INTRODUCTION

Earlier, the author had, in his presentation on *Towards a Taxonomy of Judicial Thinking* (Foo, 2001) at a conference held in Chicago before an audience including U.S. judges, argued for a novel perspective of a court as a thinking organization. Given the fact that courts deal with resolving uncertainties in the law, the thinking naturally has to be judicial in nature. This author then took on the example of Lord Denning, a famous English judge, for the purpose of modeling his process of judicial thinking. Hitherto, the roles of courts, whether in Eastern or Western cultures, had been viewed primarily as government-funded, independent institutions for the production of justice. From an economics perspective, the assumption is that the public is desirous of such a good as “justice.” Yet as will be argued here,
courts ought to be also explored in their roles as knowledge-creating organizations (Nonaka, 1991).

By their very creations, they are what C.W. Choo (1998) had already conceptualized as knowing organizations. These are organizations involved in the modes of sense making, knowledge creating as well as in rational processes of decision making (Choo, 1998). Indeed, the courts are institutions established by the relevant governmental authorities to be all knowing—provided that the case is within their jurisdiction. Courts are the very last resort for people and organizations to resolve any differences in their opinions on legal knowledge—concerning what is right or wrong in one’s interpretation of the law as applicable to any particular situation, the judges within the courts are the final arbiters.

Here, we expand on this by presenting an alternative conceptualization of the courts: a systemic view of the courts (see discussion later) as organizations that weave patterns of “social fabric” as a web or nesting of the legal rules. These webs of rules, though differing in their exact contents, are similarly woven across many otherwise different cultures and societies. Such a fabric, however, is essential for ensuring an orderly—or at least as it is seen on the surface—functioning of any modern society. Yet within these societies there exist, inherently, complexity—a complexity generated through the multitudes of interactions.

The intriguingly popular theme, at least at the turn of the century, is of our societies becoming increasingly “out of control” (Kelly, 1994), in the sense that as a society becomes ever more complex, our organization evolves to be more akin to the biological in nature. If so, this logically suggests one interesting insight: The stronger presence of courts in any society is in itself a reflection of evolution—one towards being even more “biological.” Thus an omnipresence of order inducing institutions such as the courts is precisely to facilitate societal transformation—a transformation towards “out of control” (as intended by Kelly) and becoming an even more complex adaptive society. This makes it even more necessary that we explore the roles of the courts to complete our picture of a complex, adaptive society.

How do courts ensure order emerges out of chaos? They do so primarily by their resolving of legal uncertainties. In the very process of providing certainty, the judges acting in parallel are simultaneously generating new legal insights and knowledge. The process is incremental and on a case-by-case basis. For this reason, we are exploring here the processes in adjudications by the judges. This is something yet to be undertaken. Classical concepts of knowledge creation (for example, Polanyi) are rarely if indeed ever applied to the courts. Yet there can be no denial that there are new legal knowledge creations through deep, reflective thinking by the judges.

For this reason, after our systemic modeling of courts as complex adaptive systems, we turn to explain our knowledge-based, expressive-implicit matrix.
We intend to map the conceptual matrix onto the processes of the court. Our goal is to use this as a modeling tool to gain insights into the thinking processes of the judges—in particular, how judges generate new legal insights or knowledge. Five recent cases are selected that emphasize the knowledge creating processes and that our courts ought to be explored, borrowing from Choo, as “knowing organizations.” Seeing courts from such perspectives may engender new insights or even a different paradigm, for example, possibly on how courts may then be reorganized so that the courts may better perform their societal roles of engendering order out of chaos and ensuring order in their pursuit ultimately of justice. The role of the courts is made even more cogent by the seemingly growing prevalence of chaos.

Finally we conclude by arguing that there is a Tao underlying the processes in generating of knowledge. Additionally we attempt to rationalize the roots of ancient Chinese legal philosophy evolving from deeply held (more than 5,000 years) beliefs in inevitability of change\(^2\). For our human society being part of nature, change is inherent within any society even one that may appear outwardly to be orderly. Wihelm\(^3\) argued in his introduction to translating the book *I Ching* (“The Book of Changes”) from Chinese into German, that it is “… unquestionably one of the most important books in the world’s literature…”

We now turn to discuss our systemic, dynamic modeling of courts’ roles in generating new legal knowledge.

**COURT AS COMPLEX ADAPTIVE SYSTEM**

How can we picture the court as being integral to an evolving, dynamic, highly interactive society that is Singapore? We envision the court as being nested as an organic part of the very fabric of society. An institution that regularly and systematically draws, using the language of complexity science, “order from chaos”—in plain English, how the rules of law ought to be applied in a given set of facts. Now rules, when applied by the courts to cases, constitutes for the legal fraternity or community of practitioners new legal knowledge. Why? There is no real necessity to go to the courts when there is absolute certainty on the law. It is only when there is uncertainty to the law that parties have to opt to go to the courts.

In our conceptualization here, we are attempting to simply follow up on McElroy (2000). This is seen in our approach to the conceptual modeling of the roles: law firms and other rules-enforcing entities may be seen as “detectors” as well as “effectors” in offering advice to their clients. Lawyers may detect an uncertainty—potentially chaotic if left unresolved in a given situation—and they may then advise clients to seek a court’s decision. Why? As we said earlier, to bring “order out of chaos.” Indeed another equally attrac-
A metaphor from complexity science is “attractors.” That is, the judges in the courts in presiding over cases are generating “attractors”: principles, rules, legal concepts, ratio *decidendi* that bind people together. One powerful attractor that binds people together is the concept of justice: seeking just rules. Courts are institutional manifestations of such attractors.

In so doing the courts also and necessarily bring forth new legal knowledge. It may be an emerging, new legal interpretation by the courts that may impact businesses and corporations. Thus those firms operating within the relevant legal domain or environment must then to adapt to such an emergence. Prior to the emergence of such a new legal rule clarifying what ought to apply in a particular situation, there is in the language of complexity science, a state of chaos. Clearly, when there is an unsettled chaos, a lot more energy (in Chinese, “*chi*”) may be expended by organizations—acting on advice of their lawyers—to take precautionary actions so as protect themselves in their interactions inside the legal environment. So far, very few if any academics had sought to relate the creation of new legal knowledge in the context of complexity science. For this reason, it may be useful to paint an even more vivid legal picture.

Take the case of lawyers performing their deeply ancient, traditional functions (as is the case in English legal system dating from 13th century). They advise their clients on the basis of given set of facts, their legal rights. To be effective, lawyers have to refer to a substantial body of legal knowledge—knowledge that may be said to have had emerged through the accumulative applications by the courts of laws (whether statutory or common law) to cases. The interpretations of given rules to specific cases become binding upon legal entities operating in the same legal domain. Organizations in their intensive interactions (as depicted by the sporadic spread of lines) have to pay attention to any new, emerging court decisions, especially if these newly made legal decisions have significant impacts on the activities or business of the organizations. Decisions come from the minds of the judges functioning as a court: one operating like a complex, adaptive system in providing order for the environment (see Figure 9.1).

It is surprising, however, that so far no one has explored how judges are actually creating new legal knowledge as part of the processes of the courts. We do this by grounding our approach in what may now be considered as classical concepts in the knowledge creation field.

### EXPRESSIVE–IMPLICIT MATRIX

In knowledge literature, Polanyi’s (1966) major contribution lies in emphasizing the tacit dimension of knowledge. Consistent with such an approach,
we propose here a dividing of legal knowledge into two dimensions: what remains implicit (corresponding to tacit) and the expressive. Taking this as the basis, Nonaka and Takeuchi (1995) then drew the dynamics of Japanese innovation in a circular path flowing from explicit, combination, explicit, internationalization, tacit, socialization, tacit, externalization and back again to explicit. The clear divide, however, is in knowledge being both explicit and tacit. We adapt that approach in our conceptual modeling.

This is reflected in Figure 9.2. We first divide the $x$ and $y$ axes into halves of explicit and tacit. Thus there are two quadrants that are either explicit or implicit, while another two (bold arrows) are implicit–explicit or explicit–implicit. As will be explained later, such a mapping is especially useful with regard to legal knowledge. For the creation of legal knowledge lies in rendering what is implicit in a given situation into expressive rules or decisions backed by a rationale.

Of the four quadrants however, it is the interchangeability of expressive–implicit or implicit–expressive (reflected in two quadrants) that is, in our opinion, at the core of the process in creating new legal knowledge.

To enable us to utilize the model effectively, we need to transpose only the horizontal axis from expressive–implicit into implicit–explicit. In so
doing we immediately get what we term as the “next generation” figure (Figure 9.3), one that we can then map directly upon the processes of thinking of judges as clearly expressed in their public judgments.

**Figure 9.2** Framing of legal knowledge from within a EI matrix.

**Figure 9.3** Direction dynamics in emergence of knowledge.
The lower left quadrant reflects the first dynamic of the thinking processes—that is, in the rendering of what is all “expressive” into “implicit.” In the upper right quadrant is pictured the second dynamic, namely rendering the “implicit” back again into the “expressive.”

Next we explain how this conceptual model may be applied to a sample of recent court cases. The goal is to illustrate how the model may yield insights into the legal thinking and decision making processes without having to investigate the specific details of the cases and that these processes may be related back to models on new knowledge creation.

**MODELING KNOWLEDGE EMERGENCE**

How can we model this process of knowledge emergence with the social fabric as embedded in our system of courts? Here we explore the methodology for modeling the process using the concepts discussed earlier. To do this we need samples of court cases and as such a quick review is made of recent cases.

For this overview, we select five cases. We try in each of these cases to model the entire process of reported court decision making from the perspective of knowledge emergence (the “aha”). To do so, we had to review the specific judgments of the courts.

The detailed references to the case reports are provided as footnotes in the specific conceptual model in the Figures. Our main purpose here is to illustrate by way of actual examples our conceptual methodology for generating a generic model of knowledge emergence that underlies the processes of the courts. The cases are selected for diversity of their contexts, but they are recent cases with reports are available on the internet. Each case is now briefly mentioned.

*SM v Schenker* is a case concerning a lease of a warehouse in the logistics industry. In the *Advantest Corporate Office* case the central issue of contention is one of identity, whether a certain legal entity is indeed a party to a manufacturing agreement. In the *Koon Seng Construction* case, what had to be resolved by the court was whether there was a binding agreement in relation to the supply of steel bars. And in the *Chor Pee* case involving the court process of a petition, the matter at the heart of dispute is the question of legal fees. Finally we look at the more procedurally and legally more complex *Dextra* case, which involves a prior court order and amended defenses related to the subject of patents. Analyzing of each of these court cases led to a map-modeling of legally grounded, knowledge creation sequences as follows:
SM v Schenker Case

Critical tests
Issues

7 “Aha decision”

Pleads
Sequencing
Key issues
Entities

Case mapping of legal knowledge discovery in court’s emergence of rules*
* SM Integrated Transware Pte Ltd v Schenker Singapore (Pte) Ltd [2005] SGHC 58

The Advantest Corporate Office Case

Facts
Identity
Issues
Aha Conclusions
Findings

Case map of legal knowledge discovery in court’s emergence of rules*
* Advantest Corporate Office (Singapore) Pte Ltd and Another v SL Link Co Ltd and Another [2005] SGHC 75
**Koon Seng Construction Case**

**Case map of legal knowledge discovery in court’s emergence of rules***

*Koon Seng Construction Pte Ltd v Siem Seng Hing and Co (Pte) Ltd [2005] SGHC 8*

**Chor Pee Case**

**Case map of legal knowledge discovery in court’s emergence of rules***

*Chor Pee and Partners v Wee Soon Kim Anthony [2005] SGHC 101*
As shown above, the processes of the courts in their judicial decision making are conceptually incongruent with creating of new knowledge. Clearly the roles of the courts in creating order out of chaos, while directionally opposite from order to chaos (Holland, 1998), should be of interest to complexity theorists. This is consistent with scholars who argue for a systems approach to the law (LoPucki, 1997), and it is timely to go even further by relating judicial decisions as part of the process of new knowledge creation. New insights are likely from taking a cross-disciplinary approach.

What is even more interesting, however, is to see this basic model of legal knowledge creation, the expressive–implicit dimensions in the context of a very ancient, possibly 5,000-year-old Tai-Chi symbolization from Chinese civilization.

**TAO OF KNOWLEDGE**

Simply put, creativity is a state of human mind, and by its nature, it implies dynamism. To create is to begin anew, to foster the growth of something new out of what already exists, the old. So if you look at the symbol of Tai-Chi as represented in Figure 9.4, you can see only two colors: white and black. Interestingly, in legal circles it is often standard advice by a lawyer to a client on having reached an agreement: “Put it in black and white”—that is, to nail an agreement into enforceability by expressing these intentions...
in a signed, properly stamped contract. From the perspective of complexity language, it renders the uncertainty (“chaos” is a bit too strong a word) into certainty.

In the context of Tai Chi symbol, the colors of black and white have very different connotations. They depict exactly the opposite. Taoists in ancient China, having observed nature, found the world is always changing, however subtle the changes. They depict this creative change by using the highly abstract circular symbol, contrasting the black with the white. Moreover, in the black there is always the presence of a smaller circle of the white. Correspondingly, in the white there is a circular dot of black. The symbol is never static, it is always evolving—just like the courts, always having to make new judicial decisions.

As time flows, black grows, however slowly, even imperceptibly, within the white, but certainly there comes a time when white is transformed into black. Simultaneously, the white dot grows and so black turns into white. The symbol shown is therefore a snapshot at a given moment in time. It is also circular, like the moon, embedding the concept of transformational, dynamic change. Here we try to draw a parallel with our earlier model: the explicit (black) and the implicit (white, being a blank page). Due to space limitations, we can only highlight the possible relevance of a deeper, more ancient Chinese model on creative, transformational change, one that will become more significant as China propels her way into the global economy. Thus the reason for our subtitling this chapter: Tao of transmuting cases into knowledge.

NOTES

The Mind of Lord Denning, where he argued for the perspective of “The Court as a Thinking Organization.”

2. See in particular Richard Wihelm’s translations of I Ching, the Book of Changes and visit this website: http://www.igiing.com/intro/introduc.htm for the English version of his work.

3. He translated the book into German, working with a Taoist sage, Lao Naihhsuan. On his return to Germany, he became a Professor of Chinese Studies at the University of Frankfurt and in 1925 founded the China Institute.

4. “The concept of attractor reminds us that there are organizing principles at work in all systems. Values, goals, theories, leadership in groups: all can be considered as attractors bringing people together.” Battram (1998, p. 148).

REFERENCES


Author Queries:
Please provide publisher location for Battram (1998).
Is Foo (2001) a paper presented at the conference you mention, or is it in published proceedings from the conference? If the former, please format like this:

If the latter, please format like this:

Please provide page numbers for Smith (2005). Also, this reference is not cited in the text—please either cite it or remove from the references.

Please add Wihelm (German translator of I Ching) to your references, and give a page number for the quote in the text.