and activity; (iii) justice; (iv) equality; (v) liberty; (vi) solidarity and the notion of apportioning losses; (vii) public interest; (viii) protection of future as opposed to present interests; and (ix) protection of emotional as opposed to material interests.<sup>16</sup> This model conceptualized the law at a higher level of abstraction than doctrine.

Demogue discussed each of these concepts in depth in his book, but it is unclear exactly what he was attempting to taxonomize. At least one commentator suggests that Demogue presents an unstructured list of policies, legal concepts, institutional descriptions, abstract values, concepts, and stereotypes about social life – a mix of factors that are not classifiable under any one title such as legal principles or legal rules.<sup>17</sup> For example, under his analysis of “economy of time and activity,” Demogue seems to give generalized policy reasons for efficiency, rather than analyze how a particular legal principle operates to serve the policy of efficiency.<sup>18</sup>

Moreover, with regard to globalization, Demogue suggested the harmonization of legal doctrines, not of legal principles: “If all civilized States would adopt a common body of law, if there existed a common law for Europe or for the world, there would be an end to much study and to the perplexing conflicts arising in private international law.”<sup>19</sup> While valuable in its own

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<sup>14</sup> Marie-Claire Belleau, *The “Jurists Inquiets”: Legal Classicism and Criticism in Early Twentieth-Century France*, 1997 UTAH L. REV. 379 (1997).

<sup>15</sup> René Demogue, *Analysis of Fundamental Notions*, in MODERN FRENCH PHILOSOPHY 345 (Mrs. Franklin W. Scott & Joseph P. Chamberlain trans., Augustus M. Kelley 1968) (1911).

<sup>16</sup> *Id.* at 345.

<sup>17</sup> Kennedy, *supra* note 9, at 110.

<sup>18</sup> See Demogue, *supra* note 15, at 471 (stating “the legal systems of the western world, inspired largely by the wish to encourage business and the active life, have sought to arrange the performance of juridical acts...as to economize time to the utmost, thus making it easier for individuals to act and thereby create wealth.”).

<sup>19</sup> *Id.* at 474.

right,<sup>20</sup> this suggestion responds to an entirely different concern than the one addressed by the cognitive model – Demogue was worried about lack of harmony in substantive rules of law, while the cognitive model is concerned by harmony among legal principles, regardless of the substantive doctrines that overlay them.

Demogue himself conceded that his project was not very successful: “[t]he simplicity which our minds requires does not appear to be the law of the exterior world.”<sup>21</sup> At least one commentator adds that Demogue was unable to “forc[e] [the collection of concepts] into his own meta-theory.”<sup>22</sup> Nonetheless, Demogue started giving hope to the idea of a cognitive model, as he represented a shift away from Langdell’s pure doctrinal taxonomy toward the analysis of some abstract ideas, whatever those may be.

### C. Realism – Llewellyn, Frank, Laswell and McDougal

The movement of legal realism finally acknowledged the cognitive model, but stopped short of offering a unified taxonomy of legal principles.<sup>23</sup> The constituent strands of legal realism first acknowledged the cognitive model, then attempted to use it, and finally tried to taxonomize it. However, none of the realist attempts ever posited a unified theory that would serve the needs of contemporary legal training. Incident to this shortage, the realism movement came under severe attack from modern legal scholarship.

In general terms, realism opposed Langdell’s conception of formal legal science, and viewed the law largely as a tool to achieve certain stated ends.<sup>24</sup> Its tools relied more sharply on experience: “If law was to be a tool in social engineering, facts and expert judgment had to replace doctrine and tradition.”<sup>25</sup> This emphasis on expert judgment meant that legal thought was taking a large

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<sup>20</sup> This seems to have been a prescient view, given the current harmonizing among European legal systems.

<sup>21</sup> *Id.* at 564.

<sup>22</sup> Kennedy, *supra* note 9, at 110-11.

<sup>23</sup> Oliver Wendell Holmes, “*The Life of the Law Has Not Been Logic; It Has Been Experience*”, Book Review, 14 AM. L. REV. 233, 234 (1880) (reviewing CHRISTOPHER C. LANGDELL, SUMMARY OF THE LAW OF CONTRACTS (1880)).

<sup>24</sup> Annelise Riles, *A New Agenda for the Cultural Study of Law: Taking on the Technicalities*, 53 BUFF. L. REV. 973 (2005).

<sup>25</sup> Stewart Macaulay, *The New versus the Old Legal Realism: “Things Ain’t What They Used to Be,”* 2005 WIS. L. REV. 365, 367 (2005).

step in the direction of endorsing legal principles, although still its proponents did not complete a unified cognitive model.

### 1. Judicial Discretion – Recognition of the Cognitive Model

The realist model of judicial discretion, posited by Jerome Frank, was a loose recognition of the cognitive model. Frank disapproved of Langdell's geometric axioms because he believed a judge making decisions must rely on his real-world experience, and inevitably make some discretionary choices that have no corollary in science or geometry.<sup>26</sup> For example, a judge must use discretion in choosing between conflicting starting principles in resolving a dispute – such as the choice between a consideration-based and an intent-based starting point in resolving a contract dispute.<sup>27</sup> Accordingly, the Langdellian study of the cases would be insufficient because it would not necessarily produce one set of internally-consistent principles.<sup>28</sup> Thus, Frank substituted discretion for reason as the main faculty in adjudication.<sup>29</sup> This conception of discretion (and inevitably experience) came very close to a conception of the cognitive model.<sup>30</sup>

Conceiving discretion as the main building block of adjudication had strong implications for legal training, too. In fact, Frank was a vocal proponent of clinical law education, defending the position that legal education should be primarily experiential.<sup>31</sup> To this day, Frank's writing has been described as “the most prominent effort to apply realist insights to legal education.”<sup>32</sup> He posited that doctrinal analysis of cases does not optimally prepare the law student for practice, for three reasons. First, judicial decisions are *post hoc* rationalizations of decisions made for a variety of real-world reasons; second, controlling factors of litigation often are found in the social interactions among real-world

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<sup>26</sup> *Id.* at 189.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 191.

<sup>30</sup> Perhaps Frank's emphasis on experience came from his own diverse real-world endeavors as a corporate attorney, a scholar, an administrator and a federal appellate court judge. See Matthew W. Frank, *Book Report*, 84 MICH. L. REV. 866 (1986) (reviewing ROBERT J. GLENNON, *THE ICONOCLAST AS REFORMER: JEROME FRANK'S IMPACT ON AMERICAN LAW* (1985)). As this article will demonstrate below, cross-practice legal experience is indeed one of the motivations for attempting to taxonomize legal principles.

<sup>31</sup> Jerome Frank, *Why Not a Clinical Lawyer-School?*, 81 U. PA. L. REV. 907 (1933).

<sup>32</sup> Morris D. Bernstein, *Learning From Experience: Montaigne, Jerome Frank and the Clinical Habit of Mind*, 25 CAP. U. L. REV. 517, 528 (1996).

players; and third, the facts of the case are not found but created in the course of litigation and negotiation.<sup>33</sup> Thus, his espousal of an experiential model of legal education was an important step in recognizing the cognitive model.<sup>34</sup>

## 2. Prudential Realism – Attempted Taxonomy of the Cognitive Model

Prudential realism, embodied largely in the work of Karl Llewellyn, is a close attempt at an operating cognitive model with a classification of legal principles. Llewellyn asked a crucial question that other realists left unanswered: do judicial decisions have some intelligible order independent from doctrinal boundaries?

Llewellyn believed judicial decisions could be arranged according to a set of organizing principles, which included non-legal practical factors.<sup>35</sup> This was significant because it suggested using a parameter other than doctrine to organize the law – a large departure from Langdell’s popular method. Llewellyn believed this was necessary because doctrinal rules did not reflect the full reality: “the rules not only fail to tell the full tale, taken literally they tell much of it wrong; and . . . craft-conscience, and morale, these things are bodied forth, they live and work, primarily in ways and attitudes which are much more and better felt and done than they are said.”<sup>36</sup> Thus he set out to seek a taxonomizing principle to understand the craft of lawyers.

Ultimately, Llewellyn identified a long list of legal principles that gave judges discretionary power, and fourteen factors generally constraining this discretion.<sup>37</sup> The idea was that appellate judges had the freedom to engage certain legal principles, and their discretion was only checked by some institutional factors. In simplified terms, these legal principles fell under the three large categories of (i) following precedent; (ii) avoiding precedent; and

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<sup>33</sup> *Id.*, citing Frank, *supra* note 31 at 911-13.

<sup>34</sup> See Bruce A. Ackerman, *Law and the Modern Mind by Jerome Frank*, 103 DAEDALUS 119 (1974) (noting the unappreciated brilliance of Frank’s contribution).

<sup>35</sup> See generally, Karl Llewellyn, *THE COMMON LAW TRADITION: DECIDING APPEALS* (William S. Hein & Co., Inc 1996) (1960).

<sup>36</sup> Kronman, *supra* note 8, at 214.

<sup>37</sup> These factors are: (i) law-conditioned officials; (ii) legal doctrine; (iii) known doctrinal techniques; (iv) responsibility for justice; (v) one single right answer; (vi) an opinion for the court; (vii) a frozen record from below; (viii) issues limited, sharpened, and phrased in advance; (ix) adversary argument by counsel; (x) group decision; (xi) judicial security and honesty; (xii) a known bench; (xiii) the general period-style and its promise; and (xiv) professional judicial office. See Llewellyn, *supra* note 35, at 19-51.

(iii) expanding precedent.<sup>38</sup> He then identified various sub-principles for each one of the main principles, and further sub-principles under those, giving examples from case law to illustrate the use of each.<sup>39</sup> On the aggregate, the project consisted of three layers of precedent-treating techniques, culminating in sixty-four discrete principles.

Llewellyn described his project as “set[ting] up such a workbench of tools as the foregoing.”<sup>40</sup> His desire to create a toolbox of legal principles is exactly consistent with the purpose of this article. Furthermore, the practical impact of such a toolbox on lawyer productivity is also a shared element between Llewellyn’s project and this article. In fact Llewellyn predicted, if optimistically, that “. . . the revivifying of a few simple ideas and ideals all ancient in our tradition can also, within the craft of appellate judging itself, step up the level of performance and of the craftsmen’s intangible income of satisfaction in their work.”<sup>41</sup>

Once the lawyer has a toolbox, how does he know which tool to use and when? According to Llewellyn, another experience-based concept labelled “horse sense” allows the lawyer to navigate the contents of the toolbox: “With such assorted wealth of tools at hand, their choice and use become in part a key to craftsman and to craft.”<sup>42</sup> The ability to navigate the toolbox becomes an integral part of the legal craft. Experienced practitioners build this “extraordinary and uncommon kind of experience, sense and intuition which was characteristic of an old-fashioned skilled horse trader in his dealings either with horses or with other horse traders.”<sup>43</sup> To date, Llewellyn’s formulation of “horse sense” is a very acute conception of the cognitive model. However for the reasons stated below, this formulation still fell short of today’s competitive needs in legal training.

First, Llewellyn’s taxonomy is confined to the narrow field of appellate judging. However, modern legal training must also prepare lawyers for private practice, policy-making and academic scholarship. This is especially true in an era where private law firms are building an institution of legal practice that is perhaps comparable in magnitude and resources even to the judiciary (a fact

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<sup>38</sup> *Id.* at 77-91.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 91.

<sup>41</sup> *Id.* at 155.

<sup>42</sup> *Id.* at 100.

<sup>43</sup> Kronman, *supra* note 8, at 223.

which was not true in Llewellyn's time).<sup>44</sup> While Llewellyn wrote the following words with the appellate bench in mind, he might as well have written them for the large contemporary law firm: "Tradition grips them, shapes them, limits them, guides them; not for nothing do we speak of *ingrained* ways of work or thought, or men *experienced* or case-hardened, of *habits* of mind."<sup>45</sup>

Second, Llewellyn's taxonomy is not organized in a rigorous fashion and therefore not suitable for systematic teaching. Llewellyn himself concedes that horse-sense is not reducible to a method.<sup>46</sup> Therefore no analytical description of it can be complete.<sup>47</sup> Moreover, Llewellyn believes that horse sense is an unconscious process which "just happens as you go."<sup>48</sup> He concedes that it is not easily imparted to law students, which falls short of this article's pragmatic purpose: "[t]he trained always have more of it than the untrained or the recruits. The experienced always have more of it than the green . . ."<sup>49</sup> In sum, Llewellyn's model fell short in its organization as well as its teaching capacity.

#### D. Contemporary Scholarship

Despite his initial influence, Llewellyn does not have a large following today. His scholarship has largely been marginalized by two new movements, Law and Economics and Critical Legal Studies, both of which are descendents of Langdell's scientific realism.<sup>50</sup> These two movements virtually annihilated the regard for the cognitive model in American legal scholarship. Whatever faith remains in the cognitive model today, it exists under the umbrellas of two other movements – Pragmatism and Virtue Ethics. Scholars belonging to those movements have salvaged a residual portion of Llewellyn's experiential values, although it is hard to say that realism carries its initial force today.

##### 1. Law and Economics – Criticism of the Cognitive Model

Law and Economics has catalyzed the decline of the cognitive model by substituting its own model based on economics. Richard Posner has argued that the law has an intelligible structure, though not in the working vocabulary of

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<sup>44</sup> *Id.* at 271-314 (illustrating generally the growing number and power of private law firms).

<sup>45</sup> Llewellyn, *supra* note 35, at 53 (emphasis in original).

<sup>46</sup> Kronman, *supra* note 8, at 223.

<sup>47</sup> *Id.* at 223.

<sup>48</sup> *Id.* at 217.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at 225.

lawyers themselves – but in the language of economics.<sup>51</sup> The structure of the law is best described by concepts such as scarcity, efficiency, welfare and waste-minimizing rationality.<sup>52</sup> This economic conception of the law largely undermines the value of legal principles and the cognitive model because it asserts that the language of the law is actually *irrelevant*. In fact, Posner predicts that Law and Economics will rapidly become the prominent legal theory, replacing the older theories that endorse legal principles.<sup>53</sup>

Posner sees the legal profession in a state of self-delusion, and ascribes that state to the profession's persistent embrace of its archaic legal concepts, which include legal doctrine as well as legal principles.<sup>54</sup> He criticizes the profession's pride with its "craft" because even the traditionally most craft-worthy tasks are now assigned to young and inexperienced lawyers.<sup>55</sup> He implies that legal scholars resisting Law and Economics "do not want to risk undermining their claim to professional autonomy by getting into areas where they do not command all the tools of the inquiry."<sup>56</sup> As for legal training, Posner suggests that law schools de-emphasize the non-scientific skills that lawyers have traditionally employed and instead focus on law and economics.<sup>57</sup>

This is a dismal portrayal of the legal profession's autonomy. Law and Economics asserts that autonomy of the law has been declining steadily for the following reasons.<sup>58</sup> First, there are internal reasons, such as the collapse of political consensus among academics and the boredom of the most imaginative practitioners with the old techniques of the profession. Second, there is a surge in more exact and exciting disciplines such as science, economics and philosophy, which make "traditional legal doctrinal analysis . . . to many young

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<sup>51</sup> Richard A. Posner, *OVERCOMING LAW* (Harvard University Press 1995).

<sup>52</sup> For example when a Law and Economics scholar studies even the most noncommercial legal subject of criminal law, he relies on tools such as price theory – based on the conception that severe criminal punishments have deterring effects similar to those of high prices. *Id.* at 439.

<sup>53</sup> *See generally id.*

<sup>54</sup> "The complexity of the law's doctrines, the obscurity of its jargon, and the objectifying of 'the law' are in part endogenous to the organization of the legal profession, rather than being exogenous factors to which the profession has adapted by setting high and uniform standards for qualification." Posner, *supra* note 51, at 58.

<sup>55</sup> *Id.* at 68-69.

<sup>56</sup> *Id.* at 73.

<sup>57</sup> Kronman, *supra* note 8, at 239.

<sup>58</sup> *See generally*, Richard A. Posner, *The Decline of Law as an Autonomous Discipline: 1962-1987*, 100 HARV. L. REV. 761 (1987).

scholars, old-fashioned, passé, tired.”<sup>59</sup> Third, there is a collapse in the confidence in the ability of lawyers to deal with major problems of the legal system. For example, earlier successes of the bar such the Federal Rules of Civil Procedure left their place to new failures such as a bankruptcy code that led to an increase in the number of bankruptcies, an overwhelming expansion of tort liability that may be destroying the institution of liability insurance, and additional failures in other areas of law.<sup>60</sup> Fourth, there is the increasing importance of statutes and the Constitution as sources of law, which have made obsolete the skill of inductive and deductive legal reasoning traditionally associated with the common law. He uses these sets of dynamics to discredit the work of the realists discussed above.<sup>61</sup>

It is easy to see that each of these criticisms falls apart when viewed in the global context. First, the so-called “boredom” in the domestic area does not apply to the burgeoning international and comparative law field. Second, the surge of exact sciences such as economics does not make legal analysis unappealing to young lawyers, so long as the legal profession keeps adapting its methodologies to the modern global world through projects such as the current article. Third, so-called failures of the bar are not universal. For example, it may be proved that the overhaul of Turkish competition law is offering benefits to society at the same time as the new U.S. bankruptcy code is arguably creating more bankruptcies. Fourth, the move toward heavier statutory interpretation in the U.S. arguably parallels the move toward heavier use of case precedent in civil law systems. In short, Posner’s reasons for criticizing the law’s autonomy do not take into many global attributes of the legal profession.

## 2. Critical Legal Studies – Downfall of the Cognitive Model

Critical Legal Studies has been equally hostile toward the cognitive model, but its weapon of choice is policy rather than economics. Notably, this movement asserts that the organizing principles of law are the competing forces of individualism and altruism.<sup>62</sup> Accordingly, regardless of the substance of the legal issue, lawyers will always make one of a few available stereotyped

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<sup>59</sup> *Id.* at 773.

<sup>60</sup> *Id.* at 771.

<sup>61</sup> He impliedly agrees with the description that “naughty boys like Jerome Frank and Karl Llewellyn chase[d] the formalist butterflies until they turn[ed] into formalist butterflies themselves.” *Id.* at 775.

<sup>62</sup> Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685 (1976).

arguments, every single argument being reducible to a balance between individualism and altruism.<sup>63</sup>

Duncan Kennedy gives some examples of how these values operate. For instance, he categorizes contracts under individualism because the right to expect performance of a promise is born out of an individualistic preference for furtherance of one's interests.<sup>64</sup> By contrast, he categorizes progressive taxation under altruism because it is designed to "force people with power to have due regard for the interest of others."<sup>65</sup> In addition to these two examples, all other modes of legal argument also fall somewhere on the continuum of individualism and altruism. Accordingly, every legal conclusion must be a function of policy balancing, and ultimately it is impossible for legal argument to be autonomous from moral, economic, and political discourse.<sup>66</sup>

Critical Legal Studies becomes antagonistic toward the legal craft in Kennedy's narrative of a hypothetical judge, whose desired outcome for a case diverges from the obvious outcome suggested by a straight application of the law.<sup>67</sup> The hypothetical judge uses a series of tricks to put a favorable twist on the law and facts, and to come out triumphantly ruling the case in line with his personal views. His skill in reaching this result is described in terms of his ability to manipulate legal thought, by using his own political interpretation of law, facts and precedent.<sup>68</sup> The lesson of the hypothetical is that legal rules never determine the outcome of a case, because all variables in legal reasoning are indeterminate and subject to interpretation depending on the judge's own politics.<sup>69</sup> Judges merely "respond to [hard cases] with legalistic mumbo jumbo, that is, by appealing to the concepts and pretending that they have

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<sup>63</sup> *Id.* at 1713.

<sup>64</sup> *Id.* at 1715.

<sup>65</sup> *Id.* at 1719.

<sup>66</sup> *Id.* at 1724.

<sup>67</sup> Duncan Kennedy, *Toward a Critical Phenomenology of Judging*, in *THE RULE OF LAW: IDEAL OR IDEOLOGY*, 141-67 (Hutchinson and Monahan 1987).

<sup>68</sup> Kennedy offers the visual metaphor of the law as a field, with doctrinal principles that are separated by boundaries (reminiscent of Langdell's geometry), delimited by case precedents. *Id.* For another very interesting composition on visual metaphors describing the law, see Pierre Schlag, *The Aesthetics of American Law*, 115 *HARV. L. REV.* 2047 (2002). Schlag offers four alternative metaphors for visualizing the legal system: (i) the grid aesthetic; (ii) the energy aesthetic; (iii) perspectivism; and (iv) the disassociative aesthetic.

<sup>69</sup> Kennedy, *supra* note 67, at 164-66.

decided the case for him.”<sup>70</sup> Separately from judges, scholarly legal arguments in academia “are just made up out of whole cloth to wile away the evening or get tenure or legitimate the status quo or make pretty patterns or scratch the itch of existentialist dread before the unknowableness of the most important things in life.”<sup>71</sup>

At this low point where legal reasoning was reduced to “mumbo jumbo,” “existentialist,” “old-fashioned” and “passé,” the idea of the lawyer’s cognitive mind as being based on legal principles had very low popularity. Llewellyn’s conception of practical wisdom had eroded almost completely, and scholars were starting to look outside the law to describe the processes of legal reasoning.

### 3. Pragmatism – Salvaging of the Cognitive Model

Thus the respect for legal craft had all but disappeared until a group of self-proclaimed “pragmatists” emerged in the late 1980s to salvage what was left of Llewellyn’s conception of practical experience. While the legal pragmatists were a diverse group of thinkers,<sup>72</sup> they shared a general theoretical outlook that tied Aristotle’s concept of practical wisdom to various other philosophies.<sup>73</sup> The pragmatists perceived human thought as both a product of past experience and an instrument for predicting the future environment.<sup>74</sup> They did not find economics or policy to be relevant parameters of the law, because they were not intrinsic to the human experience.

The pragmatists’ contextual view of knowledge was significant for the cognitive model, because it considered knowledge as being subject to

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<sup>70</sup> *Id.* at 1732.

<sup>71</sup> *Id.* at 166-67.

<sup>72</sup> A confusing fact is that Richard Posner is also a self-proclaimed pragmatist, even though the bulk of his philosophical commitment up to the late 1980s had been to the movement of law and economics.

<sup>73</sup> Thomas F. Cotter, *Legal Pragmatism and the Law and Economics Movement*, 84 GEO. L.J. 2071 (1996).

<sup>74</sup> For example, Posner asserted that practical reason “denotes the methods by which people who are not credulous form beliefs about matter that cannot be verified by logic or exact observation [and consists of] a grab bag [of methods] that include anecdote, introspection, imagination, common sense, empathy, imputation of motives, speaker’s authority, metaphor, analogy, precedent, custom, memory, “experience,” intuition, and induction.” Richard A. Posner, *THE PROBLEMS OF JURISPRUDENCE* (1990), at 71-73.

modification in light of additional experience.<sup>75</sup> At an empirical level, pragmatism asserted that “practical sense” exists in the legal brain, in the form of a learnable cognitive skill parallel to Llewellyn’s “situation sense.”<sup>76</sup> In a gripping article, Daniel Farber suggests that expertise in fields other than law, such as chess, mirrors the use of practical sense in law.<sup>77</sup> He references scientific experiments showing that in the field of chess, there is a cognitive skill set that is acquired through experience.<sup>78</sup> He suggests that chess masters have some type of Llewellynian “situational sense,” which is not attained simply by understanding the rules of the chess game, but through experience. In fact, Farber points out that chess masters have spent ten to twenty thousand hours staring at chess positions during their career – the equivalent of full time study for ten academic years on a single subject.<sup>79</sup> The suggestion is that legal “practical sense” is also attained through experience – a comforting approach for the cognitive model.

#### 4. Virtue Ethics – Revival of the Cognitive Model

Another living strand of contemporary legal thought that still endorses practical wisdom is virtue ethics. This field applies a particular category of practical wisdom – intellectual virtues – to a variety of legal situations. For example, Heidi Feldman uses virtue ethics and moral theory to interpret the tripartite quality of the ordinary liability standard in tort law – consisting of prudence, benevolence, and negligence – and suggests that practical wisdom is an inherent component of the prudence prong.<sup>80</sup> Feldman relies on the

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<sup>75</sup> *Id.* at 2077.

<sup>76</sup> *See generally id.*

<sup>77</sup> Daniel A. Farber, *The Inevitability of Practical Reason: Statutes, Formalism, and the Rule of Law*, 45 VAND. L. REV. 533, 554-58 (1992). *See also* H.J. van den Herik, *From Chess Moves to Legal Decisions: A Position Statement*, The Foundation for Legal Knowledge Based Systems (for possible future applications of artificial intelligence to the practice of law), available at <http://www.jurix.nl/pdf/j97-09.pdf>.

<sup>78</sup> “In these experiments, the subject was shown a slide of a chess board briefly and afterwards asked to recall the positions of the pieces. Novices were lucky to be able to remember the positions of five or six pieces after seeing a board for five seconds, while chess masters were able to reconstruct the positions of twenty pieces . . . But in other areas, chess masters have no better than average memories (nor typically, are they particularly intelligent outside of their field).” Farber, *supra* note 77, at 555.

<sup>79</sup> *Id.*, citing estimates in M.H. Chi, R. Glaser & M.J. Farr, *THE NATURE OF EXPERTISE*, at xxxi (Lawrence Erlbaum Associates 1988).

<sup>80</sup> *See* Heidi Li Feldman, *Prudence, Benevolence, and Negligence: Virtue Ethics and Tort Law*, 74 CHI.-KENT L. REV. 1431 (2000).

Aristotelian model of virtue ethics, where practical wisdom means the ability “to deliberate well about what is good and expedient for himself.”<sup>81</sup> She then posits that prudence cannot be measured by economic efficiency or utility maximization alone, because those do not evaluate our actions accurately.<sup>82</sup> As an alternative, prudence should be measured by the more nuanced concept of virtue – a “context-sensitive, deliberative evaluation of actions traditionally invited by the reasonable person standard.”<sup>83</sup> She argues that by using a calculus of negligence based on practical wisdom, rather than an economic or utilitarian calculus, we get closer to how juries think about real life negligence.<sup>84</sup> This application of practical wisdom is encouraging at a point where legal principles are in need of revival. The following sections of this article build on this encouragement to analyze legal principles in the framework of a cognitive model.

### **E. Summary**

Legal scholars have had an evolving conception of the cognitive model. They flirted with the concept under different rubrics – such as “horse sense,” “practical wisdom” and “virtue ethics.” However no one has ever presented a unified theory of how legal principles can be classified under the cognitive model. Consequently, the cognitive model lost most of its popularity in the face of emerging theories such as Law and Economics. This article strives to revive the importance of the cognitive model and the autonomy of legal thinking. In the remainder of this article, it will be shown that legal principles are an excellent candidate for classification of the law.

## **IV. THE THEORY OF EXPERTISE: THE NEW FRAMEWORK FOR THE COGNITIVE MODEL**

The “cognitive theory of expertise” is an appropriate framework for classifying legal principles because the organization of knowledge is the touchstone of expertise, and offering lawyers a more efficient way to gain expertise is the pragmatic goal of this article.<sup>85</sup> This section shows how legal

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<sup>81</sup> *Id.* at 1439.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.* at 1433.

<sup>84</sup> *Id.*

<sup>85</sup> Any taxonomic model can be built along alternative sets of parameters. For example, countries of the world can be alternatively grouped according to geographical, political or linguistic

principles fit into the existing cognitive theory of expertise. First, it posits that legal minds develop along a cognitive continuum until they think at highly developed “chunks” of abstract knowledge at the expert level. Second, it explains how the continuum of abstraction can be broken into three discrete categories for pragmatic purposes (these discrete categories are labeled *basic principles*, *composite principles* and *complex principles* in this article). Third, it argues that taxonomizing legal principles under these three categories is an efficient way to train lawyers.

### **A. Understanding Expertise: Organization, Chunking and Abstraction**

Expertise has been defined as the ability to solve problems efficiently and accurately, which ability rests on two factors: (i) the amount of knowledge and (ii) the quality of its organization.<sup>86</sup> Simply knowing more does not make an expert. The distinguishing mark of an expert is the ability to organize one’s knowledge pool in ways that permit the expert to recognize patterns and retrieve information from the pool much more efficiently than novices. Operating that organizational structure often requires “chunking” groups of information together, and storing them in mental models with high levels of abstraction.<sup>87</sup> The relationship between organization, abstraction and chunking has been prevalent in the literature of expertise.<sup>88</sup>

The “chunking” of knowledge transforms novices into experts. Leading theories of expertise posit the main difference between experts and novices is the cognitive ability to access relevant knowledge efficiently, achieved by classifying the expert’s entire knowledge pool into various “chunks” and using

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parameters. The choice among these alternatives should be dictated by the desired practical outcome.

<sup>86</sup> Gary L. Blasi, *What Lawyers Know: Lawyering Expertise, Cognitive Science, and the Functions of Theory*, 45 J. LEGAL EDUC. 313, 318 (1995). See also K. Anders Ericsson & Jacqui Smith, *TOWARD A GENERAL THEORY OF EXPERTISE: PROSPECTS AND LIMITS* 42 (Cambridge University Press 1991)(postulating that skill is the function of knowledge and search, denoted by the author in the formula Skill = f (Knowledge, Search)).

<sup>87</sup> Abstraction has been defined as follows: “In philosophical terminology abstraction is the thought process wherein ideas are distanced from objects. Abstraction uses a strategy of simplification of detail, wherein formerly concrete details are left ambiguous, vague, or undefined; thus speaking of things in the abstract demands that the listener have an intuitive or common experience with the speaker, if the speaker expects to be understood.” Reference.com at <http://www.reference.com/browse/wiki/Abstraction> (last visited 28 Dec 2008).

<sup>88</sup> See e.g., Ericsson & Smith, *supra* note 86.

those chunks to access individual pieces of knowledge.<sup>89</sup> The chunks play a guiding role in the cognition process, ushering experts toward the small pockets of knowledge hidden in their long-term memories, and eliminating the inefficient step-by-step process by which novices search each isolated pocket of knowledge. This theory has strong empirical support in at least four domains of expertise: chess, sports, music and physics – as summarized below.

Chess masters retrieve superior chess moves from their long-term memories because they store configurations of chess pieces (chunks) in their memories better than novices, and those chunks serve as cues to elicit the best move possibilities.<sup>90</sup> With experience, chess masters are able to recognize more complex piece configurations as a discrete “chunk” and store it accordingly in their memories.<sup>91</sup> Likewise, it has been shown that expert basketball players classify player configurations on the court in more abstract terms than fans – while experts classify clusters of players in terms of offense, defense, zone-pressure, individual and team (abstract principles), fans simply classify them in terms of the number of players present (concrete objects).<sup>92</sup> Similarly, physics experts classify problems along deeper principles (such as point-masses and energy conservation) whereas novices often use superficial features more directly related to the real world (such as blocks, ropes and slopes).<sup>93</sup> The expert use of deeper principles guides physics experts more efficiently in retrieving the relevant information necessary for the right solution. Finally, it has been shown that expert reading of music depends on the ability to “chunk” notes in certain patterns, which allows the expert musician to solve problems more efficiently – such as noticing notational mistakes out of character with the genre and automatically correcting them back to what the genre would have

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<sup>89</sup> *Id.* at 26, citing W. G. Chase & H. A. Simon, *The Mind's Eye in Chess*, in VISUAL INFORMATION PROCESSING, 215-81 (W. G. Chase ed. 1973).

<sup>90</sup> Chunks in chess can either static or dynamic. Clusters of chess pieces on the board are static chunks. Certain sequences of chess moves are dynamic chunks. Chess experts retain and use both types of chunks more accurately. *See id.* at 55.

<sup>91</sup> K. Anders Ericsson & Jacqui Smith, *Prospects and Limits of the Empirical Study of Expertise: An Introduction*, in TOWARD A GENERAL THEORY OF EXPERTISE: PROSPECTS AND LIMITS 1, 11 (K. Anders Ericsson & Jacqui Smith ed., Cambridge University Press 1991).

<sup>92</sup> Fran Allard & Janet L. Starkes, *Motor-skill Experts in Sports, Dance and Other Domains*, in TOWARD A GENERAL THEORY OF EXPERTISE: PROSPECTS AND LIMITS 126, 135 (K. Anders Ericsson & Jacqui Smith ed., Cambridge University Press 1991).

<sup>93</sup> *See id.* Yuichiro Anzai, *Learning and Use of Representation for Physics Expertise*, in TOWARD A GENERAL THEORY OF EXPERTISE: PROSPECTS AND LIMITS 64, 65 (K. Anders Ericsson & Jacqui Smith ed., Cambridge University Press 1991) (also showing that diagrams are an expert tool used to classify and solve physics problems).

predicted.<sup>94</sup> No empirical study of legal thinking has been attempted to fit this model.

Some common results emerge from these examples. First, novices perceive problems in terms of concrete objects – such as (i) chess pieces; (ii) basketball players; (iii) inclined slopes; (iv) musical notes – while experts think in terms of abstract principles that are comprised of chunks of concrete objects – such as (i) pin configuration involving one chess piece threatening two opponent pieces simultaneously; (ii) double-stack offense with one basketball player in the middle and two on the wings; (iii) energy conservation where energy can be transferred between two objects but cannot be created or destroyed; and (iv) repeated syncopation where accents are on the notes played between the beats. Second, as a result of this difference in capacity for abstract thinking, novices approach problems step-by-step (pondering each discrete relationship between objects every time a new problem emerges) while experts can go to the crux of the problem more quickly because their abstract organizational framework rapidly guides them to the relevant piece of information without having to search their entire memory. In parallel with these various domains of expertise, this article contends that expertise in the legal field is also governed by the same theoretical principles summarized above.<sup>95</sup>

### **B. Using Expertise: How Lawyers Use Elements of Expertise**

The touchstones of expertise are knowledge and organization. Lawyers, like other experts, operate in complex knowledge fields and perform cognitive acts to organize that knowledge in ways that enable efficient access.<sup>96</sup> While each lawyer's cognitive process might be unique, it is desirable to identify a generalized pattern of how lawyers organize knowledge – at least for the purpose of organizing legal principles in a similar pattern. The following

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<sup>94</sup> See John Sloboda, *Musical Expertise*, in TOWARD A GENERAL THEORY OF EXPERTISE: PROSPECTS AND LIMITS 153, 156 (K. Anders Ericsson & Jacqui Smith ed., Cambridge University Press 1991).

<sup>95</sup> Chunking is not the only cognitive theory of expertise, but it is one that has wide appeal. For alternative theories, see generally Ericsson & Smith, *supra* note 93.

<sup>96</sup> Despite the role of expertise in lawyering, the literature on expertise has not focused on law at all. For example, in a high-profile conference on the cutting-edge theories of expertise at the time, scholars studied the domains of chess, medicine, physics, sports, music, dance and reading (and further referenced domains such as military, business and transcription typing), but did not make any reference to lawyering. See generally *id.* Some law review notes have since recognized law as a domain of expertise, but none has rigorously tested current theories of expertise on the field of law. See e.g., Blasi, *supra* note 86.

hypothetical suggests that abstraction (ie. distillation of abstract principles from concrete objects) guides lawyers in organizing their knowledge.

Lawyers think along various levels of abstraction. For example, take the hypothetical of a shipwreck in the English Channel. A non-lawyer would likely react to its concrete facts, such as the number of casualties or amount of monetary damage (zero degrees of abstraction). But a lawyer would probably invoke the English concept of common law tort and think about how the facts fit into its principles (one degree of abstraction). Moreover, a lawyer might invoke the concept of preemption and analyze whether any English statutes preempt the common law concepts already analyzed above, such as a statutory cap on remedies (two degrees of abstraction, with the added analysis of statutory law). Further, anticipating a conflict between French and English laws due to the location of the shipwreck, she might compare the results of her tort analysis (English law) and her delict analysis (French law), in an effort to anticipate where the victims would have a better chance of recovery (two degrees of abstraction, with the added jurisdiction). Whether anticipating litigation in England or France, she would probably invoke the concept of appellate review and consider the chances of winning should the trial be appealed under either jurisdiction, and then compare those results (three degrees of abstraction, with the added appellate institution), and so on, with each new level of abstraction building on a combination of factors already analyzed in the preceding level of abstraction.<sup>97</sup>

The hypothetical shows how one particular lawyer might store knowledge at various levels of abstraction. It spans a continuum from the concrete (monetary damage in accident) to the abstract (appellate review). It illustrates how lawyers generally move between levels of abstraction and suggests that some chunking may be present in navigating the framework. For example, the lawyer places (i) courts and legislatures in one chunk to arrive at the abstract idea of preemption; (ii) trial and appellate courts in another chunk to arrive at the abstract idea of appellate review; (iii) English and French law in yet a

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<sup>97</sup> The following caveats about the hypothetical do not take away from its practical use. First, the hypothetical forces the levels of abstraction into a stratified structure of numerical degrees rather than a continuum. Second, it suggests oversimplified instances of chunking (two objects chunked into one abstract idea) and omits the more complex interrelations that exist in law. Third, it provides a less than exhaustive list of factors that a lawyer would consider under the fact pattern. Fourth, it does not show how an equally expert lawyer might approach the problem from an alternative angle. Different lawyers might approach the same problem in variant organizational modes, and their switching points between levels of abstraction may vary. Despite these caveats, the general observation stands that lawyers universally operate along a continuum between the concrete and the abstract, and each lawyer has his or her own cognitive method for navigating that continuum, where "chunking" probably plays an important role.

separate chunk to arrive at the abstract idea of conflict of laws, and so on. This type of "chunking" is very similar to those cognitive processes discussed above for other domains such as chess. The similarity suggests that legal thinking may fit comfortably into the existing cognitive theories of expertise.

### **C. Dissecting Expertise: Three Discrete Levels of Abstraction**

Because legal expertise is defined along a continuum of abstraction, as discussed above, it is challenging to taxonomize legal principles under discrete categories. However this challenge can be overcome by fictionally dissecting the continuum into any number of discrete points – a fictional tool used here for analytical purposes.<sup>98</sup> Accordingly, Section IV of this article will offer three categories of legal principles: basic principles, composite principles and complex principles. Each category is more abstract than the preceding one, in the sense that it requires the expert lawyer to delve deeper into the more complex territories of her organizational framework.

1. Basic principles are relatively obvious and easily accessible. They involve simple concepts such as time and scope, and have a concrete connection to our non-legal real world experiences. They require little or no prior legal knowledge to understand. The lawyer has to search little to find them, and she finds them on the surface of her knowledge pool. They are encountered early on in the lawyer's socialization into the field of expertise, and frequently thereafter. While each basic principle may belong to a different doctrine, they all share the same cognitive aspect of being easy to access.

2. Composite principles are less obvious. Implementing them requires more abstract organization of the mental framework, either because they require more prior legal knowledge or they require chunking of basic principles in a non-obvious way. For example the principle of comparativism requires the lawyer to understand two legal systems between which a comparison can be applied. The lawyer has to delve deeper into his reservoir of knowledge to apply these principles. They involve more complex concepts such as proportionality and balancing.

3. Complex principles are the most difficult to access. They require the most abstract organization, either because they require a second degree of "chunking" or seeing a connection between "chunks" that is not obvious. In

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<sup>98</sup> Dissecting a continuum for analytical purposes is a fictional move, in other words it pretends as if the continuum were a collection of discrete sections. Fiction is in fact one of the legal principles that deserves deeper study (such as the disaggregation of certain transactions under tax law), but such analysis is outside the scope of this article.

fact, some of the most important advances in legal thought are achieved through such leaps of logic. The lawyer has to delve most deeply into her reservoir of legal and non-legal knowledge to apply these principles. They involve complex concepts such as arbitrage.<sup>99</sup>

This tripartite conception of taxonomy is a workable way to organize a toolbox of legal principles, because it traces the very cognitive process of the expert lawyer. Legal expertise is especially related to taxonomy because it involves the ability to taxonomize and re-taxonomize both at different levels of abstraction and from different starting points when confronting the same set of facts. Accordingly its implementation in legal training promises to be workable. In fact, other fields of expertise have used their own tripartite conceptions of abstraction, to reach specified pragmatic goals.<sup>100</sup> The two examples below reinforce the point. The first is the taxonomy of architectural moves for the practical purpose of copyright protection, and the second is the taxonomy of chess moves for the practical purpose of chess education.

Architecture is a domain of expertise that parallels law in relevant ways. Both the architect and the lawyer build structures that will perform certain functions for people, subject to certain constraints such as cost, building site, laws of gravity, legal regime, and ethics.<sup>101</sup> Both the architect and the lawyer solve the problem by deploying analysis at various levels of abstraction. For example, the architect has to think on a continuum of abstraction, from such tangible issues as what grade steel to use in reinforcing the concrete, to such abstract issues as how the client will experience the space in the finished structure. But that continuum has to be broken down to discrete categories for some practical purposes.

For example, U.S. copyright law protects certain elements of architectural design, but not other elements.<sup>102</sup> In delineating those elements protected by the law, one commentator has suggested that protected elements of design must

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<sup>99</sup> For a compelling visual conception of the legal field, see Schlag, *supra* note 68 (offering four alternative metaphors for visualizing the legal system: (i) the grid aesthetic; (ii) the energy aesthetic; (iii) perspectivism; and (iv) the disassociative aesthetic).

<sup>100</sup> Lawyers can use taxonomies for different purposes (for example: legislation, education).

<sup>101</sup> See generally Blasi, *supra* note 86.

<sup>102</sup> Architectural Works Copyright Protection Act of 1990, Pub. L. No. 101-650, 701-706, 104 Stat. 5133 (1990) (codified at scattered sections of Title 17, U.S.C.).

track the three levels of abstraction at which architects think.<sup>103</sup> He argues that copyrightable material may be divided into three general categories, because architects think at three levels of abstraction: (1) design elements, (2) relationships between the elements, and (3) ordering ideas. The first category (design elements) is the most concrete dimension of architectural creation, and includes concrete elements such as structure, space definition, and light. The second category (relationship between the elements) represents a more abstract dimension of the architect's mind, and includes more abstract comparisons such as building-to-context, unit-to-whole, and repetitive-to-unique. The third category (ordering ideas) is the most abstract depth of the architect's expertise, and includes complex ideas such as hierarchy, layering, and the choice among symmetry, balance-point and counterpoint. Similarly, the continuum of abstract legal thinking can be broken down for the pragmatic purpose of taxonomizing legal principles. In fact a tripartite dissection of legal principles will be illustrated in Section IV.

The expertise domain of chess offers another tripartite arrangement of abstract thinking levels. Chess students are commonly taught the opening, middlegame and endgame of chess in separate sessions. A master chess player, like a lawyer, uses intelligence to "relate a perceived pattern to past patterns, and to develop the present position into an overall game plan."<sup>104</sup> While chess players think along a continuum of abstraction, this can be broken down for the pragmatic purpose of teaching chess. Chess literature asserts that expert thinking distinguishes itself from novice thinking most noticeably during the middlegame, then during the endgame, and least noticeably during the opening.<sup>105</sup> In the opening move of a chess game, it is nearly impossible to distinguish an expert from a novice, because the information on the board does not lend itself to abstract processing. Each player has a limited number of tangible moves available<sup>106</sup> and it is too early at that stage to associate the discrete move with any abstract strategy. In the endgame, where there are usually very few pieces left, the catalogue of moves available to the player is again limited. However abstract thinking pays more in this scenario because the static skeleton of the pieces is unique in every endgame (while it is standard in the opening) and thus experts can use intuitive strategies to use that skeleton to

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<sup>103</sup> Raleigh W. Newsam, II, *Architecture and Copyright – Separating the Poetic From the Prosaic*, 71 TUL. L. REV. 1073, 1117 (1997) (footnotes omitted).

<sup>104</sup> Howard Gardner, *FRAMES OF MIND: THE THEORY OF MULTIPLE INTELLIGENCES*, 192 (Basic Books 1993) (1983).

<sup>105</sup> John Nunn, *LEARN CHESS* (Gambit Publications Ltd. 2000).

<sup>106</sup> Only one of the eight pawns or two knights can be moved.

their advantage.<sup>107</sup> Thus the middlegame is where the expert distinguishes himself most, because he can see the board in a more abstract manner.<sup>108</sup>

Architecture and chess illustrate how the cognitive process of abstraction can be captured in discrete categories, and how these categories can be used for pragmatic purposes. This article follows a similar theoretical framework for law, and proposes its own tripartite classification of legal principles for the ultimate pragmatic goal of creating a legal training system that more effectively responds to the demands of the global market.

#### **D. Teaching Expertise: Utility in Legal Education and Training**

It can be shown that the tripartite classification of legal principles parallels the lawyer's own stages of cognitive development. Incidentally, clinical legal scholars have defined legal education as a process of socializing the student into the legal discourse.<sup>109</sup> It has been demonstrated that students develop their skills through a process of moving from concrete to abstract knowledge.<sup>110</sup> In fact, one conception of legal writing socialization again divides the stages of abstract thinking into a tripartite structure: pre-socialized, socialized, post-socialized.<sup>111</sup>

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<sup>107</sup> For example, take the premise that the object of the chess is to capture the opponent's king. A novice player may think he should conduct the middlegame by attacking the opponent king until it falls – an intuitive adversarial concept based on continual retorts and parries until one of the kings falls (winning by attack). However expert advice quickly reveals a second strategy: take one piece from the opponent early on, and then enter into a long series of bargains wherein you exchange pieces of equal value with the opponent, inevitably bringing you to an endgame where you are bound to win because you have a material advantage originating from your early capture (winning by material advantage). Many expert games are won by using the second strategy, and in fact many grandmasters surrender in the middle of the game when they lose a small piece because they foresee the impossibility of coming back from the material disadvantage. This second strategy is an expert's abstract conception of the chess middlegame, as opposed to the novice's simple logic of attacking the opponent's king.

<sup>108</sup> See Nunn, *supra* note 105, at 142 (asserting “[t]he middlegame is perhaps the part of chess in which differences in skill are most apparent. To some extent, opening play is a matter of careful study, but in the middlegame there are fewer guidelines and the player's skill is the dominant factor.”).

<sup>109</sup> See e.g., Joseph M. Williams, *On the Maturing of Legal Writers: Two Models of Growth and Development*, 1 J. LEGAL WRITING INST. 1 (1991).

<sup>110</sup> See *id.* at 11 (stating that “[t]he single common finding in the research has been that as novices start to formulate a solution to a problem, they tend to seize on the components of the problem statement that are most concrete, most visible . . . . On the other hand, because the expert has seen and solved countless problems of this kind and others, he is able to transcend the concrete representation of the problem and categorize it at a more general level.”).

<sup>111</sup> See *id.* at 24-30; see also Ericsson and Smith, *supra* note 93 (delineating three stages of expertise acquisition: the “cognitive stage” characterized by an effort to understand; the

In the pre-socialized stage, the student writes by giving excessive deference to the authority of the concrete, such as quoting the letter of the law in excessive amounts. In the socialized stage, the student starts writing in more abstract legal terms but fails to translate those concepts into words that are intelligible to non-lawyers. In the post-socialized stage, the student still conveys the abstract legal concepts in an efficient and effective manner, but goes beyond the opaque legalese jargon to convey her points to all readers. If socialization into the legal discourse is indeed a journey in various levels of abstraction, then a taxonomy of legal principles tracking those levels of abstraction will serve very well in legal education, which ultimately seeks to develop the cognitive processes of an inexperienced lawyer. Novice lawyers who are serious about building expertise can find that power in studying legal principles that are organized in the same very way that their cognition develops through the years of legal training.

### **E. Summary**

Abstraction is a defining feature of legal principles. This feature is in keeping with the touchstone of other domains of expertise – the ability to organize information into abstract chunks. Other domains have used this touchstone as a guiding principle in imparting expertise to novices. Specifically, they have done so by dissecting the abstract field into discrete groups, in a way that ensures the novice's cognition conforms to this partition. This article offers a way of performing that exercise in the legal domain – something that has never been done before – by dissecting the abstraction of legal thought into three discrete levels. The newly constructed categories are labeled as the basic, composite and complex legal principles. This article establishes this theoretical framework for examining particular legal principles, because it has been proven that novices in the law develop their legal analytical skills by moving from a concrete to an abstract understanding of the law. If the legal principles examined are offered for use in legal training, then their organization must mirror the cognitive processes through which novices in the legal field advance.

## **V. APPLYING THE COGNITIVE MODEL TO SELECTED LEGAL PRINCIPLES**

This section will study one example in each category of legal principles – basic, composite and complex. As discussed in the preceding section, each principle will be more abstract and therefore cognitively advanced from the

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“associative stage” involving making the cognitive process efficient to allow rapid retrieval of required information; and the “autonomous stage” where performance is automatic and conscious cognition is minimal).

preceding one. For example, in reading this section, the reader should consider how a basic legal principle (proportionality) can be applied by a novice lawyer, while a composite legal principle (comparativism) might require more experience and a complex principle (arbitrage) is more commonly applied by experts.

This section will also show the “portable” quality of these three legal principles in support of the pragmatic goal of their classification. In particular, it will show that these principles can transcend (i) doctrines; (ii) jurisdictions; (iii) professions. First, a number of legal principles are common across doctrinal classifications of law – international, domestic, public, private, substantive and procedural. The liberation from doctrinal boundaries is important because it gives lawyers some fluency in doctrines where they are not expert. Second, they are common across diverse jurisdictions – civil, common and mixed law jurisdictions. The practical implication is that lawyer trained in one jurisdiction can have productive capacity in another jurisdiction. Third, they are common across different types of law practice – litigation, adjudication, legislation, transactional and academic. The functional result of focusing on cross-professional legal principles is enhanced dialogue among actors in the legal community.

#### **A. Basic Legal Principles: Proportionality**

Proportionality is a “basic” legal principle because it is relatively closely-tied to our concrete non-legal world experiences, and therefore requires less “chunking” of existing legal knowledge. Essentially, it only requires a one-to-one comparison of two countervailing factors. The following examples will illustrate this cognitive quality of the proportionality principle, and also show its “portable” quality by referring to different jurisdictions, doctrines and legal professions.

Under customary public international law governing the use of force, the doctrine of proportionality developed as a fundamental tool to assess the legality of international reprisals. The widely accepted rule on reprisals was articulated in the seminal arbitral decision in *The Naulilaa Case*.<sup>112</sup> In the underlying case, Portuguese troops had killed three Germans in a skirmish that resulted from an innocent translation error in early twentieth century colonial Africa. In response, the local German governor sent a punitive force that invaded local territories and defeated Portuguese troops. The tribunal found the German reprisal illegal because it was disproportionate to the injury suffered by

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<sup>112</sup> *The Naulilaa Case* (Port. v. F.R.G.), 8 Trib. Arb. Mixtes 422 (1928).

Germany.<sup>113</sup> Thus the deciding rule in the case was based on the basic principle of proportionality, though the tribunal did not go much beyond expressing the basic principle (for example, it offered no guidance on what factors should go into the calculation of proportionality).

Modern reprisals often take the form of economic retaliation. However despite the doctrinal differences between the law of armed conflict and the law of international trade, the same principle of proportionality governs the legality of the conduct in both cases. For example, the treaty regime embodied in World Trade Organization (“WTO”) treaties provides complex liability rules and an enforcement mechanism that relies heavily on retaliation. Under the treaty terms, a signatory nation may bring a complaint against another for implementing national laws that allegedly violate the terms of the treaty. The complaint is resolved by an international tribunal. If the tribunal finds for the complainant, then the offending party must bring its laws into compliance with the treaty. If it fails to do so, however, its obligation cannot be enforced using the same mechanisms that local courts use to enforce private contracts, because the defendant has sovereign immunity from the tribunal’s personal jurisdiction.<sup>114</sup> Without more, this WTO regime and its complex liability rules would be ineffective, because they would have no working enforcement mechanism.<sup>115</sup>

However the principle of proportional retaliation solves this problem. Under the WTO regime, if the offending nation refuses to comply with the tribunal’s ruling, then the complainant has the right to retaliate by suspending its own trade concessions vis-à-vis the offending party. The treaty states that such retaliation must be “equivalent to the level of nullification and impairment” caused by the initial offense – a measure of proportionality.<sup>116</sup> Scholars argue that such retaliation provides the necessary policing system in the WTO mechanism.<sup>117</sup> Thus the entire WTO mechanism gains its operational

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<sup>113</sup> *Id.*

<sup>114</sup> In domestic contract litigation, the plaintiff can bring an enforcement action if the defendant does not pay the judgment. If the defendant still does not pay, then the government has the power to seize the defendant’s property (such as garnishment of wages) or even jail the non-performing defendant, because the state has personal jurisdiction over the defendant’s person. Such jurisdiction is absent over sovereign nations.

<sup>115</sup> Given the established principle of sovereignty in public international law, the lack of enforcement could be fatal to such treaty regimes.

<sup>116</sup> World Trade Organization Dispute Settlement Understanding, art. 22, §3.

<sup>117</sup> See John H. Jackson, *International Law Status of WTO Dispute Settlement Reports: Obligation to Comply or Option to “Buy Out”?*, 98 AM. J. INT’L L. 109 (2004) (arguing that while WTO rules

force from the presence of a proportionality principle. Unlike the principle of military reprisals discussed above, the WTO treaty also gives computational guidance on how to measure proportionality, which is necessitated by the economic nature of the domain. Despite the inherent differences between war and commerce in terms of computing proportionality, the principle of proportionality occupies an equally central position under each doctrine.

The application of proportionality is not limited to the international law of war and commerce. It also lies at the core of certain complex domestic law doctrines. For instance, one of the most complex areas of U.S. constitutional law is Eleventh Amendment state sovereign immunity, which often confuses law students so much that its analysis is sometimes entirely foregone in basic constitutional law courses. However despite that complexity, the familiar proportionality principle makes it easier to analyze.

In very simple terms, the Eleventh Amendment immunizes sovereign states from suit by private individuals without the state's consent.<sup>118</sup> At the same time, the Fourteenth Amendment authorizes the U.S. Congress to protect certain freedoms of individual citizens, if necessary by abrogating states' sovereign immunities.<sup>119</sup> At first sight these two clauses seem to clash in situations where the state violates the Fourteenth Amendment rights of individuals.<sup>120</sup> However the U.S. Congress's power to abrogate sovereign immunity is restricted by federalism – it can only do so if abrogation is a congruent and proportional remedy to such state violation.<sup>121</sup> Thus, the concept that resolves the tension between the Eleventh and Fourteenth Amendments is proportionality. For example in *City of Boerne v. Flores*, the issue was whether the federal Religious Freedom Restoration Act of 1993 (RFRA), in an effort to protect Fourteenth Amendment rights, validly abrogated the Eleventh Amendment immunity of the

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may not be binding in the traditional sense of governments using their police powers to enforce legal obligations, the retaliation mechanism nevertheless provides a working enforcement mechanism rather than a purely economic, but not legally enforceable, efficient breach option).

<sup>118</sup> U.S. CONST. amend. XI.

<sup>119</sup> U.S. CONST. amend. XIV.

<sup>120</sup> The apparent clash is the following: If the state violates individuals' Fourteenth Amendment rights, then Congress has the power to protect the individuals by abrogating state sovereign immunity. However when Congress abrogates sovereign immunity, it lifts the protection of the Eleventh Amendment protecting sovereign states from private law suits.

<sup>121</sup> *Nevada Dep't of Human Resources v. Hibbs*, 538 U.S. 721 (2003) (holding that Congress acted within its authority under the enforcement section of the Fourteenth Amendment when it sought to abrogate Eleventh Amendment immunity for purposes of the family-leave provision of the Family and Medical Leave Act, as the provision is congruent and proportional to the targeted gender discrimination).

State of Texas from private suits – thus allowing private plaintiffs to sue the sovereign state.<sup>122</sup> The Supreme Court held that the federal act did not validly abrogate Eleventh Amendment sovereign immunity, essentially because its reach was disproportionate to allegedly unconstitutional conduct carried out by the state.<sup>123</sup> The Supreme Court noted that Congress had uncovered only "anecdotal evidence" that did not by itself reveal a "widespread pattern of religious discrimination [by the state]."<sup>124</sup> Accordingly, the RFRA was found to be "so out of proportion to a supposed remedial or preventive object that it cannot be understood as responsive to, or designed to prevent, unconstitutional behavior."<sup>125</sup> Even though the structural frame of the issue was very complex – involving the federal constitution, a federal law, a state law, state practice and even municipal laws and practice – the basic principle of proportionality was the dispositive tool used by the Supreme Court.

Perhaps of all examples, this one should provide the strongest evidence of the utility of legal principles under the cognitive model. If law students were given an opportunity to study the proportionality principle in advance of the constitutional issue, they might be less baffled by the intricacies of the Eleventh Amendment.

Finally, the proportionality principle also applies in domestic private law – for example in hostile corporate takeovers. Traditionally in a hostile takeover, executives of the target company have strong incentives to resist takeover, mainly to entrench themselves in office. However such incentives should be constrained because they may conflict with the liquidity rights of the shareholders, who may want to sell their shares at a premium to the hostile bidder. Accordingly, U.S. common law has developed doctrinal limitations to takeover defenses, which revolve around proportionality. Specifically, the Delaware Supreme Court articulated in *Unocal Corp. v. Mesa Petroleum Co.* that any defensive measure the board adopts must be reasonable in relation to the threat posed – which is widely known as the “proportionality test.”<sup>126</sup> In

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<sup>122</sup> *City of Boerne v. Flores*, 521 U.S. 507 (1997).

<sup>123</sup> The challenged state conduct was the denial of a building permit necessary to enlarge a church under an ordinance governing historic preservation. *Id.*

<sup>124</sup> *Id.* at 531.

<sup>125</sup> *Id.* at 532.

<sup>126</sup> *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del. 1985). The court also articulated factors to consider in assessing whether defenses are proportional to takeover threats: “inadequacy of the price offered, nature and timing of the offer, questions of illegality, the impact on “constituencies” other than shareholders (i.e., creditors, customers, employees, and perhaps

*Unocal*, the board effected a self-tender for its own shares at a high price in order to defend against a hostile offer from a minority shareholder. The court upheld the takeover defense because it was proportional to the threat posed by the minority shareholder, since the threat was a serious attempt at greenmail via a coercive two-tier tender offer with an inadequate price at the front-end and junk-bonds at the back-end.<sup>127</sup>

In summary, proportionality is a basic principle because it consists of the straight comparison of two countervailing forces in legal doctrine. This requires almost no “chunking” of prior legal knowledge and can be applied quite readily from a cognitive perspective. Moreover, it is a “portable” principle. It applies under public international law (military reprisals), private international law (economic retaliation), public domestic law (constitutional state sovereign immunity) and private domestic law (hostile corporate takeovers). These examples are far from exhaustive.<sup>128</sup>

### **B. Composite Legal Principles: Comparativism**

Comparativism is a composite legal principle because it requires a higher level “chunking” of previously acquired legal knowledge. When two legal systems are compared, it is not enough just to perform the act of comparison, but one must also understand the internal workings of the legal systems that are being compared. This principle is also “portable” because it carries across various jurisdictions, doctrines and legal professions.

Comparativism can be used as an *ex-post* move to buttress a legal conclusion that is reached through classic doctrinal reasoning. For example, the Turkish Constitutional Court used the comparativism principle in 1996 when it struck down the controversial adultery provision of the criminal code.<sup>129</sup> The challenged criminal code provision had different liability standards for men and women committing adultery.<sup>130</sup> The petitioner alleged that such discrepancy

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even the community generally), the risk of nonconsummation, and the quality of securities being offered in the exchange.” *Id.* at 955.

<sup>127</sup> *Id.*

<sup>128</sup> More extensive study of each principle would be a valuable project for future scholarship. This article only sets the theoretical framework for such studies.

<sup>129</sup> See Turkish Constitutional Court, Decision No. 1996/15 (1996), published in the *Official Gazette* (Turk.) No. 22860 (December 27, 1996).

<sup>130</sup> For a woman, the liability standard was that “A wife who commits adultery will be convicted to a prison sentence of six months to three years.” CRIMINAL CODE (Turk.), art. 440. For a man, the liability standard was that “A husband who maintains an unmarried woman in the home where

violated the equal protection clause of the Turkish Constitution.<sup>131</sup> The Constitutional Court reasoned that the Turkish Civil Code accords an equal burden of loyalty to husband and wife within the family, and that the double standard in the subject provision was a form of gender-based discrimination that violated the equal protection promise of the Constitution without having the defense of any just reasons.<sup>132</sup> This reasoning based on gender equality was sufficient to resolve the issue within the bounds of Turkish constitutional law.

However the Constitutional Court proceeded with a long discussion of international law to support its conclusion. Referring to the European Convention on Human Rights, the Court stated that “international documents are considered in the analysis of constitutionality even though they are not binding on such analysis . . . [because these] documents reflect the common ideals of humanity among nations, where the principle of ‘equality’ is the starting point for the enjoyment of rights and freedoms.”<sup>133</sup> The Court went even further to assert that nations should keep their laws up-to-date with international legal developments: “[s]uch developments in contemporary legal understanding necessitate nations to reconsider their legal order and to eradicate incongruities that they identify.”<sup>134</sup> The judgment to align itself with another jurisdiction’s laws likely required the type of composite analysis that might not be expected from a novice, as it presupposes a strong understanding of that foreign jurisdiction as well as a value judgment of why it should be aligned with.

The comparativism principle might have even more utility where a judicial conclusion needs to be defended against ideological attacks. Under those circumstances, the principle is not only a tool to buttress a legal conclusion, but necessary to justify and defend it against potential attack. The Pakistan Supreme Court has applied the principle in that manner, in order to defend a

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he resides with his own wife or in another place known by everybody for the sake of leading to a husband-and-wife like relationship will be convicted to a prison sentence of six months to three years.” *Id.* at art. 441. From the foregoing, it is obvious that a man’s conduct had to meet more elements to rise to the level of adultery.

<sup>131</sup> TURKISH CONST. art. 10 (guaranteeing that “[a]ll individuals are equal without any discrimination before the law, irrespective of language, race, colour, sex, political opinion, philosophical belief, religion and sect, or any such considerations. No privilege shall be granted to any individual, family, group or class. State organs and administrative authorities shall act in compliance with the principle of equality before the law in all their proceedings.”).

<sup>132</sup> See Turkish Constitutional Court, Decision No. 1996/15, *supra* note 129.

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

potentially unpopular opinion.<sup>135</sup> The issue was an inheritance claim by a woman against her brothers,<sup>136</sup> and the court favored the woman's position on the merits. However such a decision would have been likely to risk criticism from fundamentalist factions at that time, especially because it would vindicate a woman's rights at the expense of her two brothers.<sup>137</sup> In anticipation of such attack, the court deployed a comparative move before it analyzed the merits of the case. In particular, it referenced various foreign bodies of law to illustrate that Islamic law protects women and that it should be cleansed of alien customs and laws denigrating the status of women. It illustrated how Roman law originally gave very little personal and proprietary independence to women, how under early English Canon law women had no separate legal existence, and how the position of the woman under Hindu law is one of perpetual tutelage under her father, husband or son.<sup>138</sup> After this survey, the Court illustrated how women generally had superior rights under Islamic law, and concluded that "under the Islamic law . . . woman occupies a superior legal position in comparison to her English or Hindu sister."<sup>139</sup> The ingenuity of the Court's move was in appeasing the potential opponents of the decision while at the same time reaching an unpopular result. Unlike the Turkish Court which used the principle as an *ex-post* reinforcing factor, the Pakistani Court used it as an *ex-ante* method to defend the popularity of the merits analysis.

Comparativism has also been used to decide cases at the first instance. For example, in *Greenspan v. Slate*, a doctor sued a minor child's parents for failure to pay for the necessities supplied to their child in an emergency.<sup>140</sup> The judge

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<sup>135</sup> Ghulam Ali v. Mst Ghulam Sarwar Naqvi, PLD 1990 SC 1 (Pakistan Supreme Court) (1990).

<sup>136</sup> The respondent sought to claim under Islamic law her share of property left by her father to her and her three brothers. The brothers opposed her suit on the grounds that she had relinquished her claim because they had expended sums of money on her maintenance, her two marriages, and a murder case in which she was involved. *Id.*

<sup>137</sup> See, e.g., Human Rights Watch, *Developments Report* (1993) (reporting that "[w]omen in Pakistan also continued to suffer severe discrimination under the law . . . [and there was] bias against women in the courts."), available at <http://www.hrw.org> (last visited 28 Dec 2008).

<sup>138</sup> Ghulam Ali, PLD 1990 SC 1 (note the chronological weakness in the reasoning: the Court did not reference modern foreign laws, but those which already existed at the time when Islamic law first came into existence – in effect avoiding a direct comparison of the legal systems at the same point in history).

<sup>139</sup> *Id.* at 43.

<sup>140</sup> *Greenspan v. Slate*, 97 A.2d 390 (N.J. 1953) (where the child had injured her foot playing basketball, which injury a doctor discovered by chance. The doctor treated her without contract or express authorization from her parents, and then sent home a bill for his services, which the parents refused to pay.).

avored the plaintiff's position on its merits but could not support it by legal rules – either in common law or criminal law. Under common law, he found that the moral obligation of the parents would flow not to the plaintiff, but to the child. Under criminal law he found that even if there were a remedy it would flow not to the plaintiff, but to the state. His last resort was to appeal to equity as embodied by the positive laws of various European jurisdictions (where there is no equity doctrine). In particular, he quoted the civil codes of Austria, France, Germany, Italy and Switzerland to support a conclusion that the plaintiffs had a civil remedy.<sup>141</sup> In the final analysis, this judge used comparativism to give effect to the doctrine of equity over the competing doctrines of positive U.S. law. This is a powerful result because it suggests comparativism can be used as a substitute for equity when the rules of domestic positive law do not produce the desired result.

Finally, comparativism can be used to reverse the law. In contrast to the examples above where it was used to effect, buttress or justify an interpretation of law, reversal is a more extreme and rare outcome.<sup>142</sup> In that sense, comparativism is an even more powerful tool when it is used to effect a reversal. The U.S. Supreme Court recently used this tool to overrule itself and reverse the law of sodomy under the U.S. constitution. In *Lawrence v. Texas*,<sup>143</sup> the Court reviewed the constitutionality of a Texas law that outlawed sodomy.<sup>144</sup> The petitioners challenged the law for violating both the Equal Protection and the Due Process clauses of the Fourteenth Amendment to the Constitution.<sup>145</sup> The Supreme Court had already ruled on the same legal issue in *Bowers v. Hardwick*, where a Georgia law prohibiting sodomy had been upheld in the face of the same constitutional challenge.<sup>146</sup> The Court would have to overrule its own holding in *Bowers* in order to strike down the statute challenged in *Lawrence*, a rare outcome in constitutional jurisprudence due to the *stare decisis* doctrine in common law systems. Nonetheless, the Court

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<sup>141</sup> *Id.*, quoting CIVIL CODE (Aus.) art. 143; CIVIL CODE (Fr.) art. 203; CIVIL CODE (F.R.G.) art. 1601; CIVIL CODE (Italy) art. 147; CIVIL CODE (Switz.) art. 271.

<sup>142</sup> Note that the Turkish Supreme Court did not reverse its own jurisprudence on adultery law in the example above, but struck down at first instance a national law as unconstitutional.

<sup>143</sup> *Lawrence v. Texas*, 539 U.S. 558 (2003).

<sup>144</sup> Tex. Penal Code Ann. §21.06(a) (2003) (reading “[a] person commits an offense if he engages in deviate sexual intercourse with another individual of the same sex.”).

<sup>145</sup> U.S. CONST. amend. XIV (reading “. . . nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”).

<sup>146</sup> *Bowers v. Hardwick*, 478 U.S. 186 (1986).

overruled itself, and it used comparativism to justify the reversal. Specifically, it cited an opinion by the European Court of Human Rights, where an Irish law prohibiting consensual sodomy had been held invalid under the European Convention of Human Rights.<sup>147</sup> The Court emphasized the growing popularity of this European holding, by pointing out that it was binding in 21 countries when it was made, and in 45 countries as of the *Lawrence* opinion.<sup>148</sup> It went even further by generalizing that to the extent “we [share] values with a wider civilization . . . [t]he right the petitioners seek in this case has been accepted as an integral part of human freedom in many other countries.”<sup>149</sup> In this complex move synthesizing fundamental American and European values, the Court acted on a highly abstracted vision of social change.

In summary, comparativism is a composite principle because it requires a second degree of “chunking” of legal knowledge. When comparing two legal systems, the legal actor already understands how each legal system operates in the context. As such, it requires a higher level of abstraction and cognitive process, and is probably more common in more experienced legal minds. It is also a “portable” principle. It applies in civil law traditions (Turkey), common law traditions (U.S.) and mixed law traditions (Pakistan). It also transcends doctrinal boundaries. It is used in criminal law (adultery in Turkey and sodomy in the U.S.), family law (inheritance in Pakistan) and obligations law (contracts in the U.S.). These examples are far from exhaustive. In fact, scholarly literature has recognized comparativism as an increasingly popular methodology in legal thinking.<sup>150</sup> Understanding the comparativism principle can not only increase the cross-border fluency of the modern lawyer but also provide “an avenue to new insights about one’s own legal system.”<sup>151</sup>

### C. Complex Legal Principles: Arbitrage

Arbitrage is a complex legal principle because it requires a yet higher degree of “chunking” of legal knowledge than the principles studied above. Not only does it require understanding and comparing two different legal regimes, but it also involves creating new value (or a third regime) out of the

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<sup>147</sup> *Dudgeon v. United Kingdom*, 45 Eur. Ct. H. R. (1981).

<sup>148</sup> *Lawrence*, 539 U.S. at 558.

<sup>149</sup> *Id.* at 577.

<sup>150</sup> See generally, Hiram E. Chodosh, *Comparing Comparisons: In Search of Methodology*, 84 IOWA L. REV. 1025 (1999).

<sup>151</sup> Kai Schadbach, *The Benefits of Comparative Law: A Continental European View*, 16 B.U. INT’L L.J. 331, 333 (1998).

discrepancies found. Thus the level of cognitive synthesis is more abstract and involved. For that reason complex principles are probably used less frequently and by more expert legal thinkers. As with the principles studies above, arbitrage is “portable” because it is common across jurisdictions, doctrines and legal professions.

The term arbitrage is most widely used in finance, and it refers to “a trading strategy that looks to take advantage of price differences of the same security, currency or commodity, trading on different exchanges.”<sup>152</sup> In law, the concept of arbitrage arises when the same subject is treated differently under two different bodies of law. An arbitrage move takes advantage of that discrepancy to reach a desired legal result, whatever it may be. The field is not limited to finance. For example, the entire concept of high courts adjudicating to harmonize diverging interpretations of the law in lower courts is one based on arbitrage.<sup>153</sup>

A textbook example of arbitrage is the financing method of securitization. Securitization is a technique used to raise financing, which is premised on the concept of regulatory arbitrage.<sup>154</sup> In a typical securitization transaction, the originating firm sells its rights to certain future monies (“receivables”) to an entity (“the pool”). The pool’s assets consist almost entirely of those receivables. The pool then sells interests (“pool securities”) to investors, who get a right to receive payments from the receivables in the pool. The terms of the pool securities are often significantly different from the terms of the underlying receivables,<sup>155</sup> which allows them to sell (i) in more markets and (ii)

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<sup>152</sup> Investor Dictionary, at <https://www.investordictionary.com> (last visited 28 Dec. 2008).

<sup>153</sup> For example, the Turkish Yargıtay (High Court of Appeals) has a council whose mandate is to “unify” divergent interpretations of the law made in the various branches of the court. Similarly, the United States Supreme Court hears issues where there is a “circuit split” among the various United States judicial districts on the interpretation of a federal law.

<sup>154</sup> See Tamar Frankel, *SECURITIZATION: STRUCTURED FINANCING, FINANCIAL ASSET POOLS, AND ASSET-BACKED SECURITIES* (Aspen Publishers, Inc. 1994).

<sup>155</sup> There are three reasons for this. First, the pool securities are “overcollateralized” – meaning their face value is less than the face value of the receivables in the pool. Second, the pool securities are rated by reputable credit rating agencies, especially if they are offered publicly. These securities receive a higher rating than the selling firm’s underlying securities would, because they only take into account the payment risk of the firms’ receivables, leaving behind all other assets of the firm’s business. Third, transactions sometimes include a guarantee of repayment of the pool securities by a highly rated third party guarantor. Of course the guaranty, similar to overcollateralization and favorable rating, increases the investor’s comfort in the pool securities. See generally Claire A. Hill, *Securitization: A Low-Cost Sweetener for Lemons*, 74 WASH. U. L. Q. 1061 (1996).

for higher prices than the originating firm's underlying securities would. In turn, the pool uses proceeds from the sale of the pool securities to pay the originating firm for the receivables. Ultimately, the originating firm with mediocre-quality underlying securities is able to extract the value of high-quality securities from the transaction. In the process, all it has to do is isolate its receivables from the general capital structure of the entire firm.

A securitization transaction is based on arbitrage because it requires the transfer to be deemed a sale under bankruptcy law, but a borrowing under tax law – a regulatory discrepancy that lawyers take advantage of in structuring these transactions. In theory, it is possible to treat the transfer either as a sale<sup>156</sup> or a borrowing.<sup>157</sup> In the United States, bankruptcy law characterizes the transfer as a sale, while tax law sees it as secured lending.<sup>158</sup> If it were otherwise, securitizations could not be structured as described above. Under bankruptcy, it is important to characterize the receivables as a “true sale” so that they can be isolated from the property of the bankrupt estate, and thus immune from attack by creditors.<sup>159</sup> Otherwise, as soon as the originating firm files for bankruptcy, all of its assets (including the receivables which were lent to the pool but not sold) become property of the estate, the further transfer of which is subject to special rules and attack from the creditors. Of course, such a restriction on the transferability of the receivables undermines the entire system of securitization, because without having those receivables in hand, the pool cannot issue pool securities to the investors. By contrast, it is essential under tax law that the transfer not be characterized as a true sale. Under current U.S. federal tax laws, treating the transfer as a borrowing rather than a sale (i) avoids entity-level taxation of the pool; (ii) permits the seller to deduct interest payments made on pool securities; and (iii) prevents the recognition or gain or loss on the conveyance of securities to the pool.<sup>160</sup> Without these major tax advantages (which only accrue if the transfer is characterized as a borrowing), many securities transactions would not be profitable. In summary, a securitization transaction requires the transfer to be deemed a sale under

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<sup>156</sup> The originating firm *sells* the receivables to the pool. In return, the pool pays to the originating firm the proceeds from the sale of pools securities.

<sup>157</sup> The originating firm *lends* the receivables to the pool. The pool intends to pay back using the proceeds from the sale of pools securities.

<sup>158</sup> See Michael C. McGrath, *Structural and Legal Issues in Securitization Transactions*, Practising Law Institute, PLI Order Number 6021 (2005). The historical reasons for this discrepancy are outside the scope of this article and the potential subject of further research.

<sup>159</sup> See *id.*; 11 U.S.C.A. § 541 (2005).

<sup>160</sup> See Hill, *supra* note 155, at 1082.

bankruptcy law, but a borrowing under tax law. Lawyers who see this discrepancy and structure these transactions engage in regulatory arbitrage.

The principle described above applies beyond the United States, and its international application often raises more complex issues due to the interaction between various local laws. Securitizations in many other countries (as well as cross-border securitizations) are premised on the same structure described above, which requires a sale under bankruptcy law but a borrowing under tax law.<sup>161</sup> For example, one of the groundbreaking securitizations in emerging markets was structured in Turkey in 1999.<sup>162</sup> The defining features of the transaction required isolation from the risk of bankruptcy and favorable tax treatment.<sup>163</sup>

Transactional lawyers perform regulatory arbitrage to benefit their clients. On the flip side, legislators respond to this behavior by enacting laws that eliminate arbitrage opportunities. Tax is an area where this dialogue occurs frequently. For example under the U.S. tax code, there could be arbitrage possibilities originating from the Tax Code's different treatment of interest, when received as income (non-taxable) and when paid out as an expense (deductible). More specifically, the Code does not include in taxable income the interest earned from state and local bonds<sup>164</sup> but generally allows deduction of interest payment as a business expense. This discrepancy creates the opportunity for arbitrage because it allows a taxpayer to borrow money in order to finance tax-exempt bonds, deduct the expense for the borrowing, and keep

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<sup>161</sup> See, e.g. Hui (Hannah) Cao, *Asset Securitization: Is it a Resolution Option for China's Non-Performing Loans?*, 28 BROOK. J. INT'L L. 565 (2003); Parikshit Dasgupta, *Securitization: Crossing Borders and Heading Towards Globalization*, 27 SUFFOLK TRANSNAT'L L. REV. 243 (2004); Nicholas J. Faleris, *Cross-Border Securitization: The Missing Link in Establishing a Viable Chinese Securitization Market*, 26 NW. J. INT'L L. & BUS. 201 (2005); Hideki Kanda, *Securitization in Japan*, 8 DUKE J. COMP. & INT'L L. 359 (1998).

<sup>162</sup> The transaction was groundbreaking because it identified an asset class for securitization for the first time – namely trade finance payment rights. See generally Douglas Doetsch & Denis Petkovic, *Securitising Trade Finance Cash Flows* (1999) (discussing the particular aspects of the Turkish securitization transaction), available at <http://www.securitization.net>.

<sup>163</sup> *Id.*

<sup>164</sup> 26 U.S.C. §103 (a) (2006) (stating “gross income does not include interest on any state or local bond.”). Note that separate from the arbitrage concept, this move is also a scope move (the income is excluded from tax consideration) and a legal fiction move (the income is deemed non-existent for tax purposes). This example shows that one legal principle may be categorized under various titles.

the difference.<sup>165</sup> In response to this regulatory arbitrage opportunity, the legislature enacted a provision disallowing the deduction of interest payment on borrowings used to finance purchase of tax-exempt securities.<sup>166</sup> The purpose of this legislative move was to eliminate tax-arbitrage and achieve tax-symmetry – treating both the income side and the deduction side of the interest nonexistent for tax purposes so that taxpayers could not achieve the windfall outcome described above.<sup>167</sup> In fact, the legislators were so concerned about regulatory arbitrage that they also included a provision specifically against “arbitrage bonds” in the same section that exempts interest income from state and local bonds.<sup>168</sup> This is one of the clearest examples of how legislators use the arbitrage principle in their profession.

The examples above suggest that the regulatory arbitrage dialogue takes place between opportunist transactional lawyers and legislators trying to stop them. However arbitrage transcends practice boundaries and also reaches into other domains of the law – such as appellate adjudication. In particular, appellate judges often harmonize divergent lower court interpretations of the law, so that plaintiffs do not have the opportunity to “forum shop.” Forum shopping is a form of arbitrage in the sense that it allows a private actor to take advantage of inconsistent applications of the law in two different fora – by bringing an action in the forum where the law is interpreted more favorably to that party. This type of arbitrage has two particular results in the legal system: unfairness to the defendant who does not have the choice of forum, and inefficiency in the court system where one law has multiple interpretations.<sup>169</sup>

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<sup>165</sup> For a useful illustrative example, see Marvin A. Chirelstein, *FEDERAL INCOME TAXATION* 146 (Foundation Press 2002) (1977) (hypothesizing a 35% taxpayer, who buys \$1,000,000 worth of local bonds yielding 8% or \$80,000 a year [non-taxable], and borrowing \$1,000,000 from a lender at an interest cost of 10% or \$100,000 a year, to finance her investment [deductible]. Her \$100,000 expenditure saves her \$35,000 at her 35% tax rate because it is tax-deductible, and her general loss from the transaction is \$20,000 due to the different interest rates, but her overall profit still stands at \$15,000 when all is considered. Thus, by manipulating the inconsistency between (i) the non-taxability of the bond interest received and (ii) the deductibility of the private investment interest paid out, she ends up pocketing the difference of \$15,000).

<sup>166</sup> 26 U.S.C. §265(a)(2) (2005).

<sup>167</sup> See also Stanley A. Koppelman, *Tax Arbitrage and the Interest Deduction*, 61 S. CAL. L. REV. 1143 (1988).

<sup>168</sup> 26 U.S.C. §103 (b) (2006) (stating “[s]ubsection (a) shall not apply to . . . Any *arbitrage* bond (within the meaning of section 148) (emphasis added)).

<sup>169</sup> See, e.g., Daniel J. Doward, *The Forum Non Conveniens Doctrine and the Judicial Protection of the Multinational Corporations from Forum Shopping Plaintiffs*, 19 U. PA. J. INT’L ECON. L. 141 (1998) (arguing that forum shopping against multinational corporations creates unfairness

Courts respond to opportunities for arbitrage in the legal system. For example, the U.S. Supreme Court hears “circuit split” cases where at least two judicial districts have different interpretations of a federal law, in an effort to unify the federal law.<sup>170</sup> Thus appellate judges, whose professional roles include doing justice in individual cases and preserving the legal system over the long run, react to the concept of arbitrage, just as private transactional lawyers, whose professional roles are to minimize risk and maximize monetary profit for clients, do.

This principle applies equally in civil law systems. For example, the Turkish High Court of Appeals acts as the highest appellate court in civil and criminal matters. It is comprised of various specialized chambers, each one with the authority to hear cases arising from certain specified legislative provisions.<sup>171</sup> The system is based on the division of labor: twenty-one civil chambers divide among them civil causes of action, and eleven criminal chambers do the same in the criminal domain.<sup>172</sup> In addition, the Court has a Grand General Council for the Unification of Case Law (“Grand Council”), whose exclusive mandate is to harmonize inconsistent decisions that originate in the lower chambers or councils.<sup>173</sup> The Grand Council has the definitive decision-making power where lower case law is inconsistent, with the authority to give decisions that bind both lower and intermediate courts.<sup>174</sup> Therefore the high appellate court of Turkey has a division strictly dedicated to preventing regulatory arbitrage and forum shopping.

A recent opinion of the Grand Council highlights its harmonizing mandate. The issue arose under the Turkish Social Insurance Act, which, *inter alia*,

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and inefficiency, both of which U.S. courts have managed to control by using the doctrine of *forum non conveniens*).

<sup>170</sup> For a recent example of a U.S. circuit split on a federal securities statute, *see* Erin M. O’Gara, *Comfort with the Majority: The Eighth Circuit Weighs in on the Proper Pleading Test for a Securities Fraud Claim in Florida State Board of Administration v. Green Tree Financial Corporation*, 270 F.3d 645 (8<sup>th</sup> Cir. 2001), 82 NEB. L. REV. 1276, 1307-08 (2004) (stating “[a]s with any circuit split, there are two avenues for resolution. The Supreme Court could untangle the Reform Act’s legislative history and set forth the appropriate pleading test under the Reform Act. Or, Congress could act by passing legislation that clearly sets forth the appropriate pleading test.”).

<sup>171</sup> Turkish Law No. 2797 on the High Court of Appeal, art. 14.

<sup>172</sup> *Id.*

<sup>173</sup> *Id.*, at No. 16. It also has other councils, including the Civil General Council and Criminal General Council, which harmonize decisions originating from the civil and criminal chambers, respectively. *Id.*

<sup>174</sup> *Id.*, at art. 58.

governs the time calculation for pension eligibility.<sup>175</sup> The statute set three criteria for meeting the pension eligibility requirement: (i) duration of insured status; (ii) days of active premium payment; and (iii) age.<sup>176</sup> The statute also provided preferential treatment to workers employed in especially wearisome jobs by automatically adding a certain number of days to the calculation – effectively allowing earlier pension eligibility.<sup>177</sup> The ambiguity in the statute was whether those preferential days are added to (i) the duration of insured status; or (ii) the duration of insured status *plus* the days of active premium payment.<sup>178</sup> The law in the lower chambers had developed in different directions. While the Twenty-First Civil Chamber had favored addition of the days to the duration of insured status, the Tenth Civil Chamber had favored addition to that period plus the days of active premium payment. This divergence was important because one interpretation gave the subject workers considerably more advantage than the other interpretation – opening the doors to forum shopping, regulatory arbitrage and general inconsistency in the legal system. Responding to this inconsistency arising from precedent, the Grand Council heard the issue and definitively determined that the preferential treatment must be added to the duration of insured status alone.<sup>179</sup> In so doing, it closed the doors to regulatory arbitrage and fulfilled its goal of upholding the consistency of the legal system. While this goal is very different than the goals of the transactional lawyers structuring securitization, in essence the principle they used was the same – arbitrage.

In summary, arbitrage is a complex legal principle because it requires identifying a discrepancy between two bodies of law and taking advantage of such discrepancy to create new value. As such, it involves a highly abstract understanding of legal doctrines and a high-order “chunking” of prior legal knowledge. Like the other principles studied above, it is a “portable” principle.

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<sup>175</sup> See Turkish Social Insurance Act No. 506.

<sup>176</sup> *Id.*

<sup>177</sup> *Id.*, at No. art. 5 (covering dangerous industries such as coal mining). See also Gaye Baycık, İŞ VE SOSYAL GÜVENLİK HUKUKU AÇISINDAN MADEN İŞÇİLERİ (“MINE WORKERS FROM THE PERSPECTIVE OF LABOR AND SOCIAL SECURITY LAW”) 181-86 (Yetkin Yayınları 2006) (discussing the special criteria and the calculation methods for mine workers’ pension eligibility).

<sup>178</sup> The former is calculated by taking the difference between the day the insured was first employed and the day he submitted a pension claim. The latter is calculated by counting the number of discrete days on which the insured made premium payments into the social security system. Thus the two calculations are different, and the question of which one is used for pension purposes gains practical importance.

<sup>179</sup> Turkish High Court of Appeals, Grand General Council for the Unification of Case Law, Decision No. 2000/1 (February 18, 2000).

It is used by transactional lawyers (securitization), legislators (tax legislation) and judges (precedent unification). It is used in civil law traditions (Turkish Supreme Court of Appeal), common law jurisdictions (U.S. Tax Code) and many others where complex financings are common (securitization). It is used in labor law (pension eligibility), corporate law (securitization), and tax law (interest deduction).

#### **D. Summary**

The preceding section shows that different legal principles have different levels of cognitive complexity. While basic principles (such as proportionality) are closely related to our concrete non-legal real-world experiences, composite principles (such as comparativism) require more prior legal knowledge, and complex principles (such as arbitration) require further legal knowledge and perhaps even some additional creativity. This conception of legal principles fits into the “cognitive theory of expertise” because composite principles require more “chunking” than basic principles and complex principles require more “chunking” than composite principles.

The preceding section also illustrates that legal principles are “portable” because they transcend doctrinal, jurisdictional and professional boundaries. They principles studied above apply across constitutional, corporate, tax, contract, trade, criminal, tort, procedure, international, and family law doctrines. The jurisdictions studied include the Turkish, American and Pakistani national jurisdictions as well as international treaty regimes such as the WTO. The legal actors discussed include legislators, adjudicators, litigators, and transactional lawyers.

### **VI. CONCLUSION**

There is a striking incongruence between the doctrinal rigidity of law and the increasing market demand for adaptable legal thinking. In response to that concern, legal scholarship has largely discredited the rigidity of legal taxonomies, but at the same time it has largely rejected the cognitive aspect of legal thought. As a result, our system lacks an ideal system for imparting legal expertise to novice lawyers who are looking to thrive in a competitive and interactive global market.

This article proposes a new classification of abstract legal concepts. It first discusses a selected number of legal principles to illustrate their core features: that they transcend doctrinal, jurisdictional and professional boundaries. Second, this article places these legal principles in a larger theoretical

framework, and attempts to classify them according to their cognitive complexity. The new arrangement places each legal principle into one of three categories: basic, composite and complex principles. Finally, this article shows how the tripartite conception mirrors the cognitive development of the legal mind, thus making legal principles an excellent candidate for catalyzing efficient legal training in the global market.

The framework proposed here can be of practical use in law schools and law firms, among other legal institutions interested in developing the legal mind. Sadly, current legal education systems do not focus enough on legal principles.<sup>180</sup> In the late 1920s, Columbia Law School attempted to revise its curriculum to focus on the functions served by the law rather than traditional legal categories.<sup>181</sup> This approach had neither a cross-jurisdictional focus nor a large following.<sup>182</sup> More recently, the Georgetown University Law Center introduced an “alternative curriculum”, where first year instruction was categorized, but not according to traditional doctrinal boundaries.<sup>183</sup> Nevertheless, programs such as this attract a very small portion of young legal minds.<sup>184</sup> It is our hope that more legal institutions will follow these models.

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<sup>180</sup> Roy T. Stuckey, *Preparing Students to Practice Law: A Global Problem in Need of Global Solutions*, 43 S. TEX. L. REV. 649 (2002) (showing evidence that lawyers in the United States have been inadequately prepared in law school and suggesting the same about legal education in other countries).

<sup>181</sup> See Macaulay, *supra* note 25.

<sup>182</sup> See *id.*

<sup>183</sup> See *id.*, at <http://www.law.georgetown.edu/curriculum/jdprog.cfm#Curriculum%20B>.

<sup>184</sup> See, e.g., YAŞAR KARAYALÇIN, HUKUKDA ÖĞRETİM – KAYNAKLAR – METOD (“LEGAL EDUCATION – SOURCES – METHOD – PROBLEM SOLVING IN LAW”) (Banka ve Ticaret Hukuku Araştırma Enstitüsü 2001) (identifying the need for more widespread applied legal education as a principle objective).

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