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Teaching Synthesis in High-Tech Classrooms: Using Sophisticated Visual Tools Alongside Socratic Dialogue to Help Guide Students Through the Labyrinth

BY CRAIG T. SMITH

Craig T. Smith is the Director of Legal Writing and Assistant Professor of Law at Vanderbilt University Law School in Nashville, Tenn.

Legal rules that rest on multiple authorities are labyrinths. In these labyrinths, many first-year legal writing students lose their way. Therefore, teaching legal synthesis to beginners is a daunting challenge. I will briefly describe this challenge and how I meet it by combining—synthesizing, really—Socratic dialogue and sophisticated visual tools, namely computer-generated tables or charts, delivered in the classroom using high-tech data-projection equipment. Finally, I will share and explain examples of how I have used these tools to help students negotiate the labyrinths of first-semester legal analysis.

I. The Challenge of Teaching Synthesis

Synthesis is the "combining of often varied and diverse ideas, forces, or factors into one coherent or consistent complex."[1] Synthesizing rules from various legal authorities is a critical yet difficult skill. Teaching synthesis is likewise difficult. As legal writing professors, we must help beginners learn to work precisely and intelligently with the law's intangible, intellectual goods—rules, policies, theories, rhetoric—as readily as carpenters work with drills and wood, and artists with brushes and paints. This is a tall task.

Carpenters and painters can experiment with tangible objects to produce tactile or colorful results: a well-joined cabinet, an appealing iridescence. Lawyers, by contrast, have only words: sounds and symbols. These words, too, are often stand-ins for remarkably complex, multilayered meanings. Though some legal terms are colorful—golden parachute; "piepowder"[2] court; the fruit-of-the-poisonous-tree doctrine—many more seem drab and lifeless to first-year students. Worse yet, often legal terms—for example, intent and consent—initially seem straightforward but grow elusive once students try to define, explain, and apply them in cases. Sometimes different words are synonymous, while the same word in different places carries different meanings. Finally, some legal words and phrases seem little clearer than Rorschach inkblots. Even words for property are maddeningly ethereal, confoundingly couched in either Latin, English circa 1300, or Law French: res, chattel, corpus, easement, profit à prendre.

Classroom teaching of legal synthesis presents an especially prickly challenge. Classroom work on synthesis typically adds a further layer of abstraction: it proceeds largely in spoken form. Students thus get a particularly fleeting variant of legal authority: mere sounds, floating ephemerally across the classroom.

How then can we, in our classrooms, help beginners learn to perform the abstract, unfamiliar task of legal synthesis? We can enlist one of the students' strongest, and in classrooms most often neglected, senses—sight—as we walk students through the labyrinth of synthesis.

II. The Promise of Socratic Dialogue Teamed with Computing and Electronic Projection

Legal writing professors can effectively teach legal synthesis in the classroom using, fittingly, a synthesis of teaching techniques. I combine traditional and high-tech teaching methods and aim for synergism: a more powerful means of helping students to carefully, thoughtfully, and critically compare legal texts and discern and articulate rules.

My starting point is the traditional technique of Socratic dialogue. My high-tech addition is use of computer-generated visual aids to address

[1] *Webster's Third New International Dictionary* (1986).

[2] A medieval designation meaning "dusty feet." *Black's Law Dictionary®* (Pocket ed., West 1996).

specific legal problems of a hypothetical client. Hence, I enhance probing colloquy about realistic legal situations by using supportive, interactive visual frameworks—tables, flowcharts, diagrams, and the like, which for simplicity I will just call charts. I create these charts with a computer and then display them on a classroom's large wall screen using high-resolution projection equipment. I then question students about the charts, and, using the computer, fill in or edit the charts in accordance with their responses. I thereby help students perform and (through me and my computer) record their own process of synthesis.

Today's classrooms and learning theories leave little reason to rely solely on Socratic dialogue to teach synthesis to beginners in a legal writing class. Our students include visual learners, and our classrooms increasingly provide sophisticated equipment. In most rooms, "data projectors" can brightly project precisely what appears on the professor's linked computer screen. Accordingly, with these projectors we can show and work with any images, texts, or charts that we can display on a computer screen. Creating useful visual tools is simple too; even flowcharts, for example, are easy to construct with basic word-processing software. The most significant limitation to teaming Socratic dialogue and technology to teach synthesis, therefore, is not so much technical ability as simply our imagination.

Computer-generated, electronically projected charts and tables can improve our teaching of synthesis before, during, and after class. First, using computers to construct useful charts or tables is superb preparation for teaching a class session. It is "writing to learn," where we are learning how to conduct a class session optimally suited to our material and our goals. By constructing and testing a table or chart, we deepen our understanding of the legal authorities students are confronting and prime ourselves to work effectively in class with those authorities.

Second, in class the data projector beams the chart from the professor's computer onto a large wall screen, where students can see and work with the chart easily. The chart thus helps guide us—professor and student—in Socratic dialogue. It provides signposts that help students understand the professor's goals, zero in on useful responses, and avoid tangential detours. By simply pointing to a diagram, for example, a professor or student can clarify a question, suggest an unrecognized concern, or steer a veering discussion back onto a more fruitful path.

Moreover, the computer-and-projector setup lets the professor instantly (1) record the results of these dialogues using the computer and (2) share them accurately with the entire class using the projector. At a student's suggestion, the professor (or a student or assistant) manipulates the chart or types text into it. Other students can then see—not just briefly *hear*—the student's proposal, because it now is projected onto the wall screen. Seeing the proposal helps students both understand and critically assess it. Or, for example, the professor can briefly project the text of a pertinent judicial decision, highlight a salient quotation, and paste that quotation into the chart. As discussion progresses, too, the professor accordingly can use the computer to edit what is projected. Students also can question the chart itself. This likewise is useful. It helps the professors learn where and why students are having difficulty. It also prompts other students to attempt to explain the analytical process to their colleagues.

The gradually filled-in, edited, and projected framework thus helps the professor guide and record, in visual terms, the students' intellectual work of synthesis. This both engages students in, and simultaneously shows them, how lawyers closely compare and question texts to search for meanings, logical relationships, and conclusions—in short, how they synthesize. Chalkboards, overhead projectors, and document cameras can do this also, but not with the flexibility that personal computers provide. A data projector will display anything the professor's computer can display—and will continue to do so even as the professor, by responsively working in class with the computer, changes that display.

Finally, the computer will readily save the class's collective analysis. This is particularly valuable when a class session ends before the analysis ends; the professor can project the partially completed chart to start the subsequent class session. The professor can also, between or after class sessions, edit the chart and its text. Moreover, the computer can simply and inexpensively distribute to the students—by paper copy, e-mail, or Web site posting—their in-class work. If students know this

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during class, they feel less compelled to take comprehensive notes. Freed of that compulsion, they seem to engage with greater concentration in Socratic dialogue.

Distributing a document that the students helped create also gives them a sense of accomplishment. That boosts their confidence—another key ingredient in first-year success. It also reduces their anxiety by giving them a document to which they can refer when questions later arise and their memory—as so often happens with 1Ls—falters or plays tricks.

Using computer-generated, electronically projected visual tools, therefore, helps us teach an abstract, intellectual task through more concrete and visible tasks: visually comparing texts and arranging legal terms within charts that suggest the terms' logical interrelationships. Our classrooms function then more like a carpenter's shop or a painter's studio. They become laboratories where, to grasp elusive concepts, students work collectively with words as visible objects, not mere fleeting sounds. The professor uses both oral and visual cues to help students grasp their way through case studies in synthesis—that is, through various legal labyrinths. The professor then sends them out of class with tangible products they have helped create: their own maps of the labyrinths they have negotiated.

III. Examples

The following are excerpts from two examples of computer-generated, electronically projected visual tools that, in combination with Socratic dialogue, I have used in class to help beginners learn to synthesize. In each example, I made the table or chart using fairly simple features of Microsoft® Word: tables and text boxes. The usual array of word-processing options permit color-coding, use of bold or italic text, and other visual cues that further help guide students.

I filled in the table or chart to help me prepare for class. The completed chart recorded precisely the information that I wanted students to provide in classroom discussion. However, in class I then provided students with an entirely or partially blank table or chart, often both as a projection onto the classroom wall screen and as handouts for all students. Our classroom work then consisted largely of understanding, critiquing and occasionally altering, and finally filling in the table or chart. First, I challenged students to articulate what information an attorney would want and why. Second, I called on students to provide that information. If they could not, we left a blank space on the chart and returned to it in a later class session. Finally, after completing the chart in class, I distributed it to all students using e-mail and the course's Web site.

The first, simpler example introduced our in-class process for learning synthesis. The process involved Socratic dialogue, often punctuated by periods in which students worked instead in small groups. The tables guided their inquiry and recorded their synthesis. The second example used a questionnaire and a "funnel" chart to guide students through a more challenging synthesis.

Example 1

Using Comparative Tables to Analyze a Statutory Provision and Case Law That Construes the Provision

Initially, I introduced my students to comparative tables. Such tables simply line up parallel chunks of information to ease comparative analysis. Filling in a table in class both helped students learn what types of information they must seek to make sense of a statute and let them practice gathering and assembling that information.

First, I projected a very simple, two-column table with only column 1 filled in.[3] I challenged students to explain why each category listed in column 1 is important, thereby testing their understanding of points that they should have gleaned from previous reading that addressed how to analyze rules. I then asked students to complete column 2, thereby applying the techniques they have read about to a statute they also had read. Here is how the table looked in my notes:

[3] This example uses a provision set forth in Richard Neumann's text, which is required reading for Vanderbilt students. Richard K. Neumann Jr., *Legal Reasoning and Legal Writing: Structure, Strategy, and Style* (3d ed., Aspen Law & Bus. 1998).

Initial Comparative Table

1	2
Name	Contracts Code §206
Type of Authority	Statute
Date	1970
Element 1	X made the contract while intoxicated
Element 2	Y had reason to know that X was intoxicated then
Element 3	Y had reason to know that X's intoxication at that time rendered X unable to comprehend the transaction's nature and consequences

This initial table formed a foundational map for subsequent analysis. By adding new columns to the table, I opened room for students to build on this foundation, visually mapping how new information—a judicial decision—changed the analytical landscape. I gave students a case[4] construing the statute, and then asked them to fill in columns 3 and 4, visually charting how case law amplified the statute:

I later expanded the chart, first adding information on the additional elements in new, lower rows and then adding additional cases, construing the same statute, in new columns inserted between columns 3 and 4.

Expanded Comparative Table (Excerpt)

	1	2	3	4
A	Name	Contracts Code §206	Williamson	Synthesis
B	Type of Authority	Statute	Mandatory Precedent (state supreme court)	
C	Date	1970	1980	(today: the current rule)
D	Element 1	X made the contract while intoxicated	1. Evidence of intoxication must be clear and convincing. 2. Generally, mere intoxication on the day of the contract is not enough; "extreme impairment" at the contract formation is required. But this is not true if other factors combine with less extreme intoxication, e.g., other mental problems or "gross inadequacy of consideration."	X must prove by clear and convincing evidence that X made the contract while EITHER (a) extremely impaired through intoxication OR (b) generally or somewhat intoxicated that day, but also BOTH (1) suffering related mental disabilities AND (2) forming an extremely unfavorable contract.

[4] The case is an Alabama decision that I simplified and very substantially modified to fit Neumann's statute. Originally, it was Williamson v. Matthews, 379 So. 2d 1245 (Ala. 1980).

Example 2:

Using a Questionnaire and "Funnel" Chart to Analyze Common-Law Precedents

The second example is a more complex exercise. To prepare for writing an interoffice memorandum, students had to analyze four Alabama decisions and synthesize a currently binding set of rules defining the tort of conversion.[5] To help them do so, they first filled out a questionnaire in small groups. We then discussed and projected their answers for all to see. Next, they again worked in small groups to transform their questionnaire answers into appropriate text on a synthesis "funnel" chart. This funnel chart showed, more pictorially, a flow of disparate analyses converging on a single, currently governing rule.

The Projected Questionnaire (Excerpt)

Step 1. Build your "umbrella" rule using primarily *{ name the case }* **because** *{ explain why }*.
According to that definition, conversion is:

(1) ______________________________

(2) that ________________ with the holder's possessory rights.

Step 2. Analyze this definition's two main elements.

(1) Element 1: _____________________

The *{ name the key case }* court said *{ element 1 }* is a:

(a) ____________________________________

- the court { did OR did not } define this;
- nonetheless, the decision suggests that "________________" means simply what it means in plain English: The defendant ________________ the items by physically picking them up and controlling them.

(b) of a ________________

(c) from _____________________

(d) without the owner's ________________

(2) Piece 2: Serious or Substantial Interference

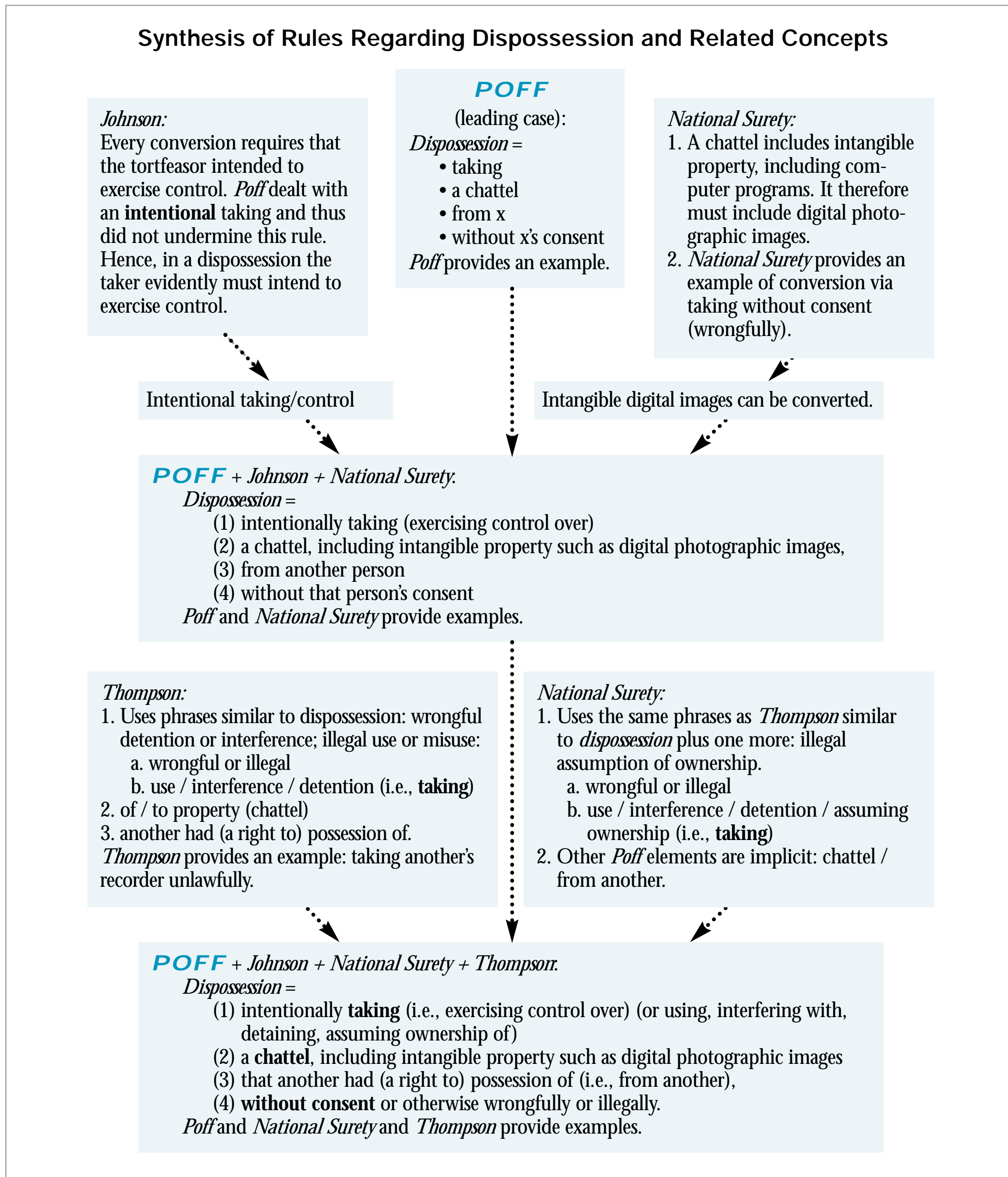
[The questionnaire then lists additional, similar questions regarding this second element.]

Step 3. Analyze what other decisions add.

[The questionnaire then lists additional, similar questions regarding other relevant decisions.]

[5] Poff v. Hayes, 763 So. 2d 234 (Ala. 2000); Johnson v. Northpointe Apartments, 744 So. 2d 899 (Ala. 1999); Thompson v. City of Clio, 765 F. Supp. 1066 (M.D. Ala. 1991); Nat'l Surety Corp. v. Applied Systems, Inc., 418 So. 2d 847 (Ala. 1982).

Part Three: The Synthesis Funnel Chart (Excerpt—for "Dispossession" only)



IV. Conclusion

Legal synthesis is hard, and students crave guidance. A legal writing professor can provide that guidance in class by engaging one of the law student's often-overlooked senses: sight. The professor can teach synthesis effectively and enjoyably by teaming Socratic dialogue with sophisticated, carefully tailored, and interactive visual tools. Using technology that is increasingly available in classrooms, the professor can electronically project these visual tools for all students to see, engage a writing class in working closely with them, and later distribute them—as in large part the students' own collective accomplishment—simply and inexpensively.

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