Self-Organizing Legal Systems: Precedent and Variation in Bankruptcy

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Models of legal ordering are frequently hierarchical. These models do not explain two prominent realities: (1) variation in the content of a legal system, and (2) patterns of non-hierarchical ordering that we observe. As a supplement to hierarchical explanations of legal order, this Article, drawing from physical and social science research on complex systems, offers a self-organizing model. The self-organizing model focuses on variation in the content of legal systems and attempts to explain the relationship between that variation and patterns of ordering. The self-organizing model demonstrates that variation and ordering are not opposite categories, but rather constitute one continuous phenomenon.

Working with bankruptcy data and institutions, this Article describes self-organizing structures as overlapping networks of legal and extra-legal actors, and self-organizing dynamics as involving the twin processes of form innovation and norm emergence. This Article adduces empirical evidence (including a substantial case study and statistical analysis of a quantitative database) showing that bankruptcy is a self-organizing system. Finally, this Article suggests that self-organization may state a general theory of trial court behavior, and that the self-organizing model may illuminate legal research in areas such as discretion, doctrine, and legal change.
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I. INTRODUCTION: WHAT IS PRECEDENT?

Lawyers and legal insiders know what a precedent is. Precedents happen every time a court takes a previously decided case as authority for disposing a yet-to-be-decided case. From the insider’s point of view, the more vital question is not “what is precedent?” but rather “what is the precedent for my case?” and perhaps, “how can I get around that precedent?”

Now consider the phenomenon of precedent from the perspective of an outsider—someone observing a legal system as she might observe an ecological system or an economic system. From this perspective, precedents are utterances that sort; that is, they allow players inside the legal system to categorize future utterances, thereby channeling the trajectory of an ongoing stream of data. The phenomenon at issue in studying precedent, then, is the phenomenon of legal ordering.

Taking the perspective of the outside observer, this Article asks: “What explains the ordering of a legal system’s content?” If there are any discernible patterns among the data generated by a legal system, the thing to be explained is “where do those patterns come from?”

There are at least three classifications of legal ordering. First, system content can be disordered, meaning that there are no discernible patterns. Second, content can be ordered by hierarchical means, such that hierarchical superiors (e.g., appellate courts or the President) issue directives that are followed by hierarchical inferiors (e.g., trial courts or administrative agencies). Finally, content can be self-organizing, meaning that we can explain patterns without primary reference to exogenous events (such as the directive of a hierarchical superior).

Hierarchical models are the most common explanation of legal ordering, and, in fact, such models do a very good job of accounting for much of the order we observe in legal systems. Our reliance on hierarchical explanations has, however, had some unfortunate effects. The focus on hierarchical ordering corresponds with a focus on appellate courts, so that trial courts’ role in the ordering process is often neglected in legal research. This bias in favor of appellate courts is

1 The content of a legal system, defined broadly, includes any form in the legal system—from a judge’s published opinions to her in-chambers meetings; from an attorney’s informal strategies and formal arguments, to a paralegal’s route to the courthouse, to how late the clerk’s office stays open on Tuesdays. See infra Part III.C (defining forms and norms that make up system content). All forms are simply data that make up the system.

2 It is likely that the vast majority of forms that I would include as system content lack any meaningful pattern. Disorder in system content can range from the relatively inconsequential to the quite substantial (think, for example, of the loose canon judge). While this Article is concerned with the means of legal ordering, it is important to keep in mind that there is substantial disorder in legal systems, and that such patternlessness imposes real costs upon system participants.

3 See infra Part IV.B (examining hierarchical means of ordering bankruptcy system).
prominent in both theoretical expositions of precedent and empirical studies of precedent. More troubling is the fact that a tendency to associate order with hierarchy can entail an erroneous identification of order with hierarchy, such that, when hierarchical means of ordering are defective, one comes to expect disorder.

4 See, e.g., RUPERT CROSS & J.W. HARRIS, PRECEDENT IN ENGLISH LAW 5 (4th ed. 1991). This basic text on precedent in common law systems represents that the “three constant features” of precedent are: “[T]he respect paid to a single decision of a superior court, the fact that a decision of such a court is a persuasive precedent even so far as the courts above that from which it emanates are concerned, and the fact that a single decision is always a binding precedent as regards courts below that from which it emanated.” Id. The role of trial courts, in Cross’ account of precedent, is thus known only by negative inference: trial courts respect and are bound by appellate court decisions because trial courts are located “below” appellate courts. See id.


6 The identification of hierarchy with the good of order is what John Griffiths would call an “ideological” rather than an “empirical” position. See John Griffiths, What is Legal Pluralism?, 24 J. LEGAL PLURALISM 1, 3 (1986). Ideology, according to Griffiths, is a “mixture of assertions about how the world ought to be and a priori assumptions about how it actually and even necessarily is.” Id. Empirical (or “descriptive,” or “scientific”) approaches to the study of law, on the other hand, take the phenomenon as the primary object of study, without entertaining questions about how the phenomenon ought to be or what it must “necessarily” be. See id. at 4–5. See also Marc Galanter, The Portable Soc 2; or, What to Do until the Doctrine Comes, in GENERAL EDUCATION IN THE SOCIAL SCIENCES: CENTENNIAL REFLECTIONS ON THE COLLEGE OF THE UNIVERSITY OF CHICAGO 246, 251–53 (John J. MacAloney ed., 1992) [hereinafter Galanter, The Portable Soc 2]. Galanter lists eight propositions of conventional legal studies, and notes that the listed propositions have a dual, composite character, fusing both descriptive and normative. They are thought to state what is normal and typical in legal systems—to reflect the inherent and proper shape of legal reality. This fusion of factual and normative assertion . . . establishes them as ideological statements—statements about what a legal system . . . ought to be like.

Id. Studies of precedent and legal ordering are generally characterized by an “ideological” approach. See, e.g., sources cited infra note 51.
We can indeed explain a great deal about legal ordering by studying appellate court behavior and tracking hierarchical mechanics. But such a focus is partial, and therefore limiting and potentially distracting. When our travels are guided by incomplete maps, we are continually blindsided by the rest of reality.7 Two prominent (and intimately related) realities are not explained by hierarchical models of legal ordering: (1) Variation. I will argue that the characteristic feature of a legal system's content is variation, and that this variation cannot adequately be explained by models of appellate control. (2) Non-hierarchical ordering. I will argue that the U.S. bankruptcy legal system presents a situation in which the mechanisms of hierarchical ordering and appellate control are substantially defective, and yet we observe significant ordering of the legal system's content. What accounts for ordering when hierarchy is defective or under-explanatory? We need a supplemental, non-hierarchical, model to explain more fully the phenomenon of legal ordering.

This Article attempts to explain legal ordering among actors in the trial-oriented sectors of a legal system, with a focus on bankruptcy law.8 As a supplement to hierarchical models, I offer a self-organizing model of legal systems.

Part II presents the hierarchical model of legal ordering as a pyramid. It tests the hierarchical model against evidence generated by the bankruptcy system and finds that the model does not explain the evidence. The behavior of the bankruptcy system is more complex than the simple hierarchical model predicts. Part II concludes by confronting the fact of variation—a central feature of legal systems and a feature that hierarchical models of ordering cannot explain.

Part III reviews the responses to variation that have constituted much of contemporary jurisprudence, and suggests a different research direction in which variation is the starting point of a constructive inquiry. It then reviews the literature on "local legal cultures" both in and beyond bankruptcy. Part III also interprets the existence of local legal cultures to be evidence of non-hierarchical ordering (i.e., the systematization of content variation such that variation becomes navigable), and asks how such ordering occurs.

Part IV offers a self-organizing model of legal systems. Building on several lines of research from the physical and social sciences, it details an account of non-hierarchical legal ordering that explains (a) self-organizing structures as overlapping networks made up of actors connected by ties of varying strengths; and (b) self-organizing dynamics, comprising (1) an account of how multiple forms are generated (thus constituting variable system content); and (2) an account

7See Galanter, Portable Soc 2, supra note 6, at 250–51 (developing "bad maps" analogy).
8This Article explores the phenomenon of ordering in the context of bankruptcy courts, but the means of ordering observed there are also active in other types of courts, beyond court systems (e.g., in administrative agencies and legislative bodies), and in bureaucracy generally. See infra Part V.B.
of how particular forms become *norms* (i.e., come to characterize system content), thus ordering system content. The model clarifies the relationship between variation and order, by showing how order proceeds from variation in the absence of hierarchical commands.

Part V applies the self-organizing model to U.S. bankruptcy law. It shows how bankruptcy’s networks are self-organizing structures. It presents empirical evidence of form innovation and norm emergence in bankruptcy, drawing on (1) an extensive case study, and (2) statistical analysis of a quantitative database. Finally, Part V suggests that the self-organizing model extends beyond bankruptcy and states a general theory of legal ordering. This Article concludes with preliminary thoughts on how the self-organizing model might illuminate three basic problems of legal research: discretion, doctrine, and legal change.
II. HIERARCHICAL ORDERING AND THE FACT OF VARIATION

A. The Pyramid Story

Figure 1

What explains the ordering of a legal system's content? As we have seen, one valid way of answering this question is by reference to hierarchical mechanics. 9

9 Reliance on hierarchical mechanics is part of the more general bias of linearity in scientific measurement and explanation. Hierarchical models of legal ordering assert a proportional relationship between input variables and output variables—the sort of relationship among variables that mathematics calls "linear." See DANIEL KAPLAN & LEON GLASS, UNDERSTANDING NONLINEAR DYNAMICS 3–8 (1995); STEVEN H. STROGATZ, NONLINEAR DYNAMICS AND CHAOS: WITH APPLICATIONS TO PHYSICS, BIOLOGY, CHEMISTRY, AND ENGINEERING 6 (Addison-Wesley 1994). The self-organizing model, presented infra Part IV.C., would allow (in its mathematical representations) for disproportional relationships among variables. Richard Abel, in a 1973 article, anticipated legal studies' turn to nonlinear models. See Richard L. Abel, Law Books and Books about Law, 26 STAN. L. REV. 175, 189 (1973) (suggesting that legal studies should "begin the construction of a more complex model in which law and behavior interact without a one-to-one correspondence") (book review).
Hierarchical explanations of adjudicative ordering tell a story about appellate control. Figure 1 displays the prototypical explanatory image: a three-storied pyramid of adjudication consisting of a supreme court at the top, intermediate appellate courts in the middle, and trial courts at the base. A pyramid explanation of legal ordering takes the following form: suppose an open doctrinal question (e.g., if old equity contributes new value, can it participate in the plan contrary to the absolute priority rule?). Myriad cases are decided at the lowest levels of fact-finding, none more precedential than the others. These cases state a variety of answers to the open doctrinal question (e.g., "yes," "no," "only if there was an auction first," "only if the new value was over a certain sum," "only if the new value met this list of five conditions," etc.). These answers fill up the very many compartments constituting the broad base of the pyramid. Some of these cases are pushed up the pyramidal appellate structure, sending precedents back down as they ascend. One case gets decided by an intermediate appellate court and, as a result, a certain number of answers to the open doctrinal question become unavailable in a certain geography. This process continues until the ultimate court at the top of the pyramid answers the question. That answer travels down every level and enters every compartment of the pyramid, exalting one resolution and exterminating the rest. Swords flash. Screams pierce the night. Then the hubbub of the pyramid subsides into silence. The pyramid is uniform, the law is settled.

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10 This is a question of bankruptcy doctrine that was allegedly resolved by the U.S. Supreme Court in Bank of America National Trust and Savings Ass’n v. 203 North LaSalle Street Partnership, 526 U.S. 434, 457 (1999). The bankruptcy jargon translates as follows: "Old equity" describes the owners or shareholders of the corporation prior to the bankruptcy filing. See In re Bonner Mall P’ship, 2 F.3d 899, 906 (9th Cir. 1993). "New value" most typically describes an injection of cash into the corporation after it has filed for bankruptcy, usually to help fund the corporation’s plan of reorganization. Id. The “absolute priority rule” is a section of the Bankruptcy Code that requires the bankrupt corporation’s reorganization plan to provide either full repayment to the parties that had unsecured claims against the corporation prior to bankruptcy, or no payment to old equity. 11 U.S.C. § 1129(b)(2)(B) (2000). The point of the absolute priority rule is to discourage old equity, who often write the plan, from retaining value at the expense of the firm’s creditors. The policy behind the “new value exception” to the absolute priority rule is to force old equity to pay for retaining value in the reorganized firm. See Walter W. Miller, Jr., Bankruptcy’s New Value Exception: No Longer a Necessity, 77 B.U. L. Rev. 975, 978–79 (1997).

11 See, e.g., In re Bonner Mall P’ship, 2 F.3d at 918.

12 See, e.g., In re Coltex Loop Cent. Three Partners, L.P., 138 F.3d 39, 46 (2d Cir. 1998).


15 See, e.g., In re 203 N. LaSalle St. P’ship, 126 F.3d 955, 963 (7th Cir. 1997) (holding new value exception applies only if contribution of new capital is “(1) new, (2) substantial, (3) necessary for the success of the plan, (4) reasonably equivalent to the value retained, and (5) in the form of money or money’s worth”).

16 On the “extermination” features of law, see Robert M. Cover, Nomos and Narrative, 97 Harv. L. Rev. 4, 40–44 (1983).
And that is the *pyramid story*. In this model, ordering occurs by means of a formal hierarchical structure. Significantly, this model predicts that if the formal mechanics of hierarchy was disrupted—if, for example, the appellate courts did not exert substantial control over trial court doctrine—then one would observe a substantial lack of ordering in that legal system.

B. Testing the Pyramid: Bankruptcy Law

The *pyramid story* presents a hierarchical model of legal ordering. Now we test that model and its predictions by comparing the pyramid story to the workings of a real legal system: U.S. bankruptcy law. Our intention is to determine whether the pyramid model of ordering is an accurate representation of actual system ordering.

A brief introduction to the chief features of the bankruptcy legal system is appropriate. Bankruptcy law is federal law, with a very complicated and comprehensive statute known as the “Bankruptcy Code” that occupies the entirety of Title 11 of the United States Code. Bankruptcy has its own courts (“bankruptcy courts”)\(^\text{17}\) staffed by Article I judges (“bankruptcy judges”)\(^\text{18}\) who are typically highly trained in the complex field. These judges are appointed to fourteen-year terms by the regional court of appeals.\(^\text{19}\) Finally, opinions of bankruptcy courts are reported by West Publishing, and are easily accessible.

One feature of the bankruptcy system is of particular interest here: the bankruptcy appellate structure generates very few decisions that bind future cases as a matter of formal, hierarchical precedent. The vast majority of decisions in bankruptcy serve as nothing more than the *law of the case*. Indeed, the common wisdom of bankruptcy scholars and professionals is that the bankruptcy system in the U.S. makes too little precedent.\(^\text{20}\) As the balance of this Article will show, I believe that characterization is controversial. But it is an unquestionably correct observation that nearly all bankruptcy cases terminate at a level where no formal precedent is made.\(^\text{21}\) There are very few appeals out of bankruptcy court, and only an infinitesimal number of cases are appealed to the level where the results formally bind other bankruptcy judges.\(^\text{22}\)

Two facts constitute this *bankruptcy appeals problem*. First, only opinions of the U.S. courts of appeals and the U.S. Supreme Court bind bankruptcy courts by reason of formal hierarchy. Second, there are dramatically few opinions from


\(^{18}\) *Id.* § 152.

\(^{19}\) *Id.*

\(^{20}\) See *infra* text accompanying notes 36–39, 43–52.


\(^{22}\) *Id.*
the U.S. courts of appeals and the U.S. Supreme Court relative to the total number of bankruptcy cases in the system. These two facts are discussed in the next two sections with the aid of figures.

1. The institutional glitch in the bankruptcy appeals process

Figure 2

Figure 2 depicts a segment of the federal court system, showing for illustrative purposes the projected appellate path of a bankruptcy action initiated
in Wisconsin. A litigant would begin in a bankruptcy court in Wisconsin ("Level A" in the Figure), move up to the district courts of Wisconsin ("Level B"), then to the U.S. Court of Appeals for the Seventh Circuit ("Level C"), and finally to the U.S. Supreme Court ("Level D"). The bankruptcy appeals problem comes from the fact that every decision by every court in Level A and Level B creates nothing more than the law of the case. Unremarkably, the decision of one judge does not bind another judge horizontally, along either Level A (Martin cannot bind Utschig) or Level B (Crabb cannot bind Shabaz). More surprising is the fact that one judge cannot bind another vertically, from Level B to Level A (i.e., decisions by Crabb do not bind Martin, except for decisions in those particular cases actually appealed from Martin to Crabb). The first point at which a court might utter something more than the law of the case is at Level C, by the U.S. Court of Appeals for the Seventh Circuit. If a litigant in Madison believes it has an important bit of law to clarify, it would have to first file and litigate at Level 23 The "bankruptcy appellate panel" ("BAP") is not illustrated in Figure 2. The BAP is a panel of three bankruptcy judges that can hear appeals, on the consent of both parties, from the decision of bankruptcy courts. See 1 COLLIER ON BANKRUPTCY ¶ 5.02[3] (Alan N. Resnick & Henry J. Sommer eds., 15th ed. rev. 2003) [hereinafter 1 COLLIER]. Appeals from BAPs go to the courts of appeals (BAPs would thus displace district courts as "Level B" in the figure). See id. ¶ 5.02[4]. Despite an express congressional policy in favor of BAPs, only the First and Ninth Circuits make full use of BAPs. Id. ¶ 5.02[3]. Four circuits (Second, Sixth, Eighth, and Tenth) make limited use of BAPs, and six circuits (Third, Fourth, Fifth, Seventh, Eleventh, and D.C.) have decided not to have BAPs. Id.; NAT'L BANKR. REV. COMM’N, 1 REPORT OF THE NATIONAL BANKRUPTCY REVIEW COMMISSION § 3.13(F)–(H), at 764–66 (1997) [hereinafter 1 NBRC REPORT]. BAPs do not help to consolidate doctrine in the bankruptcy system because the BAP opinion, just like the bankruptcy court opinion and the district court opinion, states only the law of the case and does not bind future cases as a matter of hierarchy. See Paul M. Baisier & David G. Epstein, Resolving Still Unresolved Issues of Bankruptcy Law: A Fence or an Ambulance, 69 AM. BANKR. L.J. 525, 531 (1995) ("[W]hatever arguments can be made in support of the creation of a bankruptcy appellate panel, the development of binding precedent is not one of them.").

24 Bankruptcy courts are technically departments of federal district courts. 1 COLLIER, supra note 23, ¶ 2.02[1]. The 1978 enactment of the Bankruptcy Code gave bankruptcy judges broad jurisdiction, but did not grant them Article III status. Id. ¶ 2.01[2][b]. In 1982 the U.S. Supreme Court found that arrangement unconstitutional. N. Pipeline Constr. Co. v. Marathon Pipe Line Co., 458 U.S. 50, 87 (1982) (holding unconstitutional Congress’ grant of broad jurisdiction to non-Article III bankruptcy judges). Congress responded in 1984 by enacting a complicated jurisdictional scheme that clarified the fact that bankruptcy court jurisdiction was dependent upon a grant of district court jurisdiction. 1 COLLIER, supra note 23, ¶ 3.01[2][b].

A, then appeal and litigate at Level B, and then appeal and litigate at Level C. Only after two appeals and three levels of litigation might the litigant achieve a judgment that will bind future cases as a matter of the formal operation of hierarchical precedent.

This feature of bankruptcy appellate structure is perhaps explained by the relationship between federal district courts and bankruptcy courts. Since bankruptcy courts are formally departments of district courts, one could say that there is no vertical dimension describing bankruptcy courts and district courts. The surprising lack of vertical precedent is really just a function of the unremarkable lack of horizontal precedent among district courts. But bankruptcy court judges, while formally identified with the district courts, are not actually identical to district court judges. Formally, bankruptcy judges are like the federal magistrates appointed by district courts, in that they exercise authority granted to them by the district court. But actually, bankruptcy judges maintain a judicial identity substantially separate from district court judges. Congress has created a court system containing multiple judicial personalities within the same identity. It is perhaps unsurprising that this creature has behaved pathologically.

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26It is possible for bankruptcy actions to initiate in district court in those circumstances where the district court has expressly “withdrawn the reference,” i.e., the standing device that sends all cases filed under Title 11 to the bankruptcy court qua department of the district court. See 1 COLLIER, supra note 23, ¶ 3.02[1]. Withdrawing the reference is extremely unusual. So as a general matter, bankruptcy cases begin (and, as we will see, almost always end) in bankruptcy court.

27Bankruptcy litigants best positioned to make law by pursuing appeals are thus limited to the sophisticated, the well-funded, and the repeat players: viz. participants in business bankruptcies and corporate lenders in the consumer market (such as lenders on car loans and credit cards).

28Reasons for the lack of hierarchical precedent running vertically from district courts to bankruptcy courts (along with normative arguments urging bankruptcy court judges to be good sports and act as if they were bound by district courts) have been explored elsewhere. See generally Bussel, supra note 21, at 1064 (arguing for “functional inquiry into the comparative advantages and disadvantages of various bodies in a non-traditionally organized adjudicative system”); John P. Hennigan, Jr., Appealability Regularized: The NBRC’s Proposals and Current Legislative Issues, 7 J. BANKR. L. & PRAC. 415 passim (1998) (discussing and recommending changes of finality requirement for appeals from bankruptcy courts); Jeffrey J. Brookner, Note, Bankruptcy Courts and Stare Decisis: The Need for Restructuring, 27 U. MICH. J. L. REFORM 313, 327–28 (1993) (arguing that bankruptcy courts should follow district court precedent); John H. Maddock III, Note, Stemming the Tide of Bankruptcy Court Independence: Arguing the Case for District Court Precedent, 2 AM. BANKR. INST. L. REV. 507 passim (1994) (same).


31See supra note 24 (Congress’ response to Marathon case).
Figure 3
(see following page)

Figure 3 is a rough proportional representation of the number of cases disposed at each of the four levels of the system. These data are from 2001. As shown in Figure 3, at the bankruptcy court level (i.e., “Level A”) for that year there were 1,437,354 cases; at the district court level (i.e., “Level B”) there were 2519; at the court of appeals level (i.e., “Level C”) there were 482 cases; at the Supreme Court level (i.e., “Level D”) there was one case. The data are arrayed in Figure 3 in the shape of a very bottom-heavy pyramid, with the Supreme Court case occupying the small pointy head of the pyramid and the bankruptcy court cases occupying the broad, wildly disproportionate base of the pyramid.


33 The sole U.S. Supreme Court case that year was Gitlitz v. Commissioner of Internal Revenue, 531 U.S. 206, 215–16 (2001) (discussing tax consequences of bankruptcy discharge). More typically, there are two or three bankruptcy cases on the U.S. Supreme Court docket in any given year.

34 A very important qualification is needed here: counting bankruptcy cases will both overcount and undercount bankruptcy disputes. In bankruptcy, a case is everything brought before the court in the matter of a particular debtor. See 11 U.S.C. §§ 301–304. In big business bankruptcy, there could be hundreds of disputes brought under the umbrella of a single case. In consumer bankruptcy, there are many thousands of cases filed, but very few of them result in the adjudication of an actual dispute. The closest measure we have for actual disputes in bankruptcy is the annual number of adversary proceedings. See FED. R. BANKR. P., 7001–7087. See generally Elizabeth Warren, Vanishing Trials: The Bankruptcy Experience, 1 J. EMPIRICAL LEGAL STUD. (Forthcoming 2004). For 2001, there were 67,140 adversary proceedings initiated in bankruptcy courts, of which all but 8079 were terminated in bankruptcy courts. JUDICIAL BUSINESS, supra note 32, 263 tbl.F-8. The data do not support a conclusion regarding how many of the 8079 were appealed past the district court level, i.e., to the point where the court of appeals could issue a hierarchically binding precedent. If you replace the data on cases with the data on adversary proceedings, the general point stands (i.e., there are more non-precedential than precedential decisions), but the dramatic nature of the statistics weakens.
Combining the lesson of Figure 2 (only Level C and Level D opinions create precedents that bind future decisions as a matter of formal hierarchical precedent) with the lesson of Figure 3 (nearly all of the cases are at Level A and, to a much smaller extent, Level B) suggests that there may be a dearth of hierarchically precedential opinions in U.S. bankruptcy law. One way to summarize the combined lessons of the two figures is to look at the proportion of hierarchically precedential cases in the system (483) to the non-hierarchically precedential cases (1,439,873), which describes a ratio of .0003354. That is, there are just over three one-hundredths of one percent as many hierarchically precedential cases as there are cases that never make law.35

35Despite the extreme nature of this ratio, there is likely nothing unusual about the distribution of cases represented in Figure 3. The ratio of precedent cases to law-of-the-case cases in bankruptcy is probably substantially similar to the ratio in other substantive bodies of law. I claim not that bankruptcy law is unique, but rather that bankruptcy presents a useful case study of a general phenomenon: viz. the limits of hierarchy for explaining the ordering of legal content. See infra Part IV.B.
Various reasons have been advanced to explain why nearly all bankruptcy cases terminate in bankruptcy court. One obvious reason is that the extra layer of appeals creates a financial disincentive for the party choosing a litigation strategy. There are also significant procedural hurdles to appeal: the doctrines of finality and mootness deliver a potent one-two punch to any litigant wishing to pursue a litigation strategy that involves appeals. Bankruptcy cases are typically sprawling, complicated affairs, with very few isolatable parts. Frequently it is difficult to get a final, appealable judgment on any part of a bankruptcy case until the point at which the entire case is resolved. But often by the time an issue achieves finality, an appeal on that issue would be barred as moot.

Alongside these important technical reasons for the lopsided distribution of cases within the bankruptcy system are two reasons which might be termed cultural. First, bankruptcy is understood in legal culture to be an intricate and complicated specialty subject, something along the order of tax law. Most non-bankruptcy practitioners would delightedly go an entire career without ever having to pick up a copy of the Bankruptcy Code, and district court judges are often only too happy to farm out the bankruptcy cases on the docket. On the remarkably rare occasion that a bankruptcy case is successfully appealed to the rarefied atmosphere of a court of appeals or the Supreme Court, the bankruptcy issues in the case are often not engaged at all. As often as not, the appellate court will use the bankruptcy case as a vehicle to talk about something else, most typically separation of powers, federalism, and statutory interpretation. Bankruptcy cases stay in bankruptcy courts, on this account, because bankruptcy issues gravitate to the point where they are understood and properly addressed.

The second cultural reason that bankruptcy cases stay in bankruptcy court involves what might be called the self-adjusting nature of bankruptcy

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36 See Rhodes, supra note 29 (noting that it takes two appeals to get precedent).
38 A trial court ruling is not appealable if its adjudication has been rendered moot or unnecessary by the operation of other events. In a complex bankruptcy case, issues are regularly rendered moot through ancillary rulings by the court that reduce or eliminate the amount of the claim or the size of the estate that would have been used to satisfy the claim.
39 See Bussel, supra note 21, at 1070 (“It is an irony of bankruptcy practice that an order may be non-appealable on finality grounds until it becomes non-appealable on mootness grounds!”). See also Daniel J. Bussel, Textualism’s Failures: A Study of Overruled Bankruptcy Decisions, 53 VAND. L. REV. 887, 918–19 (2000) [hereinafter Bussel, Failures] (same).
adjudication. Bankruptcy cases, sprawling, complicated, with multiple parties and myriad interrelated issues, are as often “hashed out” in the presence of the judge as they are decided by the judge. Parties do not appeal out of bankruptcy court because they value the flexibility of the forum and they prefer to negotiate for what they want. Bankruptcy judges directing these proceedings are called upon to be both managers and umpires.

C. The Broken Pyramid: Variation

We have seen that bankruptcy’s institutional conditions make it difficult to generate a hierarchically binding precedent and that, indeed, the system generates very few. But we have not yet made the case that the hierarchical mechanics of appellate control fail to order fully the content of the bankruptcy legal system. Figure 3 shows a very bottom-heavy pyramid, but it may not necessarily show that the appellate mechanism in bankruptcy is malfunctioning. The fact that such a great proportion of all bankruptcy cases terminate in bankruptcy court could actually indicate the opposite of a malfunctioning appellate mechanism: one would expect that, in a working hierarchical system, there would be very few appeals because the law is uniform, settled, and transparent.

To complete the argument that the bankruptcy pyramid is broken, that the hierarchical mechanism does not fully explain ordering, we must observe not only a low number of cases that bind as a matter of hierarchy, but also a substantial amount of variation in the way that different bankruptcy courts resolve identical issues. The consensus among bankruptcy practitioners, doctrinal scholars, and empirical scholars is that we do indeed observe such variation. This clear fact of

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41 See Edith H. Jones, Bankruptcy Appeals, 16 THURGOOD MARSHALL L. REV. 245, 246 (1991). Jones states that:

[B]ankruptcy, unlike ordinary civil litigation, contains self-adjusting aspects that may make appeals unnecessary. Many of the court’s decisions are discretionary and hence revocable. Moreover, in the natural course of a bankruptcy proceeding, an early adverse decision suffered by a party may be corrected during negotiations or decisions in a later part of the case.

Id.


43 Variation in bankruptcy system content is discussed extensively infra Parts III.A.1 and III.B.1. See Baisier & Epstein, supra note 23, at 526–27 (noting that there is lack of settled rules in bankruptcy law); Jean Braucher, Lawyers and Consumer Bankruptcy: One Code, Many Cultures, 67 AM. BANKR. L.J. 501, 532 (1993) (chronicling floor variation between cities); Lynn M. LoPucki, The Legal Culture, Legal Strategy, and the Law in Lawyers’ Heads, 90 NW. U. L. REV. 1498,
variation is, however, open to a range of interpretations. And that is where things get interesting.

III. RESPONSES TO VARIATION

A. Interpreting Variation

Variation has been the touchstone of much of modern jurisprudence. We have noticed variation and tried to ignore it; we have declared it a threat to the rule of law that must be exterminated; we have tried politely to explain it away; we have wielded it like a hammer to smash the system and begin again.

Taking bankruptcy law as a case study, this Part discusses some interpretations of the fact of variation in legal systems, and then suggests a different approach.

1. Variation as pathology or passing thing

Upon observing variation in the doctrinal content of bankruptcy law, many scholars and practitioners interpret that variation as incoherence comprising a per se threat to the rule of law. The Report of the National Bankruptcy Review Commission ("NBRC") provides an excellent vantage point from which to glean the received wisdom regarding the state of bankruptcy law. In the section of the NBRC's report recommending direct appeals of bankruptcy matters to a court of appeals, the NBRC anxiously treats the question of appellate control. After detailing the structural characteristics in the bankruptcy appellate process, the NBRC proclaims that "[s]tare decisis is a fundamental tenet of our common law
system” and that the “problems that arise from a lack of effective *stare decisis* . . . cannot be overestimated.” The NBRC continues:

Without a predictable outcome on even the most basic issues, negotiations outside of court are skewed, creating more litigation. Currently, case law can be found to support virtually any position on any issue and as a result, wasteful litigation ensues. Many . . . bankruptcy court opinions are published in a separate West and other reporters devoted to bankruptcy cases. Many bankruptcy opinions from the district courts are also published. The consequence is that about fourteen volumes of opinions of West’s Reporter alone, few of which are binding on any other future case, are published each year. Practitioners assert that it is possible to find a bankruptcy opinion to support any legal proposition and any side of a legal proposition. As a result, no binding precedent exists in some circuits on certain fundamental bankruptcy issues.

The practice of bankruptcy law, it would seem, must be in a very un-law-like state of perpetual and fundamental uncertainty. In this view, bankruptcy law is a sort of war zone, and its practitioners can most often be found hiding beneath their desks waiting fearfully for the next totally unpredictable event. There is no shortage of commentators proclaiming the fundamental incoherence of bankruptcy law, and examples can be multiplied.

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47 Id. § 3.13, at 754 (emphasis added). The NBRC uses the term “*stare decisis*” to refer to the principle by which judicial decisions bind the proceedings of hierarchically inferior courts. See id.

48 Id. § 3.13, at 754–55 (citing Baisier & Epstein, *supra* note 23, at 526–27 n.9). See also Lawrence Ponoroff, *The Dubious Role of Precedent in the Quest for First Principles in the Reform of the Bankruptcy Code: Some Lessons from the Civil Law and Realist Traditions*, 74 AM. BANKR. L.J. 173, 199 (2000) (“[T]he worst thing to happen to bankruptcy practice was the decision in 1978 to begin publishing bankruptcy judges’ opinions . . . . [O]ne can find authority in the case law these days for virtually any proposition.”).

49 A less dramatic version of the perpetual uncertainty thesis manifests itself in the anecdotal understanding that “courts of bankruptcy are essentially courts of equity.” Pepper v. Litton, 308 U.S. 295, 304–08 (1939). This notion that bankruptcy courts are courts of equity is widely held despite its extremely tenuous provenance. See Honorable Marcia S. Krieger, “The Bankruptcy Court is a Court of Equity”: What Does that Mean?, 50 S. CAL. L. REV. 275, 277–86 (1999) (demonstrating that bankruptcy courts are substantially unrelated to traditions of equity in development of U.S. law).

50 See Baisier & Epstein, *supra* note 23, at 526–28 n.9 (listing as examples of incoherence lack of resolution on four important issues in business bankruptcies); Bussel, *supra* note 21, at 1076–77 (listing ten areas where bankruptcy court has disagreed with district court or BAP decision on same issue); Rhodes, *supra* note 29, at 290–93 (listing unresolved issues); Daniel J. Bussel, *Bankruptcy Appellate Reform: Issues and Options*, 1995–1996 ANN. SURV. BANKR. L. 257, 261–62 (listing five areas of “unsettled law”).
I suggest that reports of bankruptcy law’s disintegration have been greatly exaggerated. Later I shall show that the variation in bankruptcy doctrine exhibits concrete and navigable patterns, but for now it is interesting to wonder what explains the diagnoses of the doomsayers. Why are these people projecting incoherence on this legal system? The answer, I believe, is that they are seeing what they expect to see. They subscribe to a hierarchical mechanics explanation of precedential ordering, a sort of precedent ex machina. If one identifies order with hierarchy, and then one notices that the hierarchy is defective, then one anticipates disorder. Thus the conviction of those who maintain that a legal system with a malfunctioning appellate mechanism is a system doomed to doctrinal incoherence. Precedent, on this view, is a product of hierarchy. If there is no hierarchy, there can be no precedent. Chaos closes in.

This account of precedent is the dominant theory among mainstream legal theory. See, e.g., 1B JAMES WM. MOORE, MOORE’S FEDERAL PRACTICE ¶ 0.401, at 1-2 (Daniel R. Coquillette et al. eds., 2d ed. 1996) (“As applied in a hierarchical system of courts, the duty of a subordinate court to follow the laws as announced by superior courts is theoretically absolute.”). For contemporary examples of legal and social science scholars assuming hierarchy as an unargued and essential facet of the legal system, see Bussel, supra note 21, at 1074 (characterizing some bankruptcy court opinions to hold that “the rule of stare decisis is a deduction from the hierarchical nature of the judicial system and a related interest in judicial economy”); Evan H. Caminker, Why Must Inferior Courts Obey Superior Court Precedents?, 46 STAN. L. REV. 817, 818 (1994) (justifying the “longstanding doctrine [that] dictates that a court is always bound to follow a precedent established by a court ‘superior’ to it”); Susan B. Haire et al., Appellate Court Supervision in the Federal Judiciary: A Hierarchical Perspective, 37 L. & SOC. REV. 143, 143-44 (2003) (“[T]he federal judicial hierarchy is designed to enable the Supreme Court, sitting at the system’s apex, to impose its collective will on lower federal judges.”); Lewis A. Kornhauser, Adjudication by a Resource-Constrained Team: Hierarchy and Precedent in a Judicial System, 68 S. CAL. L. REV. 1605, 1607-08 (1995) (explaining features he observes “[i]n virtually all judicial systems,” viz. the “vertical aspects of a system of precedent [in which] the lower [courts are obliged] to follow the decisions of a higher court”). The commitment to the “hierarchical nature of the judicial system” that characterizes the above-cited works is what Griffiths would call an ideological position, i.e., a “mixture of assertions about how the world ought to be and a priori assumptions about how it actually and even necessarily is. . . .” See Griffiths, supra note 6, at 3. Galanter’s list of eight ideological propositions that dominate conventional legal scholarship contains an entry on hierarchy. See Galanter, The Portable Soc 2, supra note 6, at 252 (“6. Normative statements, institutions, and officials are arranged in hierarchies, whose members have different levels of authority. A. ‘Higher’ elements direct (design, evaluate) activity; ‘lower’ ones execute activity. B. Higher elements control (guide) lower ones.”).

See, e.g., Bussel, supra note 21, at 1087-88. Delegating [the job of being the principal expositors of bankruptcy law] to bankruptcy courts results in chaotic law development. No mechanism for reconciling disparate ‘reasonable’ interpretations of law exists. In the case of administrative agencies with internal hierarchies and nationwide jurisdiction, of course, this ‘chaos’ problem is not present. But in a bankruptcy system relying upon hundreds of co-ordinate and decentralized adjudicators resolving cases, a large dose of uncertainty is unavoidable, and chaos [is] a plausible outcome.

Id. (emphasis added).
These commentators are, I suggest, victims of the pyramid story. Variation in doctrinal content, which is in fact endemic and quotidian, gets framed into being a problem. In this view, variation is either a passing thing or a pathology. Where variation is a passing thing, it is considered to be only temporary—the hierarchical mechanics merely has not yet gotten around to consolidating a bit of doctrine. Where variation is a pathology, it is understood as a sort of exception, telling us nothing about the normal functioning of a legal system in the same way that a cancer tells us nothing about the normal functioning of the body. In either case, variation is idealized away. The pyramid story thus interprets variation by defining away its centrality in the everyday life of a legal system.

2. Centering variation: indeterminacy and what follows

Against the instinct to idealize away variation, there runs an opposite tendency. This tendency, associated with the Legal Realists and Critical Legal Studies, gives variation a central role.

An important trilogy of articles by Karl Llewellyn, Stewart Macaulay, and Duncan Kennedy demonstrates the ways in which variation can be taken seriously. In 1950, Llewellyn claimed that “[i]n the work of a single opinion-day I have observed 26 different, describable ways in which one of our best state courts handled its own prior cases, repeatedly using three to six different ways within a single opinion.”

In a classic statement of the Legal Realist position, Llewellyn continues:

What is important is that all 26 ways (plus a dozen others which happened not to be in use that day) are correct. They represent not “evasion,” but sound use, application and development of precedent. They represent not “departure from,” but sound continuation of, our system of precedent as it has come down to us. The major defect in that system is a mistaken idea which many lawyers have about it—to wit, the idea that the cases themselves and in themselves, plus the correct rules on how to handle cases, provide one single correct answer to a disputed issue of law. In fact the available correct answers are two, three, or ten. The question is: Which of the available correct answers will the court select—and why? For since there is always more than one available correct answer, the court always has to select.


54 Id. Note that Llewellyn’s formulation is expressly empirical rather than ideological: our system of precedent is what it is; “[t]he major defect in that system is a mistaken idea which many lawyers have about it.” Id. (emphasis added).
In a characteristically delightful exercise, Llewellyn (taking cases on statutory construction as an example) then detailed twenty-eight positions announced by courts. Side-by-side with these, Llewellyn presented their twenty-eight opposites, also announced by courts. Where some see incoherence, Llewellyn sees only a complex system at work.

In an article sixteen years later, Macaulay observed substantial variation in the way courts construed a set of contracts cases. Unlike Llewellyn however, Macaulay did more than observe that the body of doctrine was variable. He also devised a sense-making scheme (based on policy objectives and implementation mechanisms imputed to judges) which he superimposed upon the data in an attempt resolve the apparent variation into some sort of system.

Ten years after the Macaulay article, Kennedy walked the same road. After observing variation generally across contract law cases, Kennedy proposed a different, now very familiar, sense-making scheme:

If the judges had neither derived the common law rules from the concepts nor applied them mechanically to the facts, then what had they been doing? ... [T]hey had been legislating and then enforcing their economic biases. The legal order represented not a coherent individualist philosophy, but concrete individualist economic interests dressed up in gibberish.

Like Macaulay, Kennedy superimposed a scheme to systematize the observed variation. But then Kennedy went on to deplore the scheme he superimposed.

In these three important works, I want to point out one distinction and one continuity. The distinction lies in the authors’ choice of whether to superimpose a sense-making scheme upon the variable content of doctrine. Macaulay and Kennedy elect for superimposition, and Llewellyn does not. It is interesting that Llewellyn offers no explanation for the variation he observes. He makes no attempt to make doctrinal contradiction seem to make sense. He seems frankly unconcerned that contradiction exists at all, and even slightly amused by those who are troubled. If Llewellyn offers an interpretation, it is not at the level of the

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55 Id. at 401–06.
57 Id. at 1056–57 (offering categories of rules and standards, and identifying market goals and “other than market” goals).
59 Id. at 1762–66 (applying individualistic and altruistic model as basis to explain observations).
60 Id. at 1774–76.
legal system's content (e.g., "when you consider my sense-making scheme, which elaborates the micro-rationalities of particular adjudicators, what appeared to be variable and contradictory now seems systematic, albeit deplorable") but rather at the level of the legal system's dynamics. Content variation, on Llewellyn's view, is everyday grist for the mill of a working complex legal system.61

For the moment, however, I am more interested in how the Llewellyn-Macaulay-Kennedy trilogy is continuous: they all treat variation as a fundamental attribute of legal systems. It is this recognition of the centrality of variation that distinguishes the Realist and Critical perspective from the tradition of doctrinal legal scholarship that preceded legal realism.62

What I am calling variation in doctrinal content, the Critical scholars define as "indeterminacy"63 and "contradiction."64 The Crits' recognition of indeterminacy is grounded in a metaphysical claim and proceeds toward a pragmatic program. The metaphysical claim is that reality is socially constructed.65 The pragmatic program recommends that we turn our attention away from the bootless divining of laws or patterns, and focus instead on policy

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61 For what it is worth, this Article follows Llewellyn. I observe content variation, but offer no micro-rational sense-making scheme. Instead, I am interested in content-level variation in order to explore legal systems at the macro-level of structure and dynamics. See infra Part V.B.

62 See David M. Trubek & John Esser, "Critical Empiricism" in American Legal Studies: Paradox, Program, or Pandora's Box?, 14 L. & Soc. INQUIRY 3, 9 (1989) [hereinafter Trubek & Esser, Critical Empiricism] (stating Legal Realists "showed that legal doctrine was indeterminant and contradictory, thus demonstrating that doctrinal considerations could not explain legal outcomes. The Realists' 'discovery' of the indeterminacy of legal doctrine posed a threat to mainstream themes of legal autonomy, neutrality, and rationality, as well as to the bases for scholarly authority.").

63 See David M. Trubek, Where the Action Is: Critical Legal Studies and Empiricism, 36 STAN. L. REV. 575, 578 (1984) [hereinafter Trubek, Where the Action Is] (stating that critics assert "doctrine neither provides a determinant answer to questions nor covers all conceivable situations. This is the principle of indeterminacy.").

64 See id. Trubek states that:

[The critics reject the view that the doctrine contains a single, coherent, and justifiable view of human relations; rather, they see the doctrine as reflecting two or even more different and often competing views, no one of which is either coherent or pervasive enough to be called dominant. This is the principle of contradiction.

65 See id. at 609 ("[T]here is no real world which is mirrored . . . in legal ideas. Ideas and economic or social structures are mutually constituting. Law creates society and society creates law; the relationships are complex and multidirectional. The resulting systems of action and order must be seen as a totality."). For a foundational text regarding the "social construction" thesis, see PETER L. BERGER & THOMAS LUCKMANN, THE SOCIAL CONSTRUCTION OF REALITY (1966). See generally Elizabeth Mertz, A New Social Constructionism for Sociolegal Studies, 28 LAW & SOC'Y REV. 1243, 1248 (1994) (noting that legal thought creates fiction by transforming the fluid and contested into "static and fixed").
studies\textsuperscript{66} and the praxis of transformative politics.\textsuperscript{67} A passage from Robert Gordon's statement of the theoretical underpinnings of Critical Legal Studies is instructive:

Positivist social scientists (who would include both liberal and Marxist "instrumentalist" legal theorists) are always trying to find out how social reality objectively works, the secret laws that govern its action; they ask such questions as, "Under what economic conditions is one likely to obtain formal legal rules?" Anti-positivists assert that such questions are meaningless, since what we experience as "social reality" is something that we are constantly constructing; and that this is just as true for "economic conditions" as it is for "legal rules."\textsuperscript{68}

Note the two steps in the Critical position: (1) Crits interpret variation in doctrinal content as evidence of the claim that social reality is always in the process of being constructed, and (2) Crits conclude that there are no laws that govern that process of social construction.\textsuperscript{69}

This Article accepts the first step and rejects the second: reality is constructed,\textsuperscript{70} but the process of that construction is observable and describable. We can make statements about the social construction process, and those statements can be more or less right or wrong. I want to suggest that the process of social construction by which a legal system is constantly being made, un-made, and re-made does in fact exhibit observable patterns—patterns about which we


\textsuperscript{67}Trubek & Esser, Critical Empiricism, supra note 62, at 45 (calling for "politically self-conscious practice of knowledge construction").


\textsuperscript{69}Note that Crits do observe some patterns in the social construction process, e.g., biases of individual decision makers on questions of class or race. In the vernacular of this Article, such biases are forms that enter the relevant system, and perhaps rise to the level of norms. The tendency to class bias is a form (and perhaps a norm) in precisely the same way as a discounted cash flow model. See infra Part V.A.2.(b). My position is that social science can measure, and falsify hypotheses regarding, such forms.

\textsuperscript{70}There is a parallel to the position that "social reality is socially constructed." See generally STEPHEN WOLFRAM, A NEW KIND OF SCIENCE 1-16 (2002) (supporting proposition that the universe is computational, i.e., physical reality is physically constructed). Wolfram makes a substantial, even stunning, contribution to the reality is constructed thesis by suggesting the equivalence of all universal computing systems: e.g., the complex physical phenomenon being observed (e.g., a waterfall) is as complex as the researcher observing it. Object and subject are equally complex and mutually influential, and this is true even at the level of physics. Id.
can hypothesize and which hypotheses we can test and refine.\textsuperscript{71} Thus, my position differs substantially from the Critical position. Crits treat indeterminacy as the end of one inquiry ("What is a legal system? Nothing more than the execution of the biases of the most powerful actors.") and the beginning of another ("If that is all there is to a legal system, then let us turn our attention to policy studies and transformative politics."). I regard indeterminacy as contributing substantial information and direction to the principal inquiry: What is a legal system? Can we specify its dynamics?

3. A different direction: variation and emergence

Suppose we take indeterminacy and contradiction, not as the end of the analysis, but rather as the beginning.\textsuperscript{72} Instead of asking, "What does variation tell

\textsuperscript{71}It does not follow that, if one accepts the premise that reality is socially constructed, one must reject the possibility that stable, describable, and knowable patterns characterize the process of construction. See, e.g., Edward L. Rubin, Scholars, Judges, and Phenomenology: Comments on Tamanaha's Realistic Sociolegal Theory, 32 Rutgers L.J. 241, 242 (2000) (proclaiming himself "entirely persuaded by the Continental critique of positivism" and then going on to restate a theory of adjudication that draws from the philosophical tradition of phenomenology). The formulation provided by Trubek and Esser is helpful here. See Trubek & Esser, Critical Empiricism, supra note 62, at 11. Trubek and Esser define "universal scientism" (sometimes also called "positivism") as "an understanding of the nature of knowledge and its construction. It presupposes a radical distinction between an external world of objects and behaviors and an internal world of consciousness." \textit{Id}. Trubek and Esser define "determinism" as "an understanding of the social world. It suggests that social action is governed by laws, much like the laws that govern the rotation of the planets. These laws exist irrespective of our wills and provide social action with a deep logic." \textit{Id}. Since I argue that there is a measurable and definable relationship between variation and ordering, my position (1) joins the Critical position in rejecting \textit{universal scientism}'s split between object and subject—I accept the claim that \textit{social reality is constructed}; however, my argument (2) does not join the Crits' rejection of \textit{determinism}. Socially constructed phenomena can exhibit observable patterns (although these patterns, by definition, do not exist "irrespective of our wills," and are probably rather unlike "the laws that govern the rotation of the planets"). See \textit{id}. While we cannot predict the future content of a legal system, we can describe the dynamics and structures that generate that content. Indeed, it is a hallmark feature of self-organizing criticality that we can describe the structure that produces the content, but we cannot predict the content. See, e.g., J.C. Sprott et al., Self-Organized Criticality in Forest-Landscape Evolution, 297 Physics Letters 267, 267 (2002) (describing self-organized criticality emergence in simple models).

\textsuperscript{72}Speaking for the school of "autoopoiesis," Gunther Teubner has written in a similar vein: While postmodernists are obviously satisfied to deconstruct legal doctrine and are joyfully playing with antinomies and paradoxes, legal autoopoiesis poses the somewhat sobering question: After the deconstruction?

Creative use of paradox is the message that moves autoopoiesis beyond deconstructive analysis into reconstructive practice. It is the experience of real life, the experience that discursive practices "know" how to overcome the blockage of paradoxes and antinomies that does not allow autoopoiesis theory to remain in the comforting twilight . . . Paradoxes, tautologies, contradictions, and ambiguities in discursive practice are not the end of autoopoietic analysis; they are seen as the starting
us about the content of a legal system?” let us ask, “What does variation tell us about legal systems’ structure and dynamics?” How can a system characterized by variation be understood as a system at all? I want to suggest that content variation is a precondition for a dynamical process of emergence, in which legal systems develop and disseminate new features in a self-organizing process.

In a classic study of the self-organizing of bureaucracies published in 1955, Peter Blau summarized his findings:

In his analysis of bureaucratic structure, Weber focused upon official regulations and requirements and their significance for administrative efficiency. Of course, he knew that the behavior of members of an organization does not precisely correspond to its blueprint. But he was not concerned with this problem and did not investigate systematically the way in which operations actually are carried out. Consequently, his analysis ignored the fact that, in the course of operations, new elements arise in the structure which influence subsequent operations. Recent students of organization have emphasized the importance of these emergent factors, such as informal relationships or unofficial norms.

... Most discussions on the subject contrast informal relationships and practices with the formal blueprint of the organization. This emphasizes the least interesting aspect of the concept of “informal organization,” namely, that behavior and relationships often fail to conform exactly to formal prescriptions, which is certainly not a novel discovery. Much more significant is the insight that such activities and interactions are not simply idiosyncratic deviations but form consistent patterns that are new elements of the organization... [O]rganizations do not statically remain as they had been conceived but always develop into new forms of organization.

Indeterminacy in doctrine and gaps between the blueprint and the reality are not just negative findings: things are up for grabs; you never can tell; “it’s conflict all the way down.” Rather, variation, be it indeterminacy, contradiction, paradox,

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or gap, is actually the beginning of a constructive finding: these indeterminacies and gaps contribute to the emergence of "consistent patterns that are new elements of the organization." Thus the insight of self-organization: alongside the static order rationally ordained (in the bankruptcy example, this is the pyramid story of appellate control and consolidation of doctrine), there is an order that is always emerging dynamically. Any accurate description of a legal system should account for both orders.

B. Structure in the Storm: Local Legal Cultures

Variation in legal systems is normal and common. This observation turns on its head the claim (implicit in the pyramid story) that variation is antithetical to the very definition of a legal system. To the contrary, a legal system as lived and experienced will live and experience variation.

Yet it is not enough to say merely that variation is common. Variation is more than just a feature of legal systems; it is a structural feature. Variation is not noise in the system—random, unpatternable, emitting scattered signals that ultimately cancel out each other. Rather, variation in a legal system’s content is architectural—it is generative of order.

To take a closer look at the structural characteristics of variation, we begin by reviewing important empirical research, both in and beyond bankruptcy, on local legal cultures.

76 BLAU, supra note 74, at 2. The field of "sociolinguistics" provides substantial direction and methodology to our study of the relationship between variable content and emergent norms. See, e.g., Uriel Weinrich et al., Empirical Foundations for a Theory of Language Change, in DIRECTIONS FOR HISTORICAL LINGUISTICS: A SYMPOSIUM 95, 100–01 (W.P. Lehmann & Yakov Malkiel eds., 1968). The authors note that:

The facts of heterogeneity have not so far jibed well with the structural approach to language. . . . For the more linguists became impressed with the existence of structure of language, and the more they bolstered this observation with deductive arguments about the functional advantages of structure, the more mysterious became the transition of a language from state to state. After all, if a language has to be structured in order to function efficiently, how do people continue to talk while the language changes, that is, while it passes through periods of lessened systematicity? . . . The solution, we will argue, lies in the direction of breaking down the identification of structuredness with homogeneity. The key to a rational conception of language change—indeed, of language itself—is the possibility of describing orderly differentiation in a language serving a community. . . . One of the corollaries of our approach is that in a language serving a complex (i.e., real) community, it is absence of structured heterogeneity that would be dysfunctional

Id. (first emphasis added). As in language, the task of law should be to "break[] down the identification of structuredness with homogeneity" and instead discern the structure in the variation, and state the relationship between that structure and the dynamics of ordering. Id. See also Galanter, Portable Soc 2, supra note 6, at 258 (looking to linguistic models for methodology useful to legal studies).
1. Local legal cultures in bankruptcy

Empirical research on bankruptcy begins by observing substantial variation in the application of bankruptcy laws. But the empirical work goes beyond merely observing the fact of variation: the research also establishes that this variation takes the form of substantial and persistent patterns. These patterns can be organized geographically or non-geographically. Where the doctrinal literature contends that variation signifies a legal system that is fundamentally incoherent and at odds with itself, the empirical research reveals something very different: the U.S. bankruptcy system is made up of many communities that are, in themselves, internally coherent and unified. These communities order and consolidate doctrine on a local level. The term "local legal cultures" to describe this organizational feature of variation. As defined by Professors Teresa A. Sullivan, Elizabeth Warren, and Jay L. Westbrook, local legal cultures are

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See infra text accompanying notes 82-85 (discussing empirical works). A devotee of the pyramid story would note that this variation blatantly defies the uniform federal Bankruptcy Code and even goes so far as to violate the spirit of a clause in the U.S. Constitution expressly authorizing Congress to "establish . . . uniform Laws on the subject of Bankruptcies throughout the United States." See U.S. CONST. art. I, § 8, cl. 4.

See, e.g., LoPucki, Law in Lawyers' Heads, supra note 43, at 1502 (presenting "evidence of persistent, systematic differences in legal outcomes between communities governed by the same written law").

See, e.g., Sullivan et al., Persistence, supra note 43, at 829 (using Western District of Pennsylvania (Pittsburgh) and Eastern District of Pennsylvania (Philadelphia) as examples of percentage of Chapter 13 cases that are filed). See also Teresa A. Sullivan et al., As We Forgive Our Debtors: Bankruptcy and Consumer Credit in America 343 (1989) (noting that best level of analysis for bankruptcy variation is federal district rather than state). Federal districts may be better than states as levels of analysis because bankruptcy trial networks are organized district-by-district (and really, judge-by-judge). See infra Part V.A.1 (discussing bankruptcy trial networks).


See supra Part III.A.1 (discussing mainstream scholarly approaches to variation).

The term local does not necessarily correlate with geography. Actors share a local legal culture when they are networked with each other—when they share a substantial amount of connections. See generally Albert-László Barabási, Linked: The New Science of Networks passim (2002) (detailing various links); Mark Buchanan, Nexus: Small Worlds and the Groundbreaking Science of Networks 197 (2002) (noting that "there can be no more than a few links separating any two individuals"). Networks can be defined by geography (e.g., folks in the Western District of Wisconsin form a practice community that differs substantially from the practice community formed in the Eastern District of Wisconsin) or by some non-geographical variable, such as status, see infra note 93 (describing non-geographic networks in LoPucki and Whitford study of variation in distributions by Chapter 11 plans).
systematic and persistent variations in local legal practices as a consequence of a complex of perceptions and expectations shared by many practitioners and officials in a particular locality, and differing in identifiable ways from the practices, perceptions, and expectations existing in other localities subject to the same or a similar formal legal regime. 83

These patterns of local ordering are remarkably robust, lasting over twenty years and weathering every sort of economic swing and several legislative adjustments to the Bankruptcy Code. 84

Two examples of local legal cultures, one drawn from the consumer hemisphere of bankruptcy and one from the business hemisphere, provide a taste of the insight. 85

(a) Repayment floors in Chapter 13 plans

In the consumer hemisphere of bankruptcy, Professor Jean Braucher studied Chapter 13 plans routinely confirmed in bankruptcy jurisdictions in four metropolitan areas. 86 Chapter 13 is a bankruptcy provision whereby a consumer debtor writes a plan that, among other things, may allow her to repay only a percentage of her original debt to some of her creditors. This plan is typically submitted to a Chapter 13 trustee who can play a substantial role in revising the plan. Ultimately, the plan must be confirmed by the judge of the local bankruptcy court. Braucher found that “repayment floors,” i.e., minimum repayment percentages routinely accepted by trustees and confirmed by judges (and hence, routinely offered by local bankruptcy practitioners), had emerged along geographical patterns. 87 For example, Braucher found that plans proposing to repay a mere ten percent of debt were routinely confirmed in Dayton, Ohio, while plans in San Antonio, Texas, needed to propose a hundred percent repayment in order to be routinely confirmed. 88

84 See id. at 858 (noting that “the differences suggested by the data are large enough and persistent enough to suggest systematic, community differences that survive the tenure of a single actor or group of actors”); Whitford, supra note 43, at 407-09.
85 More examples of local legal strategies, usages, and norms are collected infra Part V.A.2. See also LoPucki, Law in Lawyers' Heads, supra note 43, at 1506-07 (noting variation in routinely passed floor levels in four U.S. cities).
86 Braucher, supra note 43, at 532.
87 Id.
88 Id.
(b) Distributions to old equity in Chapter 11 plans

In the business hemisphere of bankruptcy, Professors Lynn M. LoPucki and William C. Whitford studied the conduct of Chapter 11 reorganizations of the largest publicly held corporations over several years. Chapter 11 plans, like their consumer counterpart, allow the debtor-corporation to write a plan that restructures debt and proposes a post-reorganization distribution of value. LoPucki and Whitford found that plans negotiated among the debtor-corporation and the various claimants against the firm very often included some distribution of value to the shareholders of the debtor-corporation prior to reorganization (these pre-bankruptcy shareholders are known as “old equity”). These distributions routinely occurred despite a legal provision entitling creditors to absolute priority over old equity. This legal entitlement is clear and, according to LoPucki and Whitford, could be easily and cheaply enforced. And yet creditors, against their apparent self-interest, routinely agreed to a distribution of value to old equity. LoPucki and Whitford conclude that the lawyers who negotiate the plans in big business bankruptcies are nearly all members of the same practice community (i.e., big city, mega-firm lawyers), and that a convention of distribution to old equity had emerged within this community.

2. Local legal cultures beyond bankruptcy

Long before empirical research by lawyers began sketching the outlines of bankruptcy’s local legal cultures, social scientists researching legal systems had already made much use of the concept. An important early work suggesting the existence of local legal cultures was Herbert Jacob’s Debtors in Court, published in 1969. Jacob surveyed creditors’ debt collection practices and consumer debtors’ bankruptcy filing rates in four Wisconsin cities. All four cities applied

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89 LoPucki & Whitford, Bargaining, supra note 80, at 134–37.
90 Id. at 143.
91 Id. at 144.
92 Id.
93 Id. at 156–58. The 1990 findings (i.e., that there is substantial distribution to old equity) were supported in a more recent study of Chapter 11 bankruptcies from 1991 through 1996. See Lynn M. LoPucki, The Myth of the Residual Owner: An Empirical Study, UCLA School of Law, Law & Econ. Research Paper No. 3-11, at http://ssrn.com/abstract=401160 (Apr. 29, 2003). It should be noted that distributions to old equity are certainly not prohibited by the Code, and were even explicitly envisioned by Congress. Nevertheless, the text of the statute does not compel, and the self-interest of creditors argues against, such distributions. The fact that big bankruptcy plans have developed singular characteristics suggests the existence of a legal culture that is hinged, not on geography, but on a sort of class or status: a community of interpretation and mutual-influence has emerged among the bankruptcy practitioners of large and prestigious law firms, whether those firms be in New York City, Washington, D.C., Chicago, San Francisco, or Los Angeles.
the same formal law (i.e., Wisconsin debt collection law and federal bankruptcy law). Yet Jacob's data showed both (1) substantial variation in the frequency of legal action (i.e., how often a creditor garnished a debtor's wages; how often a debtor sought bankruptcy protection); and (2) clear patterns in the variation demonstrating a significant correlation between parties' use of remedies and the city in which the action took place. A year later, Richard J. Richardson and Kenneth N. Vines published a book in which they coined the term "legal subculture" to explain the relationship between local political cultures and judicial recruitment to federal district courts. During the ensuing thirty years, a steady stream of social science research explored the usefulness of the local legal cultures explanation for various phenomena observed in civil and criminal legal systems.

A 1978 report on court delay written by Thomas Church and his colleagues offers an early definition of "local legal cultures":

95 Id. at 88.
96 Id. at 89–91.
It is our conclusion that the speed of disposition of civil and criminal litigation in a court cannot be ascribed in any simple sense to the length of its backlog, any more than it can be explained by court size, caseload, or trial rate. Rather, both quantitative and qualitative data generated in this research strongly suggest that both speed and backlog are determined in large part by established expectations, practices, and informal rules of behavior of judges and attorneys. For want of a better term, we have called this cluster of related factors the "local legal culture." 99

This definition, like the definition of "local legal cultures" offered in the bankruptcy literature, 100 focuses on the norms (including expectations, usages, perceptions, etc.) of network actors (including judges, practitioners, clients, etc.).

I want to draw two points from the stream of social science research on local legal cultures. The first regards the construction of social reality associated with Critical Legal Studies and other traditions. 101 Church, in the 1978 passage just quoted, regards the objective factors surrounding delay (e.g., court size, caseload, trial rate) as conceptually subsequent to subjective factors (i.e., the expectations of the relevant actors). 102 Other research suggests that the objective factors are conceptually prior to subjective factors. 103 Church, in a 1995 writing, elaborates on this "chicken-and-egg" problem:

[D]oes local legal culture cause or at least influence a court’s output and its practitioner’s behavior? Or does cause and effect work the other way around? Are existing patterns of output and behavior simply internalized by new judges and lawyers when they “learn the ropes” in a court, and thereby unconsciously turned into norms of behavior? Unfortunately, even if we establish a demonstrable relationship between actual court output and the norms of practitioners working in that court, it would not be possible to determine which of these two alternative

99 CHURCH ET AL., JUSTICE DELAYED, supra note 98, at 54. See also Church, Plea Bargaining, supra note 98, at 136–37. Church states that:
Indeed, when lawyers are called on to represent a client in an unfamiliar court, they often report that their biggest problems occur in areas of court operation that cannot be uncovered by reading statutes or local court rules or by looking at case files. Lawyers refer to these variations in norms and ways of doing things as differences in ‘local practice.’ Social scientists frequently use the term local legal culture to describe this network of unwritten standards and patterns of behavior.

Id.

100 See Sullivan et al., Persistence, supra note 43, at 804.
101 See supra text accompanying notes 65–71.
102 See CHURCH ET AL., JUSTICE DELAYED, supra note 98, at 54.
103 Notably, Herbert Kritzer’s Rule 11 study. See Kritzer & Zemans, supra note 98, at 539.
hypotheses is correct. The best that social science can usually provide is evidence of a relationship between two variables—in this case, between practitioner norms and court system behavior. Determining which variable is the causal factor and which is what social scientists call the dependent variable is often a speculative exercise.\(^\text{104}\)

If the social construction thesis is correct, however, it is unnecessary to show that either objective or subjective factors are conceptually prior or causal—subjective and objective factors mutually constitute each other.\(^\text{105}\)

A second contribution of the social science literature is to help refine the definition of local legal cultures. It is the beginning of definition to say that local legal cultures involve the norms of network actors. But what are norms and what are networks? Let us clarify the meaning of these two key terms.

**C. Forms, Norms, and Networks**

It is useful to draw a distinction between norms and forms. In any given system, a form is just a particular way of doing things. Forms in a legal system include at least the variety of lawyers’ strategies, administrative routines, and judicial utterances. Broadly speaking, forms are everything that makes up the content of a system.

A norm, on the other hand, is a particular form that has come to characterize system content. A norm is a way of doing things that has achieved a level of popularity or pervasiveness such that it has come to be expected.\(^\text{106}\)

\(^\text{104}\)Church, *Plea Bargaining*, supra note 98, at 137.

\(^\text{105}\)See id. ("It is entirely possible for causality to work in both directions: norms can influence behavior, which in turn can influence norms. The hypothesis suggested here is simply that practitioner norms regarding the proper mode of disposition of criminal cases are related to actual dispositional patterns in criminal trial courts."). See generally ARTHUR F. MCEVOY, *THE FISHERMAN’S PROBLEM: ECOLOGY AND LAW IN THE CALIFORNIA FISHERIES, 1850–1980* (1986); Hendrik Hartog, *The End(s) of Critical Empiricism*, 14 L. & Soc. INQUIRY 53, 58 (1989) (asserting, for the purposes of argument, the "irrelevance of method").

\(^\text{106}\)It may be useful to illustrate the difference between forms and norms by using simple algebraic notation. Let us define variable system content as:

\[
\sigma e_i = \mu^1, \mu^2, \mu^3, \mu^4, \mu^5, \mu^6, \mu^7, \mu^8, \mu^9, \ldots \mu^n
\]

where \(\sigma\) stands for variation, \(e_i\) stands for system content, and each \(\mu\) represents a different particular form. For example the \(\mu\)'s in the above statement could represent the variety of ways that a judge could assign value to a car, with \(\mu^1\) being "look it up in the bluebook," \(\mu^2\) being "evidence from a local appraiser," \(\mu^3\) being "owner testimony" and so forth. Let us define ordered system content as:

\[
\phi e_i = \mu^1, \mu^2, \mu^3, \mu^4, \mu^5, \mu^6, \mu^7, \mu^8, \mu^9, \ldots \mu^n
\]

where \(\phi\) represents a norm of the system’s content. In this latter statement we see that \(\mu^1\) (look it up in the bluebook) has come to characterize the system. While there is still the occasional \(\mu^2\) (evidence from local appraiser), we can say that the system has come to expect bluebook evidence
Networks can be a slippery concept. The social science literature on local legal cultures has set forth at least two rival conceptions of networks; each is discussed below.

I. Networks as “workgroups”

In 1977, James Eisenstein and Herbert Jacob published their study of criminal felony dispositions in Baltimore, Chicago, and Detroit. The authors found that where the same judge, prosecuting attorney, and defense attorney worked together on multiple cases, plea bargains increased and cases were disposed more quickly. Where the membership of the workgroup (i.e., judge, prosecutor, defense attorney) was unstable, there were fewer plea bargains and a slower disposition rate. Eisenstein and Jacob conclude: “Familiarity produced pleas, because with familiarity negotiations reduced uncertainty.”

A workgroup, as used by Eisenstein and Jacob, is a set of system actors that are strongly tied to each other—that is, a workgroup is comprised of actors who are common participants in repeated transactions. The question is whether a network, properly defined, should be limited to the strongly tied actors of a workgroup, or whether a network includes workgroups plus something more.

Undoubtedly, strongly tied actors establish communicative norms. We observe, for example, that frequent conversation partners develop a special slang, and autistic twins develop their own language. But, while a strong-ties-workgroup definition of networks seems accurate, it also seems underinclusive. The problem with limiting the definition of networks to strong-ties groups is the suggestion of autonomy: if networks were no more than isolated workgroups, operating side-by-side as separate and sealed systems, then communication between networks would be much more difficult than it is. Each workgroup would comprise its own system, and the ordering of that system’s content would be autonomous, with no

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(i.e., bluebook evidence is the norm). So a norm is nothing more than a particular form that has come to characterize a system. More generally, we can say that the project of this Article is to state the relationship between variable system content \((\sigma \varepsilon)\) and ordered system content \((\phi \varepsilon)\).

107See infra Part IV.C.1 for my attempt to refine the definition of network.
109Id. at 244–51.
110Id.
111Id. at 252.
112See generally Mark S. Granovetter, The Strength of Weak Ties, 78 AM. J. OF SOC. 1360, 1360, 1362–63 (1973) [hereinafter Granovetter, Strength of Weak Ties] (arguing that “the degree of overlap of two individuals’ friendship networks varies directly with the strength of their tie to one another”); Mark S. Granovetter, The Strength of Weak Ties: A Network Theory Revisited, 1 SOC. THEORY 201, 202 (1983) [hereinafter Granovetter, Weak Ties Revisited] (noting “that social systems lacking in weak ties will be fragmented and incoherent”).
possibility for inter-workgroup ordering. A broader definition of networks seems necessary.

2. Networks as semi-autonomous

Church, in a 1982 study of criminal court practices in Pittsburgh, Miami, Detroit, and the Bronx, explicitly challenged the workgroup hypothesis presented by Eisenstein and Jacob.113 The workgroup hypothesis suggests that where workgroup stability is high, the trial rate will be low because the familiarity of the parties with one another will facilitate disposition by plea bargaining; similarly, where workgroup stability is low, the hypothesis suggests that the parties' lack of familiarity with each other will impede plea bargaining and result in more full trials.114 Contrary to the workgroup hypothesis, however, Church's data showed that the court with consistently the lowest proportion of trials . . . [the Bronx] affords very little opportunity for the growth of stable relationships among judge, [assistant district attorney], and defense attorney. The one court with unambiguously strong workgroup cohesion—Miami's felony court—consistently ranks at or near the top in the proportion of cases disposed by trial. The relationships among the courts are thus almost the opposite of what the courtroom workgroup hypothesis would suggest . . .

[T]hese observations . . . suggest that dispositional practices in a court system may be grounded in something more fundamental and permanent than the current assignment practices and management procedures of courts, district attorneys, and public defenders.115

Forms and norms, it seems, develop not only within workgroups, but also across workgroups.116 So the proper definition of network should represent an overlapping and semi-autonomous arrangement of multiple workgroups. Church, writing in 1995, suggests that “[o]ne corollary of the legal culture hypothesis is the expectation of finding general agreement both within and across classes of practitioners in a given court. In other words, the notion of legal culture implies

113 CHURCH, LOCAL LEGAL CULTURE, supra note 98, at 48–52.
114 Id. at 48–49.
115 Id. at 52.
116 Put another way, the situs for ordered system content can be either intra-network or inter-network. Much of the local legal cultures research in bankruptcy may be evidence of intra-network ordering (i.e., “that's the way we do things here in the Western District of Wisconsin”), but self-organization also involves norms that spread, via weak ties, from network to network. See infra Part V.A.2.(b) (examples of inter-network organizing).
shared norms within a jurisdiction, not simply differences across courts.”

Properly understood, a network includes strong-ties workgroups, but also transcends them.

**D. From Variation to Ordering**

Local legal cultures constitute evidence of non-hierarchical ordering. Legal forms, which would otherwise be variable, are systematized in a particular locality. We can thus conclude that at least some significant portion of the variation we observe is not random noise. Rather, there are patterns to the variation, and these patterns are stable, knowable, and navigable. This contribution of the local legal cultures research is quite significant: alongside hierarchical mechanisms, we also find means of self-organization that produce emergent patterns. But while local legal cultures show us the existence of non-hierarchical ordering, they do not show us how that ordering occurs. Local legal culture is an observation, not an explanation.

We thus return to the fundamental question: “What orders system content when hierarchy does not?” The example of bankruptcy has shown us a legal

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117 Church, *Plea Bargaining*, *supra* note 98, at 146.

118 Important work in the bankruptcy area by LoPucki substantially develops this informal and emergent model of legal ordering. LoPucki suggests that local practice communities construct “shared mental models” that serve as reservoirs of system content, and these models prove resilient, even to changes in the formal written law. See *LoPucki, Law in Lawyers’ Heads*, *supra* note 43, at 1501–02. LoPucki states that:

> Within [small practice] communities, the law in lawyers’ heads plays a dominant role.

> A shared mental model of law implicitly proclaims “this is how we do things” (or, if the conversation should skip to a higher plane, “this is the right thing to do”). In these communities, the shared mental model is primary law, and the written law merely background with which the model interacts.

*Id.* LoPucki then applies an economic model developed by economists Arthur T. Denzau and Douglas C. North as an alternative to the conventional substantive rationality optimization model. See *Arthur T. Denzau & Douglas C. North, Shared Mental Models: Ideologies and Institutions, 47 KYKLOS* 3, 18–20 (1994). LoPucki’s analysis thus begins the process of specifying the dynamics of legal ordering. We can now say, following LoPucki, Denzau, and North, that the dynamics of legal ordering involves the process of developing and communicating shared mental models on the local level, i.e., system dynamics of change involves speakers’ norms. This is an important advance. Yet we are still interested in how those models or expectations (forms, in the vernacular of this Article) are developed and communicated.

119 See *Grossman et al.*, *supra* note 98, at 112. The authors state that:

> ‘local legal culture’ is not an explanation as much as it is a convenient restatement of the problem. It merely applies a label to what is generally accepted: that the practices and attitudes toward court processing of attorneys and court personnel [sic] play a significant role in determining the pace of litigation in a particular court.
system that, despite substantial defects in hierarchical mechanics, continues to manifest ordering via multiple local legal cultures. There seems to be substantially more ordering in the bankruptcy system than one would have a right to expect if the pyramid story alone was true. The formal mechanisms of hierarchy, which occupy the center stage of the legal imagination, explain some legal ordering, but not all. Hierarchy reigns, but does not rule.120

We can distill two features of local legal cultures: first, a structure of overlapping networks—local legal cultures overlap in such a way that they are experienced, not as several sealed and separate systems operating side-by-side, but rather as a single and unified (but not uniform) whole. So we can say that the practice of bankruptcy law, like the practice of speaking English in the United States, exhibits nationwide communicative unity with stark regional accents. Second, a dynamics of form innovation and norm emergence: local legal cultures generate forms and norms, which constitute a given local legal culture as both coherent in itself and distinct from other local legal cultures.

These two features, structure and dynamics, frame our attempt to explain the process of non-hierarchical ordering.

IV. SELF-ORGANIZATION

What explains legal ordering? More specifically, what explains the ordering that is not explained by hierarchical mechanics?

To clarify the process of non-hierarchical ordering, we must supplement the traditional image of the pyramid with a different image: overlapping networks that generate interpenetrating forms and norms. This Part presents a self-organizing model of legal systems, with particular application to bankruptcy. First, I specify some organizational features of the bankruptcy law system. Next, noting again that hierarchical mechanics explain a good deal of the ordering we observe in bankruptcy, I will attempt to probe the limits of the hierarchical explanations. Finally, I attempt to construct a model of self-organization. Building on a diverse body of research in the physical and social sciences, I will describe (1) the structures of self-organization, and (2) the dynamics of interaction within and among those structures.

120 This turn of phrase was suggested to me by my colleague, Marc Galanter.
A. Organizational Features of the Bankruptcy Legal System

An organizational analysis\textsuperscript{121} of bankruptcy should begin with a listing of the relevant system players. Significant actors in the bankruptcy legal system include at least the following:

Bench

- the 326 bankruptcy courts\textsuperscript{122} (comprised of the bankruptcy judge and the personnel in his or her chambers, including administrative staff and judicial law clerks);
- the clerk of each bankruptcy court (and his or her administrative staff);
- the appellate courts (including the district courts of which bankruptcy courts are departments, the circuit courts of appeals, the U.S. Supreme Court, and all the relevant judicial clerks and administrative staff);

Trustees

- the office of the U.S. Trustee and staff;
- the individual trustees-in-bankruptcy (including standing trustees, specially appointed trustees, trustee-hired professionals such as accountants, appraisers, attorneys, and attendant administrative staffs);


\textsuperscript{122}Author's count as of October 2001.
Bar

- attorneys, paralegals, expert witnesses (such as appraisers and financial modelers), and administrative staff;

Consumers

- clients (including repeat players such as organizations that frequently exercise debt-collection and other lender-related powers, and one-time players such as most consumer debtors);
- other affected parties (e.g., employers ordered, via employer wage orders, to pay debtors' wages directly to a trustee);
- near-clients (comprising those actors who have not consumed bankruptcy-related goods, but are connected to the system because they may someday be in a position to consume bankruptcy-related goods);
- non-clients (including the social and business networks of clients);

Policymaking actors

- the substantial apparatus surrounding Congress and the Executive, including lobbyists, donors, professional associations such as the American Bankruptcy Institute, the Commercial Law League of America, the National Bankruptcy Conference, etc.;

Commentators

- journalists and other organs of popularization, public opinion, and social communication;
- scholars and academic actors.

All of these system actors play a role in the ordering of system content. At the outset, I want to give special attention to the 326 bankruptcy courts. These courts are trial courts, fora of first instance, and their function differs in significant ways from the oft-studied appellate courts.

Bankruptcy courts produce two significant out-products. First, bankruptcy courts distribute the benefits and burdens of bankruptcy; they administer the

discharge and automatic stay, confirm plans of reorganization that reconfigure contracts, oversee the distribution of the estate among creditors, and otherwise parcel out bankruptcy’s benefits and costs.

The second significant out-product of bankruptcy courts is doctrine. As an incident of executing their task of burden and benefit distribution, bankruptcy courts speak doctrine. Doctrine is what an organization officially proclaims and memorializes about what it is doing. These official proclamations and memorializations serve to orient the organization to its task, and also serve as communications media to actors inside and outside the organization. Doctrine can be the mission statement posted on the wall of a local community center, the quarterly earnings projections announced by Microsoft, the official logging policy for federal lands in Montana established by the U.S. Forest Service, or the favored method for valuing a car announced by a bankruptcy court in Wisconsin. Doctrine provides important evidence both of what an organization thinks of itself, and how outside parties understand and will relate to that organization.

In addition to producing doctrine and distributing bankruptcy’s benefits and burdens, bankruptcy courts also occupy an important strategic location in the greater bankruptcy system: bankruptcy courts, as fora of first instance, are points of access for extra-system actors (e.g., actors from business networks or consumer networks) to enter into the bankruptcy legal system. Trial courts are regarded as “low-status,” vis-à-vis appellate courts, because of their proximity to and interaction with nonlegal actors. But it is precisely this low-status position that locates trial courts as the best-placed receptors of forms generated by networks beyond the legal system.

124 See infra text accompanying notes 156–64 (discussing Macaulay’s description of variation in use of formal contracts).
126 JACOB, supra note 94, at 129. Jacob asserts that:
   The political role of the judiciary has typically been seen to lie in the tendency of higher courts (especially the U.S. Supreme Court) to evolve new policies as significant as those developed by Congress or the President. Lower courts have little role in this policy-making function. But lower courts specialize in dealing with people in crisis . . . . [C]ourt appearances are not routine for most litigants.
Id. See infra Part V.B (discussing relationship between low-status and innovation in process of legal change).
127 Sociolinguistic research has demonstrated that there is more variation in speech usage among communities of lower social status (e.g., the inner city) than among the higher status speech communities. See JAMES MILROY, LINGUISTIC VARIATION AND CHANGE: ON THE HISTORICAL SOCIOLINGUISTICS OF ENGLISH 96 (1992). Milroy states:
   It was clear . . . [in] our Belfast work that to describe the inner-city phonology was a more complicated task than to describe ‘middle-class’ phonology, because there appeared to be much more variability within inner-city language than in higher status
Explanations of ordering in bankruptcy properly begin with the obvious: hierarchy. Bankruptcy law is, after all, federal law, and there are substantial hierarchical mechanisms built into the bankruptcy system that are designed to order system content. Can we explain bankruptcy’s ordering entirely from these blueprint features, without having to resort to the informal dynamics of adaptation and emergence that characterize self-organization? Before turning to a self-organizing model, we should do our best to exhaust hierarchical explanations of ordering.

Herbert Kaufman’s classic organizational analysis of the U.S. Forest Service is useful as a model for the present organizational analysis of the U.S. bankruptcy system. Both Kaufman’s project and mine want to explain the presence of ordering, the “unity without uniformity” that occurs in some organizations. Juxtaposing Kaufman’s organizational analysis of the U.S. Forest Service to an organizational analysis of the bankruptcy system shows both the reach and the limits of purely hierarchical explanations of ordering.

The plan of Kaufman’s study was to identify an organization subject to powerful forces of fragmentation (“centrifugal forces”) and then to study the “techniques of integration” by which that organization maintained its unity and coherence. Kaufman chose as his subject organization the U.S. Forest Service. However, rather than study that organization top-down, beginning with its chief administrative and policymaking offices located in the Department of Agriculture in Washington, D.C., Kaufman instead looked to the organization’s ground-level operatives, selecting a sample of five “Ranger Districts” of the then extant 792 language. ... [T]he speech community can be envisaged as being shaped like a pyramid, with greater variability at the lower end and greater convergence (or relative uniformity) at the upper end.

*Id.* Analogizing this finding to the project of legal studies, we can hypothesize that trial networks (i.e., lower status groups) possess higher variation and more often serve as the source of legal innovations than appellate networks (i.e., higher status groups). See infra Part V.B (trial courts as possible primary agents in the process of legal change).

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129 *Id.* at 203
130 *Id.* at 86, 204.
131 *Id.* at 89.
132 This was because
133 [i]n public administration, it is all too common to look at agency organization from the top down. Organization charts and description start with the head, then go to the branches, and finally to the lower levels. There is discussion of such matters as delegation of authority and of control by the top. This is all important; but perhaps more significant is to look at the organization upwards from the lowest general purpose unit—in this case, from the ranger district upward. This is what the present study has
districts charged with overseeing 181 million acres of federal lands scattered across the United States.

Kaufman analyzed the centrifugal forces working against the unity and coherence of the organization (e.g., the tremendous physical/geographical distance between field agents; the significant local interests attempting to influence the rangers' administration of forest resources, etc.) and asserts that the Forest Service has remained, in spite of it all, relatively unified. Kaufman then defined the "techniques of integration," those elements that militate against the fragmentation-inducing centrifugal forces.

Kaufman identifies three techniques of integration: (1) techniques for "pre-forming" decisions, i.e., guiding the discretion of field officers; (2) techniques for monitoring field officers; and (3) techniques for selecting and training field officers. The first two are explicitly hierarchical. The third, while substantially hierarchical, begins to intimate a dynamics of emergence that points us in the direction of self-organization.

1. Pre-forming decisions

What Kaufman calls "procedural devices for pre-forming decisions" consists mainly of a single written resource: the Forest Service Manual, a
The second set of “integration techniques” identified by Kaufman are devices for “detecting and discouraging deviation.” These include reports that field officers write at the request of the leadership and “official diaries” kept by the rangers, assistant rangers, and their principal aides.

show[ing] to the nearest half-hour how each workday is spent. On standard [U.S. Forest] Service-wide forms, the field officers and employees record each thing they do, describing the activity in enough detail for any inspector to identify it, the functions to which the activity is chargeable, the time at which it began and was completed, and the amount of office, travel, and field time that it entailed. They thus compile a full running record of the way they employ their time.\footnote{\textit{Id.} at 130–31. The comparison to the “every six minutes” billing records of a law firm is obvious.}

\footnote{\textit{Id.} at 95.}
\footnote{\textit{Id.} at 97.}
\footnote{\textit{Id.} at 96.}
\footnote{\textit{Id.} at 126.}
These reports and diaries are regularly reviewed by higher-ups who then scold or praise as occasion sees fit.\textsuperscript{142} Other means of monitoring field officers include: inspections by internal auditors;\textsuperscript{143} appeals by private parties of field officers' decisions (e.g., the decision not to grant a grazing permit to a particular private livestock concern) to the officers' superiors;\textsuperscript{144} frequent reassignment of field officers to other geographical regions within the Forest Service;\textsuperscript{145} and internal sanctions.\textsuperscript{146}

Such monitoring of the "field officers" of bankruptcy (i.e., the judges of U.S. bankruptcy courts) is more difficult to measure. For a bankruptcy judge, the most natural form of being monitored by superiors is having your decisions subject to review and reversal by a higher court. As we have seen, the probability of meaningful review in any given case is statistically very low. Yet most bankruptcy judges are very sensitive to the possibility of review. To minimize the chances of reversal, many judges almost certainly adjust their behavior in informal ways that are difficult for an outside observer to measure or detect.\textsuperscript{147}

Another significant means of monitoring bankruptcy judges is the reappointment process. Bankruptcy judges serve fourteen-year terms and are subject to reappointment by the relevant court of appeals, often considering the recommendation of the local bankruptcy bar.\textsuperscript{148} The possibility of not being reappointed is likely to exert influence on job performance.

3. Selection and training of personnel

Kaufman's third set of "integration techniques" involves the selection and training of personnel—as Kaufman names it, "developing the will and capacity to conform"\textsuperscript{149} by first "selecting men who fit"\textsuperscript{150} and then fostering their loyalty.

\textsuperscript{142} Id. at 131–34.
\textsuperscript{143} Id. at 137.
\textsuperscript{144} Id. at 153.
\textsuperscript{145} Id. at 155–56.
\textsuperscript{146} Id. at 157.
\textsuperscript{147} In a valuation dispute, for example, a bankruptcy judge might tend to \textit{split the difference} between the values argued for by the two parties as a way of diminishing the chances of appeal.
\textsuperscript{148} While reappointment is the normal course, the rare failure to be reappointed receives substantial attention among the bankruptcy bench and bar. See, e.g., Anne Colden, \textit{Pioneer Bankruptcy Judge Won't See Her Term Renewed}, DENVER POST, Apr. 22, 2000, at C1. Judge Patricia Ann Clark of the District of Colorado Bankruptcy Court was denied reappointment. "[A]ccording to some members of the Colorado Bar, . . . Clark made some enemies during her years on the bench. . . . A subcommittee of the Colorado Bar Association solicited opinions about whether Clark should be reappointed." \textit{Id.} See generally \textit{Bankruptcy's Reappointment Mess}, 36 BANKR. CT. DECISIONS NEWS & COMMENT, Oct. 18, 2000, No. 18 (discussing shortcomings in existing bankruptcy judge reappointment process).
\textsuperscript{149} KAUFMAN, \textit{supra} note 128, at 161.
\textsuperscript{150} Id.
to the Forest Service. He discusses the rites of recruiting and training, including the rigorous program of frequently relocating officers to a wide variety of posts all over the county, especially early in their careers.\footnote{Id. at 176.}

Bankruptcy also has its rites of selection and training. Bankruptcy judges are selected by the regional court of appeals, which often will rely upon a recommendation of the local bankruptcy bar, which has agreed to put forward one of its own. Bankruptcy judges are trained, first, as all lawyers are trained, through the reorientation of a law school education and the discipline of practice, and then, as bankruptcy judges, by their peers and by the members of the bar that appear before them. Additionally, the Federal Judicial Center operates annual training programs for all bankruptcy judges ("baby judges' school") and publishes resource manuals for use by the judges. Also, there are multiple professional associations and annual conferences that serve to cultivate the exchange of ideas.\footnote{National organizations include the National Conference of Bankruptcy Judges, the American Bankruptcy Institute, the Commercial Law League of America, the Turnaround Management Association, and the National Bankruptcy Conference. Additionally, there are specialized bar associations for bankruptcy professionals, organized by judicial district.}

Kaufman concluded that the three "integration techniques" (i.e., pre-forming, monitoring, selection, and training) explain the unity and coherence he observed in the U.S. Forest Service. While that might have been a satisfactory conclusion in the case of the U.S. Forest Service in 1960, it is not at all clear that these integration techniques fully explain the ordering we observe in U.S. bankruptcy law. In that sense, Kaufman's project ends where the present project begins.

Going beyond Kaufman's approach, we distinguish between the hierarchical mechanisms that he examined, and other, non-hierarchical, forces for integration. The first two of Kaufman's "integration techniques" are expressly hierarchical: the publication of texts, like the Forest Service manual, and the monitoring of inferior officers by their superiors both depend on the existence and successful deliberate implementation of a hierarchical chain-of-command. Kaufman's third technique, selection and training of personnel, is also presented as a sort of blueprint device, but with the intimation that there is something more dynamical and emergent going on. Kaufman leaves the dynamics of emergence substantially unexplored.

This Article's description of the bankruptcy system will focus on the dynamics of emergence. I attempt this description not because I want to show a gap between blueprint and reality.\footnote{Which is, incidentally, like shooting fish in a barrel. We see gaps between our formal blueprints and the reality of legal systems just about every time we try, and we should learn from this only that our blueprints are biased and infirm. Since our biases generate our perception of the existence of gaps, the gap studies approach to scholarship may be something of an artificial exercise. See Galanter, Portable Soc 2, supra note 6, at 257 ("The perception of a 'gap' proceeds
blueprint perspective, and approach the task of description from a different, and hopefully unbiased, direction.\(^{154}\)

C. A Self-Organizing Model

This Section outlines a model of self-organizing legal systems.\(^{155}\) Such a model should include: (1) a description of the structures; and (2) a description of the structures' dynamics (i.e., the way that self-organizing structures order system content via the innovation of forms and the emergence of norms).

1. Self-organizing structures

Stewart Macaulay's classic 1963 article on noncontractual relations among businesspeople\(^{156}\) is often cited for the proposition that formal contracts control only a small portion of business exchanges. That proposition, however, rests upon the substantial foundation of Macaulay's descriptive empirical research on dozens from and expresses an expectation of harmony or congruence between authoritative normative learning and patterns of action.

\(^{154}\) Recall Blau's lapidary formulation:

Most discussions [of emergence in organizations] contrast informal relationships and practices with the formal blueprint of the organization. This emphasizes the least interesting aspect of the concept of "informal organization," namely, that behavior and relationships often fail to conform exactly to formal prescriptions, which is certainly not a novel discovery. Much more significant is the insight that such activities and interactions are not simply idiosyncratic deviations but form consistent patterns that are new elements of the organization. . . . [O]rganizations do not statically remain as they had been conceived but always develop into new forms of organization.

\(^{155}\) A substantial amount of research in the physical sciences has been going forward under the general name of "self-organizing criticality." For an introduction by one of the founding researchers in the field, see generally Per Bak, How Nature Works 1 (1996) ("The aim of the science of self-organized criticality is to yield insight into the fundamental question of why nature is complex, not simple, as the laws of physics imply."); see also Per Bak et al., Self-Organized Criticality, 38 PHYSICAL REV. 364, 364 (1988) (discussing behavior of dynamical systems which organize naturally into critical state).

of businesses in Wisconsin. It is the picture that Macaulay's research paints of these businesses that is most exciting and significant for the purposes of this Article.

Macaulay asks the question: when are relations among businesspeople governed by formal norms (e.g., contracts) and when by informal norms (e.g., trust, tit-for-tat, etc.)? Through the prism of that question, Macaulay develops a portrait of a business in action, which I have attempted to represent in Figure 4.

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158 Macaulay, supra note 156, at 56.
communities. As represented in Figure 4, each of these groups overlaps with other relevant groups.\textsuperscript{159}

As for the question of whether formal or informal norms control relations, Macaulay’s work suggests that it depends on the relative occupational roles of the parties to the relationship.\textsuperscript{160} Suppose the business is a newspaper. Folks on the production side will have relationships with suppliers of paper and ink, and those relationships will be practically governed by informal norms despite the presence of formal contracts. Likewise, the sales staff of the newspaper will have multiple informal and unrecorded arrangements with firms that buy advertising space in the newspaper. People in legal/compliance and accounting will labor mightily to record and control the activities of the people in sales and production. During times of ordinary business, sales and production will be at the center of the firm, with legal/compliance and accounting understood as controlling around the edges and at the margins. During extraordinary times (bad times from the business’ perspective) such as audit time or lawsuit time, the people in legal/compliance and accounting move to the center, with sales and production temporarily reduced to a relatively subordinate position.

Each community within the firm develops its unique culture, manifested as much by the types of regulation that the community generates (i.e., formal, written, enforceable contracts or informal arrangements of trust, courtesies, and reciprocation)\textsuperscript{161} as by that community’s special language and vernacular, habits, methods, and expectations.\textsuperscript{162} Occupants of these overlapping communities develop mannerisms and methods for dealing with people in other communities. A salesperson will behave one way with a client, another way with a fellow salesperson, and a very different third way with someone from legal/compliance.\textsuperscript{163}

\textsuperscript{159} The figure could be filled in a bit more: “Inside” legal counsel for the business will overlap with communities of outside counsel, communities of government regulators, and communities of outside financial institutions. “Inside” accountants will likewise interact with “outside” regulators and financial professionals. “Inside” sales will overlap with “outside” advertising firms, etc. The figure should also include some representation of management that would be, to a greater or lesser extent, integrated with all or most of the other communities.

\textsuperscript{160} Macaulay, \textit{supra} note 156, at 56.

\textsuperscript{161} See \textit{id.} at 66 (indicating that sales agents, who deal with customers, and productions officers, who deal with suppliers, are less inclined to make formal contracts, and more inclined to order via informal norms).

\textsuperscript{162} Apropos is a \textit{Dilbert} cartoon. As part of a firm-wide training program, employees are being temporarily relocated to other departments within the firm. Dilbert, a computer techie, is assigned to work in the sales department. He takes the elevator to the appropriate floor and alights into what seems to be a huge party. On the wall is a sign in flashing neon lights that says, “Sales Department—Three Drink Minimum.”

\textsuperscript{163} See Macaulay, \textit{supra} note 156, at 68 (depicting sales and productions agents as “foreign affairs personnel” of business). Agents located at the intersecting points of communities, because of their unique ties both inside and outside the group, are best positioned to transport norms. See
Macaulay establishes that not only are formal contracts oftentimes altogether missing in the governance of business relations, but also that there is wide variation in how a contract, when present, is understood and used, and that this variation also corresponds to the occupational role or location of the party within a particular overlapping community. So someone in legal/compliance will regard a contract as a legally enforceable account of rights and responsibilities. Someone in production might see the same contract as a sort of list of what needs to be requisitioned and when. Finally, someone in sales might use the same contract as a convenient strategic fallback, allowing the salesperson to say to one client, “Gosh, I really can’t go outside the contract,” while simply ignoring the contract for a different client under different circumstances.

Ten years after the publication of Macaulay’s article, work by Sally Falk Moore contributed substantially to the two tasks we are concerned with here: the task of defining structures, and the task of specifying the structures’ dynamics. Falk Moore’s primary concern was methodological—she wanted to state a method by which social scientists could frame particular subjects of study. Falk Moore called this task “field definition,” using a term common in the physical sciences. A social field, like a “natural field” or a “physical field,” is defined functionally (not to say, tautologically) as that entity which is the focus of the scientific study. Where Macaulay had defined his fields (i.e., the Wisconsin businesses on which he had gathered data) implicitly, concretely and, as it were, a-theoretically, Falk Moore is interested in stating a general theory of the methodology of field definition—a generalizable way of looking that will clarify the process of selecting and defining specific social phenomena.

For Falk Moore, fields are characteristically “semi-autonomous” and “processual.” On the characteristic of semi-autonomy, Falk Moore writes:

infra Part V.B (discussing role of low-status actors in process of legal change).

164See Macaulay, supra note 156, at 55. Macaulay’s finding that the variation in presence and use of contracts corresponds with the “occupational role” of the actor also corresponds with the notion that “low-status” actors (i.e., those who are weakly tied to actors in different networks) play a crucial role in transporting norms between fields. See generally JAMES MILROY, LINGUISTIC VARIATION AND CHANGE, at viii (1992) (exploring language change as social phenomenon); Granovetter, Strength of Weak Ties, supra note 112, at 1360 (arguing that interpersonal networks at micro-level translate into large-scale patterns which ultimately influence small groups); Granovetter, Weak Ties Revisited, supra note 112, at 203 (reviewing literature dealing with impacts of weak ties on individuals, sociological idea-flow, and social cohesion).


166The development of social fields as an approach to law is generally associated with the work of Bourdieu. See generally Pierre Bourdieu, The Force of Law: Toward a Sociology of the Juridical Field, 38 HASTINGS L.J. 814, 816 (Richard Terdiman trans., 1987) (“The social practices of the law are in fact the product of the functioning of a field.”) (citation omitted)).
The approach proposed here is that the small field observable to an anthropologist be chosen and studied in terms of its semi-autonomy—the fact that it can generate rules and customs and symbols internally, but that it is also vulnerable to rules and decisions and other forces emanating from the larger world by which it is surrounded. The semi-autonomous social field has rule-making capacities, and the means to induce or coerce compliance; but it is simultaneously set in a larger social matrix which can, and does, affect and invade it, sometimes at the invitation of persons inside it, sometimes at its own instance.\(^\text{167}\)

These overlapping structures are further defined, Falk Moore maintains, less by what they are than by what they do. She continues, "[t]he semi-autonomous social field is defined and its boundaries identified not by its organization (it may be a corporate group, it may not) but by a processual characteristic, the fact that it can generate rules and coerce or induce compliance to them."\(^\text{168}\)

In order to properly qualify as a social field, it is not necessary for a structure to possess any degree of institutionalization or specialization. It is enough that the structure "generate rules and coerce or induce compliance to them."\(^\text{169}\) Imagine a spectrum of all social fields in which you have participated, ranging from social fields with high specialization and institutionalization to social fields with low specialization and institutionalization. Nearest to the high pole might appear formal and enduring legal systems such as the U.S. government. Proceeding down the spectrum, one might encounter such entities as religious organizations and business associations. Nearing the low pole, one might locate the neighborhood, and then the occasional and thin ordinary networks (e.g., the barber who cuts your hair every few weeks or the merchant who sells you a cup of coffee every morning), and finally the group of four strangers who happened to ride in the elevator with you this morning while silently observing a certain etiquette (stand to the side; if your floor is coming up, announce this by moving to the front, and so forth). According to Falk Moore, these are all properly understood as social fields: each engages in self-regulation and each is subject to regulation by outside forces.

Tracking Falk Moore’s approach to field definition onto the representation of a business displayed in Figure 4, we see that there are at least six “semi-autonomous social fields” denominated in the figure: (1) the firm, (2) the firm’s legal/compliance and accounting departments, (3) the firm’s production department, (4) the firm’s sales department, (5) the firm’s suppliers, and (6) the firm’s customers. Each of these fields has the capacity, within its own group, to generate rules and coerce compliance with those rules, and each is subject to some

\[^{167}\text{Falk Moore, supra note 165, at 720.}\]
\[^{168}\text{Id. at 722 (emphasis added).}\]
\[^{169}\text{Id.}\]
outside regulation. Look closer at Figure 4, however, and several additional fields appear. For example, the point of intersection between sales and customers defines a separate field of interaction, in which unique norms and languages develop; similarly the point of intersection between sales and legal/compliance. Hence the processual feature of this method of field definition—a field is defined not by an ex ante idealization or formal abstraction (such as an organizational flowchart depicting the firm with its various departments neatly arranged) but rather by what it does: generate and communicate forms.

For the purposes of explicating the bankruptcy legal system, I offer two alterations to the task of field definition, again following on methodological advances associated with the physical sciences. First, I will not refer to fields but rather to networks. Networks are collections of connected elements. In the social sciences such as legal studies, the elements are the actors (e.g., judges, attorneys, paralegals, administrative assistants) and the connections are the relationships, or ties, that run between the actors. Networks, with its specification of elements and connections, may allow for more precision than fields in describing the interconnections of bankruptcy actors. Second, a useful way of representing networks is through the use of graphs, i.e., dots (the elements) drawn with lines of various sorts (the connections) running between the dots. "Graph theory" is an important area of study in mathematics.

170 Network-based methodologies are becoming increasingly important as a basic research tool in the sciences. See generally BARABÁSI, supra note 82, at 7 ("This book has a simple aim: to get you to think networks. It is about how networks emerge, what they look like, and how they evolve."); BUCHANAN, supra note 82, at 22 ("Nexus focuses on a number of the world’s most important networks."); STEVEN STROGATZ, SYNC: THE EMERGING SCIENCE OF SPONTANEOUS ORDER 1 (2003) (exploring science of "spontaneous order in the universe"); DUNCAN J. WATTS, SIX DEGREES: THE SCIENCE OF A CONNECTED AGE 16 (2003) ("[T]his book is . . . a story about the science of networks.").

171 See GARY CHARTRAND, INTRODUCTORY GRAPH THEORY, at vi(1985). Specifically, a graph is a set of vertices and edges \((G = (V, E))\). Each edge has an edge-weight, which is stated as a function. For the simplest graph, imagine two parties ("vertices") \(A\) and \(B\), with the edge \((A, B)\) running between them, and the edge-weight for edge \((A, B) = 1\). Thus we have a mathematical description of a two-party, strong-ties, network. See id. at 10–19. Using this notation, we can elegantly and usefully describe very complex organizations. See also Kathleen M. Carley & Vanessa Hill, Structural Change and Learning Within Organizations, in DYNAMICS OF ORGANIZATIONS: COMPUTATIONAL MODELING AND ORGANIZATION THEORIES 63, 89–90 (Alessandro Lomi & Erik R. Larsen eds., 2001) (discussing computational modeling for network analysis).
To see the competitive advantage of network graphs over fields, consider Figure 5 as a specification of one detail represented in Figure 4. Nothing like the amorphous blobs represented in Figure 4 really exist. When you walk into the sales department of a business, you do not see a blob labeled “Sales” overlapping with a blob labeled “Customers.” You see Chuck, a salesman, on the phone with Margie, who represents the Bingaman account. And not only does depicting networks with graphs allow for a higher degree of actor specification, it also allows us to specify the relationships between the actors—we can see which actors are connected by strong ties (represented in Figure 5 by the solid lines connecting the three members of the sales staff), and which are connected by weak ties (shown in Figure 5 as the dotted line connecting Chuck with Margie).

Falk Moore also speaks to the variation in the types of “rules”\(^\text{172}\) that are generated by semi-autonomous structures. After laying out two empirical case studies (the operation of the better dress line in New York City’s garment trade, and attempts to legislate social change in Tanzania) Falk Moore writes:

These examples all involve at least two kinds of rules: rules that were consciously made by legislatures and courts and other formal agencies to produce certain intended effects, and rules that could be said to have evolved “spontaneously” out of social life. Rules of corporate organizations, whether they are the laws of a polity or the rules of an organization within it, frequently involve attempts to fix certain relationships by design. However, the ongoing competitions,
collaborations and exchanges that take place in social life also generate their own regular relationships and rules and effective sanctions, without necessarily involving any such pre-designing. The ways in which state-enforceable law affects these processes are often exaggerated and the way in which law is affected by them is often underestimated. Some semi-autonomous social fields are quite enduring, some exist only briefly. Some are consciously constructed, such as committees, administrative departments, or other groups formed to perform a particular task; while some evolve in the marketplace or the neighborhood or elsewhere out of a history of transactions.  

Putting Falk Moore's argument into the vernacular of this Article, ordering of system content occurs through both hierarchic organization and self-organization. Hierarchic explanations of ordering contend that order exists because hierarchically inferior actors execute the directives of their superiors. Alternatively, a self-organizing explanation describes a system with many generative centers rather than one, and with the flow of authority running outward from the various centers, rather than from the top downwards, as in a hierarchic model. Unlike the hierarchic model, where the order sought is the product of some deliberately intended grand design or blueprint, spontaneous ordering yields a result that is the product of many individual human wills but of no grand human design.

2. Self-organizing dynamics

We have specified the structures of self-organizing systems: semi-autonomous networks, comprised of elements, and connections between elements, that order system content through the development of forms and the emergence

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173 Falk Moore, supra note 165, at 744-45.
174 Shapiro, supra note 123, at 44, 46. Shapiro states that: [S]uch major policies as that of private control of timber resources or the allocation of industrial loss to workers rather than entrepreneurs are not made and announced by a single court on a single day but are the product of a large number of decentralized, nonhierarchical, and differentially motivated decisions by a large number of judges, counsellors, pleaders, academic commentators and litigants over long periods of time and, for the most part, with no formally defined, continuing relation among the participants or their decisions.
Id. (citation omitted).
of norms. But how does this self-organization occur? Can we specify the dynamics of a self-organizing legal system?

In natural systems, the ordering of system content involves two processes: mutation, which introduces multiple forms into a given system; and natural selection, the process by which one or more of these forms, well-fitted to survive the system’s environment, become the norm. Similarly, self-organization in a legal system involves two processes: (1) the innovation of forms, and (2) the emergence of norms.

(a) Form Innovation

How do forms get into a system? Where does system content come from? Many forms come from the creative strategies of particular system actors. Lawyers, for example, attempting to achieve some client objective, will reconfigure existing apparatus to some innovative end or otherwise generate a novel legal position. Other forms are transmitted into one system after having originated in another system. I shall refer to this method of form innovation as transportation-cum-distortion. A substantial body of socio-legal research on “dispute transformation” has shown that communications of meaning undergo


177 See infra Part V.A.2.(a) (giving examples of form innovation via lawyer creativity, such as the pre-packaged Chapter 11 plan).

178 More can be said about this process of form transportation. For example, it is possible that the forms that are transported are typically robust, having achieved a normative status in the sending system; e.g., sophisticated valuation techniques (qua form), widely used in business networks, are gradually transported into legal networks (see infra Part V.A.2.(b)(i) discussion of discounted cash flow models). Also, we may be able to say that the network actors through which forms are transmitted inter-system are often weakly tied, in that they are not central (i.e., not strongly tied) to either the business network or the legal network. This would suggest an important role for low-status actors (the trial courts in legal systems) in the process of innovation.

179 See Trubek, Where the Action Is, supra note 63, at 621 (“[D]ispute transformation [explores how] the nature, intensity, and trajectory of social conflicts are affected by the intervention of various actors, including lawyers.” (citation omitted)). See, e.g., William L.F. Felsteiner et al., The Emergence and Transformation of Disputes: Naming, Blaming, Claiming . . ., 15 LAW & SOC’Y REV. 631, 632 (1980–81) (providing “a framework within which the emergence and transformation of disputes can be described”); Susan Staiger Gooding, Place, Race, and Names: Layered Identities in United States v. Oregon, Confederated Tribes of the Colville Reservation, Plaintiff-Intervenor, 28 LAW & SOC’Y REV. 1181, 1181 (1994) (“[E][xplor[ing] the socially and culturally based identities at stake in a current treaty rights case and the mediation of these identities within a framework of legal rights.”); Lynn Mather & Barbara Yngvesson, Language, Audience, and the Transformation
changes as they move between actors from various systems (e.g., from family actors or business actors to legal actors). In another context, the legal sociologist Gunther Teubner has developed a similar notion. Describing the "interdiscursivity,"\textsuperscript{180} Teubner observes in systems of "legal pluralism" (i.e., the overlapping or semi-autonomous networks comprising the structures of a self-organizing system),\textsuperscript{181} that:

The dynamics of legal pluralism cannot be understood by a common logics of the discourses involved, be it the transaction economics of law and organization, the politics of omnipresent micro-power, the socio-logics of social control, or yesterday's political economy. Rather, it is the radical diversity of discourses—the internal rationality of the organization, the exigencies of the market, the idiosyncracies of personal interaction, and the intrinsic logics of diverse public and "private" legal orders—that are responsible for distorted communication in legal pluralism.\textsuperscript{182}

The intersystem dynamic of form transportation-cum-distortion runs both ways. For example, a business system (e.g., a firm or a set of firms) may import a set of directives about, say, employment discrimination, from legal systems (e.g., courts or administrative agencies), and may even import procedural apparatus (such as grievance committees sitting as intra-organizational dispute resolution devices) from legal systems. In the process of receiving and implementing these legal forms, however, the firm will stylize them to fit the

\textsuperscript{180}Teubner, supra note 72, at 1453.
\textsuperscript{181}See supra Part IV.C.1 (discussing self-organizing structures).
\textsuperscript{182}Teubner, supra note 72, at 1456 (emphasis added). Teubner suggests that "legal phenomena [emerge] in the context of highly specialized discourses . . . which the law then misreads as sources of norm production." Id. at 1457. See generally Clune, supra note 66, at 74 (developing model for understanding implementation of laws and regulation wherein multiple levels of interaction amongst various stakeholders influence outcomes).
firm’s particular environment and business goals. Running in the other direction, a legal system may import a technique or argument that is in play in an extra-legal system (e.g., a business community or a civil rights community), but tailor its implementation in ways specific to the legal environment. This process of creative miscommunication contributes to the generation of the variable forms that comprise system content.

A special case of transportation-cum-distortion occurs in systems (such as legal systems) that have a hierarchical structure: a network of hierarchically superior actors will sometimes direct a form into a network of hierarchically inferior actors, and that form will be effectively rejected by the hierarchic inferiors. This pattern of “ukase-rejection” was explained by Malcolm Feeley and Edward Rubin, in their important book on judicial policymaking and prison reform. Exploring the relationship between appellate courts and fora of first instance, Feeley and Rubin suggest that the appellate courts’ task of consolidating doctrine is typically nothing more than “coordination,” i.e., appellate courts take notice of the ways that trial courts resolve a problem and, in a sense, follow their lead. Appellate courts, under this model, speak most effectively when they echo a conclusion already worked out among the various trial courts.

Appellate courts stray from simple coordination when they face what Feeley and Rubin call a “ukase.” A ukase is a hierarchical superior’s attempt to order system content in a way that displaces the self-organizing already in progress.

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183 See PHILIP SELZNICK, LAW, SOCIETY, AND INDUSTRIAL JUSTICE 32 passim (1969); Lauren B. Edelman, Legal Environments and Organizational Governance: The Expansion of Due Process in the American Workplace, 95 AM. J. SOC. 1401, 1406–17, 1435–37 (1990); see also Teubner, supra note 72, at 1453–54 (discussing movement of legal standards to implementation by organization).

184 See infra Part V.A.2 (noting case study of lien-stripping and empirical evidence on bankruptcy valuation are examples of transportation-cum-distortion of forms from business to legal networks).


186 Coordination takes place “either horizontally or vertically; that is, it either emerges from the collective actions of various institutional actors or it is imposed by the leaders of the institution.” FEELEY & RUBIN, supra note 125, at 229. See id. (describing “collective action” attributed to horizontal coordination as three-step process). Feeley and Rubin’s process of “horizontal coordination” is, in the vernacular of this Article, a form of self-organization. According to Feeley and Rubin, an example of “vertical coordination” is the appeal, and especially the consolidating effects that a U.S. Supreme Court declaration allegedly has upon the practice of law in a targeted area. See id. at 231.

187 Id.

188 See id. (“[M]ost major Supreme Court cases represent the culmination of a coordination process that began horizontally, among the federal trial and appellate courts. While this pattern is far from universal, it is much more common than is generally assumed.”).
among hierarchical inferiors. Feeley and Rubin claim that "[c]reating doctrine precipitously, without waiting for the coordination process to generate a solution that seems relatively continuous with preexisting legal doctrine, is thus the situation that would raise the most serious legitimacy problems." Hierarchically inferior actors will often give the ukase a cool reception. Feeley and Rubin note that even when a hierarchically superior court expressly directs a legal form at inferior courts (via the ukase) the form may sometimes be effectively rejected by the inferior courts.

Summarizing the process of form innovation: (1) much form innovation occurs via the creative strategizing of system actors (e.g., lawyers); (2) forms are also innovated by being transported-cum-distorted from, for example, a business network to a bankruptcy trial network (i.e., from an extra-system actor to a system actor); (3) a special case of the transportation-cum-distortion process in hierarchically structured systems involves the ukase-rejection pattern, in which a hierarchically superior actor (e.g., an appellate court) directs a ukase at an inferior actor, which then effectively rejects that ukase. These devices of form innovation may explain much of the variable system content that we observe.

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189 Id. at 246. ("Our . . . judiciaries . . . are ultimately hierarchical, headed by a supreme court whose decisions possess authoritative force. This creates the possibility . . . that the jurisdiction's supreme court will dispense with the coordination process and operate by ukase."). Of course, this Article offers a substantial qualification to the claim that "our judiciaries are ultimately hierarchical." Hierarchy reigns but does not rule.

190 Id. at 247. Note how Feeley and Rubin's account of the institutional condition of hierarchy turns the conventional account of hierarchy on its head. For commentators such as Bussel and Epstein, a functioning pyramidal and hierarchical structure is a sine qua non for a legitimate legal system. See supra Part III.A.1 (analyzing hierarchic aspects of appellate review in bankruptcy). For Feeley and Rubin, a legal system is never closer to illegitimacy than when it orders content via hierarchical command. See also Robert M. Lawless & Dylan Lager Murray, An Empirical Analysis of Bankruptcy Certiorari, 62 Mo. L. Rev. 101, 104–11 (1997) (highlighting benefits of "percolation" before case is taken by U.S. Supreme Court).

191 It is unpredictable how a ukase sent from one network will actually affect the target. Falk Moore concludes that many attempts to affect social life through legislation or other deliberate legal means have unpredictable outcomes because the norms issued by the state (in the form of social welfare legislation, for example) encounter and must interact with norms already in place in the fields that are the target of the legislation. See Falk Moore, supra note 165, at 742–45. Some of the norms of the "sending field" are adopted by the "receiving field," some are substantially modified, and some are simply ignored. Id. at 719–20.

192 In the cases where the U.S. Supreme Court tries to issue a ukase, it is possible that the lower courts will reject the spirit of the suggested doctrinal change by limiting the ukase to its facts. See Feeley & Rubin, supra note 125, at 231–32 (recounting Jones v. Alfred H. Mayer, Co., in which U.S. Supreme Court tried clever theory of Thirteenth Amendment for discrimination by private persons). While "[t]he decision itself was clever, . . . it served no coordinating role for the lower courts [and] they . . . regularly rejected any claims . . . that went beyond the precise facts of the Jones case." Id. (citations omitted); see infra Part V.A.2.(a) (discussing Dewsnup v. Timm).
(b) Norm emergence

Now we turn our attention from forms to norms. Having explored the origin of a system's variable content (analogous to the theory of mutation in evolutionary explanations of natural systems), we now ask the question: by what process do some of these forms emerge as normative?\(^{193}\)

The obvious answer in legal systems is that norms emerge via hierarchical command, because the Supreme Court (or the President, or the Congress, or the final rule-making body of an administrative agency) said so. This is a sort of *ordering ex machina*. But we have seen that hierarchical mechanisms of ordering are under-explanatory, and we are challenged to explain the order that is unexplained by hierarchical command. How does system content self-organize?\(^{194}\)

In natural systems, the mechanism of self-organization is called *natural selection*—forms fittest to the particular environment survive and come to characterize the system. In social systems (specifically, the legal systems we consider here), we also need a principle of *fitness to the environment* that explains the process of norm emergence. Fitness in nature often involves attributes such as size, strength, speed, coloration, or intelligence. One principle of fitness in a legal system may be *redundancy*.

To explain, it is useful to review some of the work of Martin Shapiro, a political scientist who grappled with the problem of how ordering occurs in a legal system that lacks significant hierarchical properties.\(^{195}\) Shapiro explored the "organization" that produces tort doctrine.\(^{196}\) He defined a network with "fifty-two tops": the highest court of each state system, the highest court of the federal system, and an aggregation of the British courts that produce tort doctrine.\(^{197}\) Shapiro wrote:

> If each of these fifty-two tops were relatively independent for tort purposes, we would simply have a good case for comparative study of comparable decision-making organizations similar to a study of fifty-two super market chains. What makes tort so interesting for the study of organizational policy-making, however, is that there are not fifty-two bodies of tort policy but in a very real sense a single body of Anglo-American tort law that runs throughout England and the United States, with local variations to be sure, but with a remarkably uniform core.

\(^{193}\)Recalling the algebraic formulation: What is the relationship between variable system content (\(\sigma = \mu^1, \mu^2, \mu^3, \mu^4, \mu^5, \mu^6, \mu^7, \mu^8, \mu^9, \ldots, \mu^n\)) and ordered system content (\(\phi = \mu^1, \mu^2, \mu^3, \mu^4, \mu^5, \mu^6, \mu^7, \mu^8, \mu^9, \ldots, \mu^n\))?


\(^{195}\)Shapiro, *supra* note 123, at 44.

\(^{196}\)Id. at 46–47.

\(^{197}\)Id. at 50.
The puzzle is how fifty-two appellate decision-makers, none legally or politically subordinated to any of the others, arrive at such a unified body of policy.\textsuperscript{198}

Summarizing the problem, Shapiro asked: "[H]ow do a large number of decision-makers manage to arrive at well-coordinated policy decisions (policy decisions are the output of this organization) when the organization is bereft of all the mechanisms of hierarchical control that we associate with classical organizational structures?"\textsuperscript{199} The progression of Shapiro's resolution of the problem is worth quoting at length:

\textit{[O]ur attention is immediately drawn to communications phenomena. A logical first guess would be that the organization [i.e., the tort-policy-producing organization with the fifty-two tops] has developed some set of special communications techniques that allow its decision-makers to cooperate—to substitute, somehow, mutual influence for command from above. Because of the large number of decision-makers, and the very large volume of decisions necessary to keep tort policy attuned to a changing society, we would expect these communications techniques to absorb a disproportionately large share of the organization's resources. In fact... we find a vast body of communications personnel. The \textit{litigational market} assures that thousands of lawyers will devote their energies to carrying messages from one court to the next, keeping each informed of what the others are doing. This flow of communications is not controlled by conscious plan or carefully structured communications networks, but rather by hundreds of thousands of individual decisions guided by the desire for personal profit. I use the term \textit{litigational market} precisely because I wish to suggest an "invisible hand." For this market, like Adam Smith's, has many rules and conventions that harness individual greed to a higher cause. Under the rules of the game, the lawyer-communicator has the highest chance of winning if he can show a court that his client must prevail if the court keeps doing exactly what it has been doing; the next highest chance if he can persuade the court that it should do exactly what some other court has been doing; the next highest chance if he can convince it to do something slightly different from what it or some other court has been doing; and the worst prospect if he must argue that the

\textsuperscript{198}Id. at 50–51. One should note that a study of fifty-two independent supermarket chains would very likely demonstrate a coordination in pricing similar to the coordination Shapiro observed in doctrine, for many of the same reasons.

\textsuperscript{199}Martin Shapiro, \textit{Toward a Theory of Stare Decisis}, 1 J. LEGAL STUD. 125, 130 (1972).
court should do something markedly different from what it and other courts have done in the past.\textsuperscript{200}

Shapiro describes a semi-autonomous network (i.e., the area of intersection between courts and the bar) governed by the fitness principle of \textit{redundancy}, whereupon the judge wants to rule in a way that is consistent with prior court rulings and the litigator wants to convince the judge that, if the judge acts with the wonted redundancy, it means victory for the litigator’s client.\textsuperscript{201} Redundancy is the grammar of litigation, just as courtesies and reciprocation are the grammar of sales, and formal planning and recording are the grammar of legal/compliance. Every action taken or strategy proposed is evaluated, and its relative value determined, by referring to the criteria of redundancy.\textsuperscript{202}

Shapiro’s concept of the “litigational market” helps explain the process of non-hierarchical norm emergence. Litigators want to win. And they know that courts judge arguments as winners or losers based, at least in significant part, on the principle of redundancy.\textsuperscript{203} Courts, for their part, base the resolution of cases on the “messages” that litigators carry “from one court to the next.”\textsuperscript{204} Litigators

\textsuperscript{200}\textit{Id.} at 131 (emphasis added). Shapiro presents a social scientific analysis of what every judge and litigator instinctively knows: lawyers work for the court, virtually as an extension of court personnel; the success and prestige of a litigator is directly proportional to the degree to which she comes to be perceived as a trusted advisor to the judge.

\textsuperscript{201}Shapiro presents a theory of the \textit{maintenance} of system content (i.e., judges want to render decisions that will not \textit{stick out}) and a theory of the \textit{change} of system content (i.e., judges can be coaxed into making what Shapiro refers to as “cybernetic changes” so long as they approximate “syntactic continuity”). \textit{See id.} at 133–34.

\textsuperscript{202}In evolutionary terms, one can say that the environment rewards redundancy, and that an argument’s \textit{fitness} corresponds to its degree of redundancy. The really interesting question, of course, is how \textit{redundancy} came to define the environment. In legal and social systems, purely naturalistic explanations (e.g., “you gotta swim fast around here because otherwise you will get eaten by that shark”) are unavailable. \textit{See, e.g.,} ISSAC D. BALBUS, \textit{THE DIALECTICS OF LEGAL REPRESSED: BLACK REBELS BEFORE THE AMERICAN CRIMINAL COURTS}, at xii (1973) (“[T]he form of repression is even more important than the . . . concrete severity of the sanctions which emanate from [the] form . . . .”). \textit{See also} David M. Trubek, \textit{Complexity and Contradiction in the Legal Order: Balbus and the Challenge of Critical Social Thought About Law}, 11 LAW & SOC’Y REV. 529, 529 (1977) (review of Balbus book).

\textsuperscript{203}Redundancy is the principle of fitness from the viewpoint of the bench as well as the bar. \textit{See} FEELEY & RUBIN, \textit{supra} note 125, at 242. The authors state that:

\textit{[C]oordination involves the conscious decision to displace one’s own efforts at integration with an integrative effort that can be communicated to, and followed by, a large number of dispersed individuals within the judiciary. For an idea to coordinate individual judges’ integration processes, it must be continuous with existing legal doctrine; that is, it must be perceived by judges as a natural outgrowth of that doctrine, rather than a radical departure.}

\textit{Id. Accord} Shapiro, \textit{supra} note 199, at 133 (discussing “cybernetic feedback” and “syntactic feedback”).

\textsuperscript{204}Shapiro, \textit{supra} note 199, at 131.
thus connect points in the network that might otherwise remain distant.\(^\text{205}\) Litigators bear into court messages such as, “a court like yours over in Arizona has adopted this particular theory of contributory negligence, and you should adopt it too, your honor.” Moreover, litigators carry these messages not because they hanker after some system-wide doctrinal coherence, but rather because they want to score a client victory and collect the big fee. Yet from this hodgepodge of motivations, institutional constraints, and individual actions, system content is ordered and norms emerge.

V. APPLICATION AND EXTENSION

A. Bankruptcy as an Example of a Self-Organizing Legal System

The self-organizing model elaborated in the previous Part establishes the following: (1) the structure of self-organizing systems is characterized by networks containing actors related to each other by ties of varying strength; and (2) the dynamics of self-organizing systems involve (a) a process of form innovation, including strategic choices by system actors and the transportation-cum-distortion of forms from other systems, and (b) a process of norm emergence whereby forms most fit to the system’s environment come to characterize the system. This Section applies the self-organizing model to bankruptcy law.

1. Self-organizing structures: bankruptcy networks

Figure 6 represents a networks-based model of the bankruptcy legal system.\(^\text{206}\) As Figures 4 and 5 depict a business firm’s communities overlapping with each other and with extra-firm communities, Figure 6 depicts the same structural relationships as played out in the bankruptcy legal system.

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\(^\text{205}\) See, e.g., Strogatz, supra note 170, at 249 (providing example of how “small-world architecture apparently fostered global coordination more efficiently”); Watts, supra note 170, at 37–42 (explaining small-world problem).

\(^\text{206}\) This figure could be filled out a bit more. There is an important set of networks engaged in bankruptcy policymaking, including Congress, lobbyists, commentators, etc., that substantially overlaps with the communities represented in Figure 6. See Clune, supra note 66, at 55–57 (contrasting downward cycles wherein policy is formed, deployed, and acted upon, with upward cycles wherein insiders and outsiders impact policymaking). The figure could also represent that most of the “Commentators” community is engaged primarily in analyzing the doctrine produced by the appellate networks, with only a relatively small group of scholars interested primarily in the activities of trial networks. See id.
The inset (represented at the bottom of Figure 6) magnifies a portion of the networks using the "graph theory" utilized in Figure 5. The inset shows the relationships between four specific actors, initially located in three different groups: Judge Martin in "Bankruptcy Courts," clients Feldstein and Wagner from General Motors Acceptance Corporation in "Clients," and attorney VanSicklen in "Members of the Bar and Other Legal Professionals." These four actors are
connected by ties of varying strength: strong ties connect Martin to VanSicklen and Feldstein to Wagner, and a semi-strong tie connects Wagner to VanSicklen.\textsuperscript{207}

Figure 6 illustrates a few specific points. First, note that the various actors in a given system stand in a position of mutual influence. Contrary to conventional imagination, the targets of legal regulation are not subordinated to the regulators—rather, the dynamic between regulators and targets of regulation is more “back-and-forth” than “top-down.”\textsuperscript{208}

Note also that Figure 6 represents trial and appellate networks side-by-side, rather than the conventional imagination of trial networks operating below appellate networks. This representation rejects hierarchical imagery and suggests that trial and appellate networks are, in some sense, coequal—each with independent access to authority and each executing separate but related functions.\textsuperscript{209}

While the trial and appellate networks are substantially coequal, they are also substantially different. Figure 6 represents the trial and appellate groups as two\textsuperscript{210} distinct but cooperating networks. What delineates the difference between these two networks? One conventional answer is that the trial network is engaged primarily in the administration of benefits and burdens, while the appellate network is interested mainly in the pronouncement and consolidation of doctrine.\textsuperscript{211} But this characterization is partial and misleading. The trial network makes a sustained and regular effort to announce doctrine, and the appellate network shows occasional interest in the administrative tasks of bankruptcy (at least when it attempts to justify its positions on policy grounds). Fact versus law distinctions are similarly under-explanatory.

I suggest that a chief distinction between trial and appellate networks lies in their preeminent means of ordering. While appellate networks occasionally self-
order (e.g., an appeals court deciding a question of first impression), and trial networks often bear the imprint of hierarchy, such instances are uncharacteristic. The typical means of ordering is hierarchical for appellate networks and self-organization for trial networks.

For bankruptcy's appellate networks, the hierarchical model does explain much of ordering. Hierarchical mechanisms succeed in ordering appellate system content mainly because of small numbers—the sheer amount of actors and data to be managed is relatively low. The smaller number of courts and decisions in appellate networks makes it possible to intend, and even occasionally to achieve, a semblance of system-wide consistency. The prototype of deliberate hierarchical ordering is, of course, the U.S. Supreme Court. Because there is only one court to consider (making the sheer amount of relevant data relatively low), the U.S. Supreme Court can, and does, pursue consistency as one of its chief goals. When you can count all the relevant data on your fingers, there is no need to look past the obvious to answer the question: “What orders system content?”

Bankruptcy’s trial networks, on the other hand, order content in a complex environment of large numbers. The study of bankruptcy trial networks directs our attention past hierarchical models of ordering and towards a more complex model of self-organization.

2. Self-organizing dynamics: empirical evidence

This Subsection presents evidence of form innovation and norm emergence in bankruptcy. Beyond listing specific instances of forms and potential norms that comprise some of the bankruptcy system’s variable content, I will present (1) a detailed case study of a particular form (called lien-stripping) that demonstrates important features of the process of form innovation, and (2) quantitative evidence from a substantial database of valuation opinions that suggests certain norms have emerged non-hierarchically.

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212 The bankruptcy appellate networks would include at least the judges and court staff, lawyers, clients, and commentators acting in the vicinity of the U.S. Supreme Court, the twelve U.S. courts of appeals commonly hearing bankruptcy cases, and the various district courts hearing bankruptcy cases.

213 Note, for example, the degree to which the U.S. Supreme Court engages in fictions of continuity (e.g., claiming “this Court held in 1946,” when in fact no one on this Court was a member of “this Court” in 1946) when justifying its positions.

214 The bankruptcy trial networks would include at least the judges, court staff, lawyers, clients, near-clients, non-clients, and commentators acting in the vicinity of the 326 U.S. bankruptcy courts.
(a) Form innovation: a case study

Form innovation abounds. The forms that make up the vast and variable content of the bankruptcy system are generated primarily by the creative action of actors such as attorneys\(^{215}\) (trying to achieve client objectives) and judges\(^{216}\) (receiving or rejecting attorneys’ arguments). Examples are numerous,\(^{217}\) and would include such cleverly named devices as the “Chapter 20,”\(^{218}\) the “pre-pack,”\(^{219}\) and the “liquidating 11.”\(^{220}\)

Sometimes, however, the legal actor is more transmitter than creator of an innovation. Forms are occasionally imported from extra-legal systems (e.g., commercial systems of debt collection) to the bankruptcy system. These forms become distorted as they move from extra-legal systems to legal systems (transportation-cum-distortion),\(^{221}\) and between trial networks and appellate

\(^{215}\)See supra text accompanying notes 195–203 (discussing Shapiro’s “litigational market”); LoPucki & Weyrauch, supra note 176, at 1405–06.

\(^{216}\)See supra text accompanying notes 185–92 (discussing Feeley and Rubin’s insights on creation of legal doctrine).


\(^{218}\)A Chapter 20 occurs when a consumer debtor files under Chapter 7 and Chapter 13 successively, obtaining the full benefits of both chapters. This debtors’ strategy was expressly blessed by the U.S. Supreme Court. Johnson v. Home State Bank, 501 U.S. 78, 87 (1991). As an example of the ukase-rejection pattern, supra text accompanying notes 185–92, Chapter 20 strategies are still rejected by some bankruptcy courts despite the blessing from the pinnacle of the federal hierarchy. See LoPucki, Law in Lawyers’ Heads, supra note 43, at 1534–36.

\(^{219}\)A pre-packaged bankruptcy occurs when a firm negotiates a plan of reorganization prior to filing a petition under Chapter 11. See, e.g., Pre-Petition Comm. of Select Asbestos Claimants v. Combustion Eng’g, Inc. (In re Combustion Eng’g, Inc.), 292 B.R. 515, 517 (Bankr. D. Del. 2003) (describing debtor’s pre-packaged plan).


\(^{221}\)See supra text accompanying notes 180–83 (discussing Teubner).
networks within legal systems (the ukase-rejection pattern). This intersystem and inter-network friction contributes to the variable system content (i.e., the multiplicity of forms) that we observe in bankruptcy legal systems.

A case study illustrates these features of transportation-cum-distortion and ukase-rejection. I will track the movement of a particular form, known as lien-stripping, through the following steps: (1) the origination of the form in the extra-legal system of commercial debt collection; (2) the transportation of the form from that extra-legal system to the trial networks of the bankruptcy legal system; (3) the distortion of the form incident to its transportation; (4) the development, by trial network actors, of practices designed to ameliorate problems caused by the distortion; (5) the transportation of the form from trial networks to appellate networks, where the U.S. Supreme Court, in Dewsnup v. Timm, issued a ukase against the form; and (6) the effective rejection of that ukase by bankruptcy’s trial networks.

At the outset, I note that I recount the saga of lien-stripping and Dewsnup not to make a policy point. This Article does not focus on whether lien-stripping is good or bad. The lien-stripping story merely provides an example of the interaction among various types of networks and the interpenetration of their respective forms. The case study of lien-stripping gives us a feel for the semiautonomous structure of networks, and illustrates the dynamics of transportation-cum-distortion and ukase-rejection that characterize form innovation in self-organizing systems.

I shall define lien-stripping first as a market strategy and then as a legal strategy. In either case, the basic effect of a lien-stripping strategy is to define a debt (typically by bifurcating the debt into two parts) based upon a valuation of the collateral.

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222 See supra text accompanying notes 185–92 (discussing Feeley & Rubin).
224 The normative evaluation of forms often follows on the heels of objective empirical work that identifies the importation of forms from beyond the legal system. See, e.g., Marianne B. Culhane & Michaela M. White, Debt After Discharge: An Empirical Study of Reaffirmation, 73 AM. BANKR. L.J. 709, 711–13 (1999) (“[U]ndertaking empirical research to learn how frequently Chapter 7 debtors reaffirm, which debts they reaffirm, how much they agree to pay, and whether they can afford it.”). The important work by Culhane and White demonstrated a practice in which unsecured lenders pressure debtors to reaffirm debts that otherwise would have been discharged in bankruptcy. Legal actors have explicitly targeted this practice (qua form, in the vernacular of this Article) for elimination as a matter of good policy. See infra Part V.B.2 (discussing policy approaches to doctrine).
At market, suppose a bank lends a debtor $15,000 and secures the debt by taking a security interest in the debtor’s car, which is worth $13,000. If the debtor defaults on the loan, the relevant commercial actors (i.e., the bank and the debtor) can typically do one of two things that would effectively divide the $15,000 debt into two parts, based upon the value of the car. First, the debtor could surrender the car to the bank, which could then sell it and realize the $13,000 market value (less the costs of liquidation). The bank, contractually owed $15,000, would continue to have a claim against the debtor for the $2000 balance, but that claim would be unsecured and the bank would have to resort to state law collection remedies (e.g., garnishing the debtor’s wages, seizing the debtor’s assets) to collect the unsecured portion of the debt. In the alternative, the bank can repossess and liquidate the collateral, realizing the same result (i.e., $13,000 in its pocket and an outstanding unsecured claim for $2000).

At law, suppose the debtor files for bankruptcy protection, and the bank claims it is owed $15,000 and has a lien in the car. Often, the bankruptcy court will order that the car be left with the debtor. The court will then perform a valuation of the car, finding, say, the value to be $13,000. The court will then bifurcate the bank’s claim into two parts: a $13,000 claim that will be treated as secured and thus receive certain statutory privileges that heighten the chance of repayment, and a $2000 claim that will be treated as unsecured.

Both at market and law, the essence of lien-stripping is that a debt is defined (typically by being bifurcated into two parts) based upon a valuation of the collateral. At market, the valuation is by exchange; at law, the valuation is performed judicially. At market, the debtor will often lose the car; at law the debtor often keeps the car. But the basic content of lien-stripping remains the same, whether performed at market or at law: the initial debt is defined in two parts based upon a valuation of the collateral.

The strategy of lien-stripping arose commercially, among actors in the world of debt collection, and was transported to the bankruptcy legal system as a remedy at law. Many debtors file for bankruptcy expressly to take advantage of lien-stripping.

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225 A lender’s claim against a borrower is secured when the lender has taken, and the borrower has given, a property interest (known as a security interest or a lien) in an item (known as collateral) typically held by the borrower. A common example of a secured claim is a mortgage, which gives the lender a right to foreclose on the borrower’s house if borrower defaults on the loan.

226 The threat of repossession is a most effective debt-collection tool for car lenders. Typically, the car lender’s collection efforts are greatest during the period right after it makes the loan, when the loan-to-value ratio is most unbalanced and the lender is most at-risk if the debtor chooses to default.

227 The U.S. Bankruptcy Code expressly authorizes lien-stripping, in at least the following: § 506, § 722, §1123(b)(5), § 1322(b)(2), and plans under Chapter 12.
stripping, and commentators regard lien-stripping as serving basic bankruptcy goals.228

But the form’s transportation has also worked the form’s distortion, and has led to problems in the way that lien-stripping is implemented by legal actors. The creditor and the debtor (stripped of their bargaining bluffs) will admit that the creditor is entitled to a secured claim worth the value of the collateral. The real question about lien-stripping comes at the point of valuation: if the secured portion of the debt is to be pegged to the value of the collateral, how does one determine the value of the collateral?229 In the nonlegal system of commercial debt collection, the problem of valuation is settled by exchange—an item is worth what it sells for. Problems arise when the collateral is valued by some process other than an actual exchange or market transaction. Distortion is introduced when a scheme of commerce is founded (as our commercial scheme certainly is) on the assumption that exchange settles value, and then rights of commercial parties are modified by a law that allows something besides exchange to settle value. Bankruptcy law allows a legal valuation of property to substitute a market valuation of that property, and the potential spread between those two valuations is the primary concern with lien-stripping.

Returning again to our example of the $13,000 car: suppose that the judicial valuation230 sets the value of the car at $10,000, even though everybody knows that the exchange value of the car would be closer to $13,000. Maybe the judge just makes a mistake. Or maybe the judge is pursuing some goal other than verifying the ex ante market expectations of the bargaining parties (e.g., goals such as wealth redistribution, or establishing the debtor’s fresh start). Now the creditor is clearly getting less than it would have bargained for.

As it turns out, however, the problem of the potential spread is a quandary more abstract than actual. When applying a lien-stripping remedy, actors in bankruptcy’s trial networks have developed multiple techniques designed to peg the collateral’s value to an actual exchange value:231 the collateral is judicially valued incident to an actual sale at which the exchange of the collateral (or comparable property) took place. This exchange value is precisely what the secured creditor countenanced when it made the loan and took the lien, and is no more or less than it would have gotten at a full and fair bargaining ex post.

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228See, e.g., Margaret Howard, Stripping Down Liens: Section 506(d) and the Theory of Bankruptcy, 65 AM. BANKR. L.J. 373, 419–420 (1991) (arguing that elimination of lien-stripping is bad policy and is contrary to Congress’ concern with creditor misbehavior).

229See Barry E. Adler, Creditor Rights After Johnson and Dewsnup, 10 BANKR. DEV. J. 1, 13 (1993–94) (implying that valuation is linchpin of lien-stripping).

230That is, a ruling pursuant to a section 506(a) hearing.

231See LoPucki, supra note 223, at 517 n.165 (indicating that section 725 allows for distribution of collateral directly to secured creditors during course of bankruptcy, and section 363(f) allows court to sell property during course of bankruptcy, thus finding exchange price).
Lien-stripping thus illustrates both the process of transportation-cum-distortion that characterizes form innovation, and the means of ameliorating distortion that is developed by the system receiving the form. Conscious of the importance in allowing lien-strips at a price that is close to (or informed by) exchange value, trial networks developed norms of vague flexibility designed to capture the usefulness of lien-stripping while mitigating (or perhaps justifying on independent grounds) its excesses and potential problems.

The lien-stripping story also illustrates the ukase-rejection pattern of distortion in the interactions between the trial and appellate networks of bankruptcy’s legal system. In Dewsnup, the U.S. Supreme Court scrutinized the practice of lien-stripping as it flourished in the trial networks. The Court looked at the intricate apparatus carefully developed by the trial networks to adapt a useful commercial form to legal purposes, and saw instead something that looked like an illicit “taking” of property. Once alerted to the alleged “problem of the potential spread,” the Court dealt with it in the manner common to appellate networks: it issued a categorical and peremptory ukase banishing the practice of lien-stripping. In the classic fashion of signaling a complete lack of confidence in its declaration, the Court limited its holding to the facts of the case for no particularly principled reason.

Trial networks responded to the ukase by continuing the practice of lien-stripping virtually unabated in every context except the one specifically enjoined

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233 According to the Court in Dewsnup, lien-stripping would freeze the creditor’s secured interest at the judicially determined valuation. By this approach, the creditor would lose the benefit of any increase in the value of the property by the time of the foreclosure sale. The increase would accrue to the benefit of the debtor, a result some of the parties describe as a “windfall.”

*Id.* at 417. This particular conception of the problem of the potential spread is, as LoPucki points out, based on a set of misunderstandings about what actually happens in a bankruptcy. See LoPucki, supra note 223, at 517–18. In the Supreme Court’s imagination, there is the section 506(a) judicial valuation of the property, followed by a large time gap during which the property’s value might appreciate, followed finally by a foreclosure (i.e., an actual sale of the property establishing an exchange value) at which it is shown that the section 506(a) valuation was too low and the debtor nets a windfall. Dewsnup, 502 U.S. at 417. In the real world, however, the foreclosure may not happen at all. If it does, and if the nature of the property and the conditions of the market suggest that there might be an appreciation, the court and parties have access to ample techniques that will avoid any time gap or creditor’s loss of appreciation. See LoPucki, *supra* note 223, at 517–18.

234 See *supra* Part IV.C.2.(a) (Feeley and Rubin discussion of the “ukase”).
235 Dewsnup, 502 U.S. at 418–20. Contrary to the popular view of the U.S. Supreme Court as a group of superheroes standing astride the law, one is almost inclined to characterize the Court in Dewsnup as a dim giant who blunders upon a mass of delicate machinery and, not liking what it does not understand, smashes it all to bits before grunting contentedly and moving on.

236 *Id.* at 416–17 (“We . . . focus upon the case before us and allow other facts to await their legal resolution on another day.”); *id.* at 417 n.3 (“[W]e express no opinion as to whether the words ‘allowed secured claim’ have different meaning in other provisions of the Bankruptcy Code.”).
by the U.S. Supreme Court in Dewsnup,\textsuperscript{237} and otherwise “channel[ing] strategically-minded debtors into alternative strategies that reached the same result, though probably with higher transaction costs.”\textsuperscript{238}

The lien-stripping saga demonstrates how bankruptcy’s trial and appellate networks often seem to be going about their business separately. They are concerned about different matters, employ different methodologies, even speak different languages.\textsuperscript{239} Sometimes the hierarchically inferior trial networks will effectively reject an express command of the hierarchically superior appellate networks.\textsuperscript{240}

\textsuperscript{237}That is, use of section 506(d) to lien strip in a Chapter 7 where the collateral is real estate.

\textsuperscript{238}LoPucki, \textit{supra} note 223, at 518 (citation omitted).


More generally, the life of the form called *lien-stripping* illustrates important phenomena associated with form innovation, specifically the processes of transportation-cum-distortion and ukase-rejection.

Turning from forms to norms, we now explore whether bankruptcy legal systems contain evidence of non-hierarchical norm emergence.

**(b) Norm emergence: quantitative evidence**

A form becomes a norm when it comes to characterize system content. In hierarchically ordered systems, norms happen by *fiat* when a hierarchically superior actor selects a particular form. It is this mere act of selection (followed by subsequent acts of obedience by hierarchically inferior actors) that makes a norm.

In self-organizing systems, norms emerge through a complex process of selection.\(^{241}\) Sometimes norms emerge when actors imitate a particular innovation known for its excellence at resolving a problem. An example of this sort of norm emergence is the spread of “fast-track” procedures for small business bankruptcies that were developed in the Eastern District of North Carolina. This particular form has spread to many other jurisdictions.\(^{242}\) This sort of innovation, without

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\(^{241}\) See supra Part IV.C.2.(b) (discussing emergence of norms).

\(^{242}\) See Lawrence Ponoroff, *The Dubious Role of Precedent in the Quest for First Principles in the Reform of the Bankruptcy Code: Some Lessons from the Civil Law and Realist Traditions*, 74 AM. BANKR. L.J. 173, 190 n.86 (2000). Ponoroff states that:

By now, most bankruptcy professionals are familiar with the ‘fast-track’ procedures pioneered by Judge A. Thomas Small, Jr. in the Eastern District of North Carolina to streamline and expedite the process for small businesses. Judge Small did lobby
legislation (or other hierarchical command), demonstrates the adaptive properties that characterize self-organizing systems.

More general evidence of the adaptive activities of bankruptcy's trial networks comes to us from Daniel Bussel's study of bankruptcy opinions that were subject to "legislative vetoes" by the U.S. Congress.\textsuperscript{243} One significant finding of Bussel's work was that a large proportion of the court cases that received the corrective attention of Congress emanated from bankruptcy courts, rather than the more hierarchically superior appellate courts. Bussel writes:

While it may in part reflect the law professor's tendency to focus on appellate decisions, I was surprised by [the finding that Congress acted to "veto" decisions rendered by bankruptcy courts]. I imagined that bankruptcy court decisions would have very low visibility with the Congress and that those adversely affected by bankruptcy court decisions would be far more likely to appeal or relitigate the issue in the next case than to seek an amendment from Congress.\textsuperscript{244}

Bussel's alleged anomaly (i.e., that Congress would bother to veto the interpretations of hierarchically inferior courts) is, of course, completely resolved by the self-organizing model: actors in bankruptcy's trial networks regularly develop administrative techniques and other forms. Some of these forms take hold and spread to other bankruptcy trial networks, achieving a sort of normative status even in the absence of external direction. Occasionally, one of these forms may make the jump to, and receive the (often unwelcome) scrutiny of, an appellate network.\textsuperscript{245} Much more frequently, the forms (including those forms that may have achieved the status of norms) of bankruptcy's trial networks remain unappealed.\textsuperscript{246} Yet these forms, despite being the creation of hierarchically insignificant courts, affect both the disposition of a large number of cases and the allocation of a large number of dollars. For this reason, forms generated by bankruptcy's trial networks receive the attention, including the negative attention, of Congress when it sets about the task of revising or clarifying the U.S. Bankruptcy Code.

My own empirical research on bankruptcy valuation, which occasioned the theoretical exposition offered in this Article, also contains evidence of emergent

\textsuperscript{243} Bussel, \textit{Failures}, supra note 39, at 889.
\textsuperscript{244} \textit{Id.} at 918.
\textsuperscript{245} \textit{See supra} Part V.A.2.(a) (discussing lien-stripping).
\textsuperscript{246} \textit{See supra} Part II.B (discussing appeals problem in bankruptcy).
norms in bankruptcy’s trial networks regarding some aspects of valuation in business cases. From this quantitative database on bankruptcy valuation, I offer three examples of the entry of forms into the bankruptcy legal system and the possible emergence of norms over time, (1) debtors’ use of discounted cash flow valuation models, (2) debtors’ use of valuation models based on comparables, and (3) creditors’ overall valuation standard. Note that all three figures represent descriptive statistics for the published cases from 1979–1998. I make no inferential claims with these data.

(i) Debtors’ use of discounted cash flow

Figure 7 charts and graphs the means representing debtors’ use of discounted cash flow (“DCF”) models over time. Figure 7 also displays a “trendline” to accent the general flow of the data.

247 In an empirical study funded by grants from the National Conference of Bankruptcy Judges and the American Bankruptcy Institute, I have compiled and statistically analyzed two substantial databases (one covering consumer exemption cases, the other covering business cramdown cases) of U.S. bankruptcy court opinions covering the twenty-year period from 1979 through 1998. I shall report more fully on the findings in two forthcoming publications: Bernard Trujillo, *Valuation in Business Cramdowns* (forthcoming); Bernard Trujillo, *Valuation in Consumer Exemption Cases* (forthcoming). The source of the next three figures is my “business cramdown” database: all bankruptcy court opinions reported by Westlaw from 1979 through 1998 containing valuation issues under Bankruptcy Code § 1129(b). Specifically, the database contains all cases in the Westlaw library FGBK-BCT responding to the search term “51K3563 51K3564 51K3565 & DA(AFT 1978 & BEF 1999)” (yield: 388 cases) and which contain one or more numerical valuations of an asset by the bankruptcy court (total observations: 180). A case is a “cramdown” under section 1129(b) when the court considers confirming a plan of reorganization despite the fact that a class of creditors has voted against the plan. In order to cram a plan down the throats of a class of dissenting creditors, certain “cramdown rights” of the dissenting class must be respected, which cramdown rights entail a judicial valuation of the creditors’ claims. § 1129(b)(2)(A)(i), (A)(iii), (B)(i).

248 A discounted cash flow model estimates the present value of future expected cash receipts and expenditures. The model is typically generated by a financial professional who is introduced as an expert witness. The financial expert will estimate the firm’s future cash flows and then discount those expected future returns to present value through the use of a discount rate. See, e.g., Richard A. Brealey & Stewart C. Myers, *Principles of Corporate Finance* 73–78 (5th ed. 1996) (explaining conceptual and mathematical application of discounted cash flow analysis for business valuation).

249 Cases where the debtor used a DCF model were coded as “1.” Cases where the debtor did not use a DCF model were coded as “0.” The mean represents the average use of DCF models by all debtors in a given year. For example, in 1992 the debtor used a DCF model in about forty-three percent of the cases (in fifty-seven percent of the cases the debtor did not use a DCF model). For clarity of presentation, Figures 7, 8, and 9 do not display years that contain zero or one observation of the relevant variable.
Figure 7 shows a gentle and steady upward trend in the use of DCF models over time. DCF models were relatively rare in 1982, but became fairly common by 1998. These data support the interpretation that in the early 1980s, the use of DCF evidence, already quite common in business and financial systems, entered the bankruptcy legal system and gradually became something of a regular arrow in the quiver of debtors in Chapter 11 cases. Sometime after 1985, the use of DCF models in cramdown valuation proceedings became, in the vernacular of this article, a regular form available to system participants.250

(ii) Debtors’ use of comparables

Figure 8 charts and graphs the means representing debtors’ use of comparables-based valuation models251 and also shows data for the standard deviation over time.252

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250 We might interpret the increased usage of DCF models by bankruptcy courts as a spread of “managerial norms” from business networks to legal networks. See generally Lauren B. Edelman et al., Internal Dispute Resolution: The Transformation of Civil Rights in the Workplace, 27 LAW & SOC’Y REV. 497, 511 (1993) (finding that businesses translate legal directives into managerial norms).

251 A valuation model based on “comparables” estimates an asset’s value by looking to the known values of other, ostensibly similar, assets. See, e.g., MARK GRINBLATT & SHERIDAN TITMAN, FINANCIAL MARKETS AND CORPORATE STRATEGY 368 (1998) (mentioning use of comparable risk-adjusted discount rates from other firms to value project investment opportunities).

252 The standard deviation represents how widely the values are dispersed from the mean. A high standard deviation represents that the mean was achieved by averaging widely disparate numbers (e.g., two values of 0 and 100 have a mean of 50 and a standard deviation of 70.71). A low
Figure 8 shows steadily rising means and declining standard deviations from 1984 until 1993. From 1990 through 1993 the means are extremely high and the standard deviations are extremely low, indicating that comparables valuation models were robustly normative during those years. These data support the interpretation that during the early 1990s it became a system characteristic for debtors in Chapter 11 cramdowns to offer comparables-based valuation models. In the vernacular of this Article, comparables valuation models entered the legal system in the early 1980s as a form. For the period from the late 1980s and mid-1990s, comparables become a norm of the legal system.

(iii) Creditors’ valuation standard

Figure 9 charts and graphs the standard deviation of the creditors’ valuation standard over time, and also shows a “trendline” that accents the flow of the data. standard deviation represents that the mean was achieved by averaging numbers that are close together (e.g., two values of 49 and 51 have a mean of 50 and a standard deviation of 1.41). Cases where debtor used a comparables valuation model were coded as “1.” Cases where debtor did not use a comparables valuation model were coded as “0.”

The low standard deviations in Figure 8 indicate that the high means were achieved by averaging uniformly high numbers, i.e. the use of comparables was high across the board from 1990 to 1993. If it was 1992 and you were a judge hearing a cramdown, and the debtor did not produce comparables, you would have said: “What’s going on?” One should note that the system change in favor of comparables coincided with the valuation of property in cases filed during the recession of the early to mid-1990s. As the value of property (and particularly real estate) declined, debtors (who are typically eager to get low valuations for their property in a cramdown hearing) would adduce evidence drawn from the valuation of comparable properties (which values would be depressed because of the recession).

The valuation standard is a variable I constructed to measure the parties’ and court’s general approach to the valuation. The valuation standard variable describes a continuum between two poles: one pole is extreme “common” value and the other pole is extreme “individual private”
Figure 9 shows a pronounced shrinkage of the standard deviation, indicating that the variation in the ways creditors approach valuation has diminished markedly over time. This is a vivid example of non-hierarchical ordering. The data support the interpretation that, in the early years, right after the enactment of the U.S. Bankruptcy Code in 1978, creditors were all over the map in the ways they talked about valuation. As the years wore on, creditors’ valuation strategies have become less variable and more ordered. And this ordering has occurred across multiple parties in multiple jurisdictions, all without the command-and-control of a hierarchical mechanism.

Summarizing the data: Figure 7 (DCF models) suggests the entry of a business form into the legal system and the spread of that form within the legal system. Figure 8 (comparables models) suggests a form entered the legal system...
and gradually spread to the point of achieving normative status. Figure 9 (creditors’ valuation standard) suggests that creditors’ valuation strategies have become more ordered over time, despite the absence of exogenous or hierarchical control. These data lend support to the claim that at least some of what we observe in the bankruptcy system is self-organizing.

B. Self-Organization as a General Model of Trial Court Behavior

There is evidence that at least some substantial part of the content of our bankruptcy legal system is self-organizing. In this final Section, I suggest that bankruptcy law may not be unique. Fields of law as diverse as the law of crimes and misdemeanors, tax law, and immigration law may also demonstrate properties of non-hierarchical ordering and informal adaptation. I have presented bankruptcy as a case study that illustrates the principles of self-organization, but there is reason to believe that self-organization may extend beyond bankruptcy. I offer that the self-organizing model might be a general theory of the ordering of legal content, helping to explain basic phenomena common to all trial courts (or other fora of first instance, such as administrative decision makers) regardless of the particular substantive areas of law. Undoubtedly, much of what we observe in law is hierarchically ordered, and much is not ordered at all. But I want to suggest that traces of self-organization may exist in areas of law beyond bankruptcy. In the spirit of setting an agenda for future research, this Section will briefly mention three basic problems of legal scholarship that the self-organizing model may illuminate: discretion, doctrine, and legal change.

1. Discretion

Scholars and politicians often color the discretion of judges and other decision makers as a problem to be solved. The self-organizing model, on the contrary, suggests that discretion is little more than a background condition for the dynamics of problem-solving. A passage from Peter M. Blau is instructive:

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255 Variation and adaptive system behavior are endemic; “[t]he major defect in [the precedent] system is a mistaken idea which many lawyers have about it.” Llewellyn, supra note 53, at 396 (emphasis added).

256 Self-organizing dynamics will also appear in appellate court networks where a judge is deciding an issue of first impression. In such instances, the judge typically will select a few cases (which she may describe as the leading cases or the better reasoned cases) as guides, while simultaneously declining to be influenced by other cases that, at least formally, are similarly situated.

257 See Edward L. Rubin, Discretion and Its Discontents, 72 CHI.-KENT L. REV. 1299, 1299 (1997) (suggesting that judicial discretion is presented as “problem,” when it is actually ubiquitous and unremarkable feature of modern law); Rubin & Feeley, Creating Legal Doctrine, supra note 185, at 2037 (“[Judicial creation of law] can be described, understood, and justified. It is one of the
It is still often assumed that the rational pursuit of bureaucratic objectives requires that most members of the organization virtually abstain from exercising rational judgment in the performance of their duties. . . . But these considerations ignore the complexity of many bureaucratic responsibilities and the need for change in operating techniques. . . . [E]fficiency depends on recurrent modifications of operating methods and is adversely affected by the time lag between the appearance of operational difficulties and the official establishment of remedies. In contrast, if every official is expected to be concerned with the rational accomplishment of organizational objectives, . . . necessary adjustments will spontaneously emerge in work groups, and far more rational operations become possible.258

For those focused on tracing the authorizing pedigree of legal commands,259 discretion (and especially the discretion of unelected judges) is a central problem. But for descriptions of complex systems and their adaptive and self-organizing properties, discretion is epiphenomenal.

2. Doctrine

Legal scholarship takes doctrine very seriously. The thrust of most legal research is concerned with getting the best doctrine: rule or standard?260 Property rule or liability rule?261 Let-the-market-work or help-the-weaker-party?262

Lawyers study doctrine either because we think doctrine is intrinsically important and we care about its analytical consistency (formalism), or because we think that doctrine can affect, for good or ill, the policy outcomes that we care

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258 BLAU, supra note 74, at 216–17 (emphasis added).
259 That is, for those scholars undertaking an “ideological” research program, in the sense offered by Griffiths. See Griffiths, supra note 6, at 12 (“[I]t would be impossible for a descriptive theory to define the underlying ideas of ‘difference’ and ‘sameness’ in relation to rules and situations, since that is a legal-doctrinal and not an empirical distinction.”). See generally Abel, supra note 9, passim (distinguishing between “law books” and “books about law”).
260 See, e.g., Duncan Kennedy, Form and Substance in Private Law Adjudication, 89 HARV. L. REV. 1685, 1685 (1976) (“[A]ltruist views on substantive private law issues lead to willingness to resort to standards in administration, while individualism seems to harmonize with an insistence on rigid rules rigidly applied.”).
262 See, e.g., Macaulay, supra note 56, at 1051–52 (discussing party’s “duty to read” contract language before signing juxtaposed with issues of market autonomy versus unfair circumstances).
These two approaches to doctrine are conventionally presented as polar opposites. From the perspective of this Article, however, the formalist and the realist approaches to doctrine are substantially continuous—both study doctrine because they care about what it says. That is, both the formalist and realist approaches to doctrine are content-dependent: the content of the doctrine determines the direction of the research.

This Article, on the contrary, states a position that is agnostic about doctrine’s specific content. From the point of view of the self-organizing model of legal systems, doctrine (e.g., the formal speech-acts of judges) is just one type of system content, alongside other forms of system content such as attorney strategies and innovations introduced by businesspersons, civil rights activists, and other extra-system actors. A researcher inquiring into self-organizing systems cares about system content (including doctrine) not because of what it says, but because of what it can show us about the structure and dynamics of the legal system and the extra-legal systems with which it intersects. In this view, studying system content is important primarily because it provides us with the variables for learning about the system’s structure and dynamics. Research on self-organizing legal systems takes doctrine as data.

3. Legal change

How does the content of a legal system change? What explains why certain changes occur in a legal system’s content, while other changes do not? I believe that many important questions in legal research echo these inquiries.

The self-organizing model gives us the apparatus for beginning an exploration. For example, the model puts us in a position to test the hypothesis that legal innovations come from low-status networks (i.e., those affiliated with trial courts and other fora of first instance), which receive and transport the

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263 For policy-impact uses of bankruptcy empirical research, see, e.g., Braucher, supra note 43, at 582-83 (discussing whether uniform application of bankruptcy laws is appropriate policy goal); Sullivan et al., Persistence, supra note 43, at 859 (suggesting that legal change should be effectuated through educational seminars as well as amendments to formal rules). Compare this with Griffiths, who writes that “empirical” (in his sense of “non-ideological”) approaches to law “must be independent of the practical concerns of the administration of state institutions.” Griffiths, supra note 6, at 23. In other words, the researcher should not engage particular variations (asking “is this particular variation good or bad?” “can these variations be smoothed somehow?” or “can we tell a story about judicial strategies or biases that will explain away these variations?”), but should rather look at variation holistically and, as it were, from a distance. This distance enables the researcher to explore the systemic properties of variation, and ask how variation fits into the entire process of ordering.

264 See Galanter, The Portable Soc 2, supra note 6, at 252 (“I make no distinction between believers in the model of rules and instrumentalists; nor between formalist believers in autonomous rule development and their realist critics. Thus, where some observers detect a radical break, I see a striking continuity.”).
innovations from outside the legal system. Understanding the self-organizing aspects of a legal system, we are put in a position to measure the role of trial courts as bridges to extra-legal networks and primary agents of legal change.

VI. CONCLUSION

This Article attempts to supplement our maps of legal reality so that they are a bit more accurate and useful. A hierarchical map of ordering, the pyramid story, does not account well for two prominent realities: (1) variation in the content of the legal system, and (2) patterns of non-hierarchical ordering that we observe. A more complete map of legal ordering must account for these realities.

I have offered a model of self-organization to explain what hierarchy cannot. Self-organization takes as central the variation that we observe in the content of a legal system, and attempts to state how order emerges from that variation. Contrary to conventional wisdom, variation and order are not categories arranged as binary opposites. Rather, variation and order compose one continuous phenomenon.

Working with bankruptcy data and institutions, I have portrayed self-organizing structures as overlapping networks of legal and extra-legal actors, and I have explained self-organizing dynamics as processes of form innovation and norm emergence. I have adduced empirical evidence (including a substantial case study and statistical analysis of a quantitative database) to support the proposition that U.S. bankruptcy law is a self-organizing system. Finally, I have suggested that the self-organizing model might provide a more general theory of trial court behavior, and I have offered some preliminary thoughts on how the self-organizing model may illuminate basic research on discretion, doctrine, and legal change.