Designing Problems to Teach Legal Problem Solving

Stephen Nathanson
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TO TEACH LEGAL PROBLEM SOLVING

STEPHEN NATHANSON*

I. INTRODUCTION

Students, in pairs, are simulating a negotiation based on a new problem designed for the course you are teaching. The session appears to be going well and students seem engaged by the problem. You circulate among the group and listen for conversation that might be helpful in identifying learning points to discuss during the debriefing session. You call an end to the simulation, and the first question you ask in the debriefing is: “All right, before we compare settlement results, what lessons have you learned from this negotiation?”

A student looks up at you with furrowed brow. “The dates in the confidential instruction sheet are all mixed up,” she says. “So are the figures.”

Dumbfounded at first, you quickly recover and then resort to your old bag of facilitator’s tricks. “The instruction sheet says you can make up or assume any facts consistent with the existing ones. You could have made certain assumptions.”

“The problem,” says another student, “is that some of the pairs spent a lot of time discussing what figures they should assume before they started the negotiation. Some people hardly negotiated at all.”

“Thank you for your helpful feedback,” you say as if feedback of this sort is a normal, even welcome, part of the learning activity. And then you resort to another diversionary tactic: “I am going to try to improve it for next year.”

No doubt, many who have done skills teaching have had a similar expe-

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rience. Instead of attempting to perform the skills and learn experientially, students sometimes focus on criticizing the learning activity. This happens when the problem on which it is based is not well designed. In this situation, students often feel a lack of stimulation and teachers feel anxious. The learning activity can deteriorate as teachers lapse into lecturing, or they try to appease discontent by thanking students for their feedback. The learning activity can even collapse completely with students being told they can take the rest of the day off.

This last scenario, of course, is an extreme outcome. Nevertheless, it is only one of many possible, unhappy outcomes that can be caused by inadequate design. When they do occur, they are unwelcome reminders of how important well-designed problems are to professional education. The purpose of this article is to explain why problems are so important, and what features make them effective learning tools. If features can be identified, they can help educators do a better job of designing good problems.

II. WHAT ARE “PROBLEMS” AND WHY ARE THEY SO IMPORTANT?

Sometimes called case studies, case files, current matters, fact patterns, simulations, or briefs, problems are the factual material law students work with when they simulate what lawyers do. Although teachers also use problems in models or demonstrations of what lawyers do, this paper refers to problems as what students work on, with or without the guidance of teachers. Problems form the basis of learning activities and assessments found in a skills-based or problem-centered curriculum.

A problem-centered curriculum is different from a traditional, knowledge-based curriculum. In the knowledge-based approach, the curriculum is organized into subjects and teachers are regarded as experts in their subject. They impart their subject knowledge to learners who are expected to remember, understand, and apply it.

In the problem-centered approach, the curriculum is organized around problems; students are active learners who work on problems or simulate problem solving. Teachers are facilitators who guide students in the process of learning by doing. During this process students work, usually in small groups, discovering solutions on their own, gaining insights into their own performance, and acquiring skills and knowledge as they solve problems.

Although many educational programs have characteristics of both approaches, and each encompasses a range of formats and terminology, an easy way to distinguish them is in the outlook of the teachers. In the knowledge-based approach, teachers concentrate on building their own subject expertise and sharing it with students. In the problem-centered approach, teachers are focused on meeting students’ learning needs through curriculum design, by promoting student responsibility for their own learning, and by
devoting resources to developing students’ problem-solving skills.1 Knowledge-based programs are sometimes described as teacher-centered because the educational process revolves around what teachers teach rather than what students do. Problem-centered programs are sometimes described as student-centered, because the educational process comes out of what students actually do in activities designed and guided by teachers.2

In the learning activity described above, students were involved in student-centered activity. They were simulating a negotiation problem, the facts of which had been provided to them in the form of confidential instruction sheets. The facilitator/teacher was to identify lessons learned from the experience, suggest how those lessons could reinforce prior learning or might be transferred to other activities, and help students reflect on and gain insights into their performance.

This is a typical problem-centered learning activity, of which there are many types, but all of which are dependent on the quality of factual scenarios. Professional schools, including law schools, use these scenarios in their learning activities. Some involve explicit skills learning. Law schools tend to use them for simulations in skills such as negotiation, advocacy, interviewing, advising, opinion writing, commercial drafting, letter writing, and drafting pleadings. But factual scenarios are also used in activities that do not necessarily focus on one specific skill. Good examples can be drawn from professional education in other disciplines such as business where case studies and the “case study method” are used to teach knowledge, analysis, and general problem solving skills.3 Case studies are also used in problem-based learning (“PBL”), a learning method developed by medical schools to help students manage large amounts of information in problem-solving contexts. In PBL, problems are used as engines for learning, motivating students to use their own initiative to learn the skills and knowledge they need to solve the problem.4

Educators using these approaches sometimes differ in their rationales for emphasizing problem solving in their programs. Some view the process of problem solving as a learning method designed to facilitate the acquisition of knowledge and skills in practical contexts. Others see the ability to solve problems as an explicit educational goal. Still others view problem solving as both a means and an end: students should learn through problems but also learn how to solve them.5 In the final analysis, however, whatever

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5. The differences between problem solving as an educational goal and as a learning
rationale is used for teaching problem solving, and whatever the educational approach—skills, case study method, or PBL—all share the same essential ingredient: students learn, and are motivated to learn, by working on problems.

Problem solving is arguably the cornerstone of all formal education. As Robert Gagné states, "Educational programs have the important ultimate purpose of teaching students to solve problems." In professional education, problem solving as either an educational goal or a learning method can be found in such disciplines as medicine, business, architecture, and law. Until very recently, legal education did not stress problem solving as an explicit theme, although it found indirect expression in the teaching of legal skills which requires the simulation of client problems. These developments are a response to the growing realization of how important problem solving is to professional education. If one accepts that learning how to solve problems is the ultimate goal of legal education and that learning through problems is an essential learning method then, insofar as curriculum design for law is concerned, nothing can be more important than the design of good problems.

III. WHAT MAKES GOOD PROBLEMS?

In discussing the principles for what makes good problems, this paper refers to three main sources: research literature, my own experience and, most important, an example of what I consider to be a good problem (reproduced in Appendix A at the end of this paper). The research literature refers mainly to the case study method, PBL, and legal skills sources. My experience and the problem at Appendix A relate mainly to legal skills teaching. As such, the principles of problem design described in this article are especially applicable to legal skills simulations. However, these princi-

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7. See HOWARD S. BARROWS, HOW TO DESIGN A PROBLEM-BASED CURRICULUM FOR THE PRECLINICAL YEARS 5 (1985).
8. See EASTON, supra note 3.
9. See Robert Cowdroy & Barry Maitland, INTEGRATION, ASSESSMENT AND PROBLEM-BASED LEARNING, in REFLECTIONS ON PROBLEM-BASED LEARNING 175 (Chen Swee Eng et al. eds., 1994); Michael J. Ostwald & Chen Swee Eng, MARGINALISATION OF THEORETICAL ISSUES IN A PROFESSIONAL PBL COURSE—A STRUCTURAL OR ATTITUdINAL PROBLEM?, in REFLECTIONS ON PROBLEM-BASED LEARNING 87 (Chen Swee Eng et al. eds., 1994).
10. See RUSSELL STEWART, CURRICULUM DEVELOPMENT FOR THE PRACTICAL LEGAL TRAINING COURSE 23 (1979).
11. Problem solving as the primary goal of legal education has recently occupied the thinking of some legal educators to the extent that curricula have been explicitly organized around a problem-solving goal. See, e.g., Scott Slorach & Stephen Nathanson, DESIGN AND BUILD: THE LEGAL PRACTICE COURSE AT NOTTINGHAM LAW SCHOOL, 30 LAW TCHR. 187 (1996).
pies may be more broadly applied because the learning processes and goals of legal skills teaching, PBL, and the case study method have many similarities.

The problem at Appendix A is an interviewing assessment created for the Professional Legal Training Course ("PLTC") by Patsy Scheer. Scheer designed the problem, entitled Pat Arthurs, more than a decade ago. It has been used for many years by colleagues in both Canada and England to test interviewing skills. I specifically selected Pat Arthurs because I have worked with it many times, and because it illuminates all the features of good problems discussed in this paper. I also chose it because, as a skill assessment performed under time constraints, it is relatively brief and easy to reproduce in this paper.

The student conducting the interview in the lawyer role knows only that a client has come to seek advice about a debt collection, and that the interview must be completed in forty-five minutes. The problem is presented as a set of secret instructions given to a student who plays the role of the client, Pat Arthurs. Pat's problem is how to deal with a sister and brother-in-law who owe Pat money, have been slow to pay it back, and now want to borrow more money from a bank to start a new business.

It is suggested that you read Pat Arthurs first and then return to this section of the paper.

Having read Pat Arthurs, we can now examine the features of good problems. Readers should note beforehand that Pat Arthurs is a particular type of problem among many types. For example, unlike a typical case study or PBL problem, no time for research is built into it. Because it is an on-the-spot skills assessment, students need sufficient prior knowledge and skills to perform it. This may limit how far its own particular features may be generalized. Readers should also note that because a learning problem is an organic whole, analyzing its individual features might present two further difficulties. First, the interconnectedness of the features results in some overlapping among them; second, in any consideration of features, thoughtful readers will inevitably argue that certain ones have been omitted. I have not overcome these difficulties, but have tried to compensate for them by


13. Patsy Scheer was one of the original designers of PLTC, responsible for the creation of many aspects of that course. She is now a practicing lawyer in Vancouver, British Columbia. Scheer wrote detailed instructor notes, with possible approaches and solutions, for this problem. These are not included here.

14. Several features of the PLTC were adopted by the Nottingham Law School in the development of its Legal Practice Course. See Slorach & Nathanson, supra note 11, at 77.
providing a simple analysis that can help curriculum designers at a practical level. Thus, only six features have been chosen. Good problems should be (1) user-friendly; (2) realistic; (3) relevant; (4) consistent with objectives; (5) similar, but different; and (6) challenging.

### SIX FEATURES OF GOOD PROBLEMS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Characteristics</th>
</tr>
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<tbody>
<tr>
<td>User-friendly</td>
<td>Easy to read and use, Consistent facts &amp; figures, Well-organized</td>
</tr>
<tr>
<td>Realistic</td>
<td>Realistic and current, Minimal objectives &amp; facts</td>
</tr>
<tr>
<td>Relevant</td>
<td>Common in practice, High impact, dramatic &amp; urgent</td>
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<tr>
<td>Consistent with Objectives</td>
<td>Problem-generated specific objectives, Uses appropriate context &amp; format</td>
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<tr>
<td>Similar, but Different</td>
<td>Promotes transfer, Uses format &amp; context similarity</td>
</tr>
<tr>
<td>Challenging</td>
<td>Familiar, but novel, Linearity balanced with flexibility, Discovery balanced with guidance</td>
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### A. User-friendly

The first and most basic feature of good problems is that students and teachers find them easy to read and use. Unclear, poorly written problems impede learning. If students have difficulty understanding a problem, they

need to ask the teacher to clarify it. This takes time away from learning, and the teacher may not be able to clarify it. Students usually respond to unclear problems in one of two ways. First, they tolerate the situation, in which case time is lost trying to clarify the problem and motivation is undermined. Second, if the problem is written with obvious carelessness—with typos, misspellings and poor grammar—students might treat it with disregard, and nothing is learned.

A problem can be well written but can still contain inconsistencies or factual errors that throw students off. Although students should be expected to forgive the occasional error, if they are asked to simulate a problem and the facts or figures do not add up, it should not be surprising if students react in a less than forgiving manner. Students invariably think more deeply about a problem than teachers do because they are the ones who have to grapple with it. They look at the problem from all sides and assume every aspect of the problem has a point to it. If one aspect does not fit with another, they may assume this lack of fit is a planned part of the problem. When the students realize that it is, in fact, a mistake in design, it can leave them feeling angry, especially if they have invested a lot of time working on the problem. A series of mistakes in a number of different problems can sour their attitude toward the teacher, and even the entire curriculum.

In Pat Arthurs, several aspects of design are noteworthy for being user-friendly. For example, the text speaks directly to the reader with the intent of helping the reader play the client role. The language is informal and the tone is matter-of-fact. The sentences are short. Its organization also makes it easy to use. General directions are given at the start under the heading, “Secret Instructions,” telling the client broadly how the interview should unfold. Then, under “The Main Characters,” the characters, their ages, occupations, and relationship to each other are described. Anyone who has played the role of a client in an interview knows how helpful it is to fix in your mind who is who in the scenario. This obviates the necessity of constantly referring to different pages to remind yourself what role you and the others have assumed. If you forget who you are, or anyone else, you can simply flip back to page one to find your bearings.

A person cast in the role of a client can easily lose track of a complex story. So to enable the “client” to grasp it as a whole before having to explain the details, the story is briefly summarized under “The Problem.” Only then, under “The Facts,” does the story unfold chronologically—but not the whole story. It continues in a different form under “Details (If the Lawyer Asks for Them).” Under this heading, interactions between lawyer and client are designed to teach investigative questioning because the client is directed to respond and reward the lawyer with details, but only if the lawyer asks for them. Each of these details is set out on a separate line so that the client can spot them quickly as questions are being asked, and as he or she is scanning the pages.

Two additional user-friendly aspects are worth mentioning. The first is
the use of gender-neutral names. The name Pat Arthurs can be used by either a male or a female, so either can play the role without having to play the opposite sex or adapt to odd formats such as “Patrick/Patricia Arthurs.” This is especially helpful when students are playing client roles, as opposed to professional actors who need less help in role-playing.

The other aspect is the use of a date-coding system. “Yr-0” refers to the current year, “Yr-1” is last year, “Yr-2,” two years ago, and “Yr+1” is next year. At first sight, this system may seem distinctly unfriendly to users because it may seem confusing and appear to detract from realism. But date coding makes it unnecessary for dates to be changed from term to term, thus negating the potential for design errors when date changes are required. Moreover, students adapt to date coding almost immediately and are happy to substitute actual dates if the simulation requires it.

B. Realistic

The second feature of good problems is that they are realistic. When problems resemble real life, they are intriguing and students are motivated to solve them. Teachers in several professional disciplines have commented on the importance of realism in problem design. In business problems written for Harvard Business School, cases are based only on actual situations. Teachers at Harvard Medical School who designed cases for its problem-based curriculum unanimously stated that good cases were written from their personal and professional experiences, although some of those problems actually occurred and some did not. Whether cases were based on real or fictional experiences, they had to reflect real situations and contain correct data. At The Flinders University of South Australia School of Medicine, curriculum designers agreed that problems also had to deal with current issues and reflect current practice.

Problems that are unrealistic or outmoded do not call for solutions contemplated by today’s practicing professional. Thus, they are unlikely to be very meaningful to students. An example of such a problem is the garden-


17. See Hafler, Case Writing, supra note 15, at 95-96; Ostwald & Chen, supra note 9, at 89.

18. See Hafler, Case Writing, supra note 15, at 82.

19. See id. at 83.


variety law school problem. Typically, in law school problems, facts are described in such a way as to raise legal issues, that is, unanswered questions about which rules apply in favor of which party. These types of problems, which one researcher distinguishes from real problems by referring to them as "exercises," are often given to students after reading assignments or didactic law teaching to reinforce students' memory and understanding of legal rules in a particular subject. Students are asked to identify the issues, apply the relevant rules, and manipulate them in legal argument. They are not ordinarily asked to define the client's problem, let alone resolve it.

In *Pat Arthurs*, the legal issues are minimal. The client appears to have a strong legal case against Joe and Rita Ellison as well as several procedural advantages. The student must elicit information and design a plan that not only takes full account of decisional consequences, but also helps to resolve Pat's inner conflict about taking assertive action against the family. The student needs to link legal knowledge with interviewing skills, but is not required to identify multiple issues or manipulate them in legal argument.

*Pat Arthurs* is not an exercise. It is a realistic human problem, the solution to which is based only partly on legal knowledge. It also reveals an aspect of realism that is important to designing problems, especially those incorporating a complex skill such as interviewing. Problems should be realistic, but minimalist. Minimalism has two characteristics: the first is that there should be a minimum number of learning objectives in the problem. The second is that factual and documentary detail should be kept to a minimum.

The "minimum-number-of-learning-objectives" principle means simply that the designer should not aim to teach too much with a problem. Students should stay focused on one or two major objectives, perhaps a few minor ones, and should not be sidetracked by others. Designers are often tempted to complicate the legal context of the problem, creating too many learning objectives.

Based on my experience with skills teaching, this can easily occur. For instance, in a course I taught in interlocutory advocacy, one of the very first problems students encountered was an "ex parte application for an order for ex juris service of a writ." The rules on ex juris service are conceptually simple to practicing lawyers. But to a law student, they can seem very complicated. They are lengthy and spill into multi-level subsections. I noticed that in three-minute oral applications, the students would make tortuous arguments as they tried to navigate their way through the rules. They were unable to meet the main objective which was to present a clear, well-for students to be "engaged" by business problems, the problems must be "authentic and contemporary."

22. See Donald Woods, Problem-Based Learning and Problem Solving, in Problem-Based Learning in Education for the Professions, 19, 20-22 (David Boud ed., 1985).
23. See O.11 r.1 R.S.C.
24. See id.
organized argument. The legal context, ex juris service, was just too complex and required too many learning objectives to be met before it could be integrated efficiently with interlocutory advocacy. During feedback and debriefing, students would invariably veer off into the niceties of procedural law and neglect basic advocacy points. The legal context overwhelmed the skill.

As a general rule in skills teaching, problems should be focused on one skill in one legal context, yet be free of complex legal issues or a multiplicity of issues. At the same time, either students should have a firm command of the legal context, or it should be simple enough so that they can easily integrate it with the skill they are trying to perform. While the overriding objective in skills teaching should be to learn how to deal with the client’s problem by performing the skill, relevant legal issues still need to be mastered, but only up to a point. In Pat Arthurs, the skill is interviewing. The legal context is collections law. Although solving the problem by interacting with the client is the main objective, the student still needs to understand collections law but does not have to remember the minutiae of rules or the details of case law.

“Realistic, but minimalist” also means keeping factual and documentary detail to a minimum. This minimalist approach to facts can call for great ingenuity especially where, as in Pat Arthurs, a strict time limit is imposed. Consider, for example, the promissory note attached to the problem. It is as minimalist as a promissory note can be. Even so, it is still realistic because the client bought it at a stationery store. This too is believable because the client is dealing with a relative. It is therefore likely that Pat would not have sought the services of a lawyer to draft the promissory note. A lawyer’s promissory note or loan agreement would have been much longer and more complicated. This would have cluttered the problem with other issues.

25. This is similar to the view of case writers for the Harvard Medical School’s PBL program. The general consensus among them was “that cases should have one central topic or theme, similar to a mystery story, rather than multiple themes.” Janet Hafler, Case Writing: Case Writers’ Perspectives, in The Challenge of Problem-Based Learning 150, 153, (David Boud & Grahame Feletti eds., 1991) [hereinafter Perspectives].

26. Minimalism is a controversial issue for PBL designers. They refer to extraneous objectives as “red herrings.” Some PBL designers suggest that too many red herrings can distract students from the main objective, although more advanced students may well benefit from more red herrings than first-year students. See id. at 153-54. Barrows and Kelson express concern about designers tempted to remove red herrings in order to make things easier for students, the result of which is that realism is at risk of being undermined. See Howard S. Barrows & Ann Kelson, PBL Problem Design, 5 (Dec. 10, 1996) (unpublished manuscript, on file with authors). Because skills simulations often require a prescribed level of prior knowledge to elicit meaningful performances, it may well be that students performing them would benefit by having fewer red herrings than in more open-ended PBL problems focused on stimulating a search for the knowledge students need to solve the problem.

(intended or unintended), and would distract students from the main objective. Besides, if a competent lawyer had been included in the story, he or she would have recommended that the Ellisons provide collateral security on their property to the client. However, if that had been the case, it would have killed the problem: it is the very absence of collateral security that has prompted the client to seek a lawyer in the first place. This is one example of how, through careful design, minimalism can be achieved without sacrificing realism.\textsuperscript{28}

In my opinion, the realistic/minimalist principle applies to the design of all problems. Even with major problems such as trial advocacy or commercial drafting (both of which normally require research, much longer time limits, more documentation, and greater complexity of legal issues) learning objectives should be limited, and factual and documentary detail should not go beyond what is necessary to achieve the learning objectives.\textsuperscript{29} As a general rule, designers need to create a balance: provide enough supporting material for realism and depth but not more than students can manage in the time available for problem solving.\textsuperscript{30}

\textbf{C. Relevant}

In addition to being realistic, problems should be relevant. This is the third feature of good problems. In relation to medical education, it has been argued that curriculum designers should select problems that illustrate common medical conditions likely to be encountered in practice or, if not common, conditions with high impact on the patient and the community.\textsuperscript{31} A similar principle applies to legal education. In the design of professional legal training courses, one design policy calls for the selection of certain types of transactions for students that are demonstrably common in legal

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\textsuperscript{28} Some factual weaknesses can arguably be found in \textit{Pat Arthurs}. For example, how did Pat manage to save $50,000 of unsheltered money on his/her income by the age of 34 under the Canadian tax system? And, then, even if Pat had managed to save that much, lending so much money would virtually exhaust all Pat's savings. More facts might have been added to flesh out Pat's motivation for this unusual behavior.

\textsuperscript{29} A problem can achieve this realistic/minimalist standard, yet still lose credibility if the designer selects frivolous sounding names for characters. Double-entendre names, such as Sue Generis or Major Breach, or utility names, such as Bob Tortfeaser or Walter Beneficiary, can detract from realism and undermine the serious purpose of the learning activity. If students perceive that something is frivolously designed, they can feel justified in performing frivolously. To find realistic names, look in the telephone directory. Names that are easy to pronounce and remember are preferable.


\textsuperscript{31} See Prideaux & Farmer, supra note 20, at 131; Barrows, supra note 7, at 39. See also Peter J. MacDonald, \textit{Selection of Health Problems for a Problem-Based Curriculum}, in THE CHALLENGE OF PROBLEM-BASED LEARNING 101 (David Boud & Grahame Feletti eds., 1991). MacDonald discusses methods for case-selection based on factors other than prevalence and impact.
\end{flushright}
practice. The usual rationale for this policy is to “cover as many bases as possible” with the expectation that the more common the transactions are, the more likely that larger numbers of students will encounter them in their future practice. Relevant problems prepare students for practice in the real world. If both students and employers perceive student education as effective preparation for practice, this has the collateral effect of motivating students to work harder when confronted with relevant problems.

Equally important to relevance is high impact: is there something about the problem that will add to the students’ understanding of what it means to be a lawyer in a broader sense? For example, is there a moral or emotional aspect to the problem that can help provide the student with important insights? To produce these insights, a problem should not only be relevant, but dramatic. It should grab students’ interest, stimulating them to identify closely with the role they are playing.

In Pat Arthurs, the lawyer might wonder: should swift action be taken to secure the debt before the brother-in-law borrows more money, but at the risk of alienating the sister? Or, is there some way to secure the debt that will not alienate the sister? This is dramatic not just because the client has a conflict over a debt, but because the client has a genuine moral and emotional conflict that the lawyer feels compelled to help move toward resolution. When simulating advice giving, students can learn that, in cases such as this, solving the problem is not only about selecting appropriate procedures. It is also about communicating with the client so that the client’s inner conflict as well as the legal conflict is acknowledged. This is an important insight that sheds light on lawyering as a helping profession, one whose function is to handle moral and emotional problems when they are intertwined with legal ones.


33. See Barrows & Kelson, supra note 26, at 5.

34. See Hafler, Case Writing, supra note 15, at 84; Glick & Armstrong, supra note 27, at 25.


36. One of the easiest ways to ensure that problems include this dramatic aspect is to create simulations that allow students to be competitive. See id. at 54. This may be one reason why, no matter what their career intentions, students rate advocacy simulations so highly as learning experiences. They are thrust directly into the role of competitive advocate applying not only all their knowledge and skills to the problem, but their emotions as well. This is one reason to consider over-weighting competitive skills such as advocacy and negotiation in legal-education programs. See Anna Tutton & Alison Fulcher, An Interim Report on a Survey of the Usefulness of IMLS Skills-Based Training in the First Two Years of Legal Practice, in 1 The Australasian Professional Legal Education Council (APLEC) Conference Papers 535, 546 (1996).

37. See Glick & Armstrong, supra note 27, at 25 (“The [problem] should facilitate bringing [ethical quandaries] or other vital social or humanistic issues to the point of intellectual decision.”).
As with common legal-practice problems, drama heightens students' motivation to work hard in solving the problem. But motivation is further heightened when an element of realistic urgency is included in the drama—when the facts create an urgent need for the client to make a decision quickly, or for the student to act quickly to move the client's problem toward resolution. Urgency can also prompt students to search for more active, creative solutions and less routine ones.\textsuperscript{38} In \textit{Pat Arthurs}, the client's adversaries, the Ellisons, were on the brink of granting a second mortgage on their house to the bank. This action would have made it exceedingly difficult for the client to be paid or to secure the loan. As a result, to preempt the second mortgage, students needed to come up with a plan that could be quickly implemented, and which extended creatively beyond such routine solutions as negotiation or legal action.

\textbf{D. Consistent with Objectives}

The fourth feature of good problems is that they are consistent with objectives. In designing a knowledge-based curriculum, consistency is relatively easy to achieve because knowledge can be taught topically—one topic coherently connected to the next. Designers can initially determine what the topic objectives will be, and then arrange classes and materials to teach them. The disadvantage with this curriculum-design approach is that students do not learn how to transfer that knowledge to problems encountered in practice.

In a problem-centered curriculum, students do learn to transfer knowledge to the real world, but only if the curriculum is well designed. The challenges of design, however, are formidable when compared to knowledge-based design, in particular, achieving consistency between premeditated objectives and realistic problems. This is because realistic problems are "messy." This messiness is reinforced by the inherent lack of certainty in the problem-solving process: for example, in a conflict-resolution problem, the pivotal question might be, should the client sue, negotiate, or settle? Such a problem is capable of being interpreted and solved in a variety of ways. There might be more than one correct solution but, at the point when a decision is made, one does not know if it is the correct one or if the interpretation on which the decision is based is correct.\textsuperscript{39} Realistic problems cannot be solved merely by reference to traditional disciplines such as Torts or Contracts. Thus, what is learned by students when they work on these problems does not unfold topically or coherently. Realistic problems require knowledge and skills from a variety of disciplines connected to each other in disordered ways.

In contrast to this messiness, students need coherence in the process of

\textsuperscript{38} See Barrows & Kelson, supra note 26, at 5.
\textsuperscript{39} Id. at 2-3, 6.
learning. They need to know where they are headed so they can make sense of their learning. Therefore, in the design of a problem-centered curriculum, a natural disharmony exists between the students' need for coherence and the designer's need to create realistic problems. If the needs of both designers and students are to be met, coherence and realism must be reconciled. How can this be accomplished?

A complete answer to this question would run well beyond this paper, so what is offered here is a brief summary of three strategies: (1) using problem-generated design; (2) choosing an appropriate context; and (3) choosing an appropriate format.

The first strategy, "problem-generated design," is an approach to design whose purpose is to reconcile coherence with realism. Using this strategy, designers adhere to a systematic, staged approach to curriculum design: setting objectives, designing learning activities to meet those objectives, and trying out and evaluating the curriculum. But designers also have the freedom to be realistic and creative in the design of problems. This is achieved by the simple device of setting general constraints on the design of problems rather than specific ones. Thus, general objectives are set before the problems are written, whereas many specific objectives are defined after they are written. This makes practical sense because designers prefer to write problems first and set objectives later. When designers are working creatively to construct or modify a realistic problem, it is difficult to control how the facts unfold and what students learn from the problem. Many of the learning points (specific objectives) that arise out of a problem are different from what designers anticipate or were asked to include.

In the tryout-and-evaluation stage of design, the problem is first tried out on students and evaluated. Thereafter, the objectives and the problem itself can be fine-tuned to bring them more in line with each other. Coherence and realism are reconciled by encouraging designers to work creatively inside general constraints, yet be open to changing both problems and objectives so they become more consistent with each other.

The second strategy for making objectives and problems consistent ap-

41. Others exist. For example, in the design of problem-based learning ("PBL") curricula, some researchers suggest using a "cross-off-the-list" strategy. A list of objectives for the whole course are set first, and then problems are written. As they are written, a judgment is made about which objectives have been met. These are then crossed off the list. When all are met, the problem-writing process ends. See, e.g., BARROWS, supra note 7, at 39-40.
42. Stinson & Millet appear to disagree. They say, "[i]t is the learning outcomes that should drive problem design, and not the other way around." Stinson & Millet, supra note 21, at 3. They do not, however, distinguish between general and specific outcomes.
43. See Hafler, Case Writing, supra note 15, at 99.
44. See Hafler, Perspectives, supra note 25, at 153; Peter R. Sheal, How to Develop and Present Staff Training Courses 73 (1989).
plies specifically to skills teaching. This strategy requires you to choose the appropriate legal context for the skill you are trying to teach. It assumes that while teaching the skill is the primary objective, and legal context is of secondary importance, the legal context is still essential to create a meaningful problem. Lawyers do not negotiate, draft, or interview in a legal vacuum. Therefore, when designing a problem to teach a skill, designers need to put together two general objectives: one in skill and one in legal context. Designers must also ensure that they fit well together.

In *Pat Arthurs*, the general skill objective was interviewing. At PLTC, interviewing was taught with a client-centered, decision-making model.\(^4\) The model was based on the Binder and Price three-stage interview. In the three-stage interview, the lawyer identifies the problem, elicits the story in a "chronological overview," and then explores facts and legal theories more comprehensively.\(^5\) This is followed by client-centered advice, which is based on the lawyer identifying and analyzing the client's options and their likely consequences.\(^6\)

The selected context in *Pat Arthurs* was collections law. This was appropriate for the skill because collections law is associated with litigation, which is all about trying to win or resolve conflict. This also fits the Binder and Price model which is specifically designed for litigation interviewing.\(^7\) In addition, because collections law presents many legal and non-legal options for creditors trying to collect a debt, it can easily be made consistent with the model's delineation of "advice" as identifying and analyzing options and their consequences. Legal interviewing and advice need not necessarily follow this model, but the collections law context enables the designer to mold facts easily to the structure of that model.

When combining contexts and skills, it is helpful to rely on the experiences of others. Designers have observed that some legal contexts simply do not work efficiently with certain skills and vice versa. For example, some designers try to avoid combining negotiation with commercial transactions, because commercial negotiations are extremely laborious to transform into realistic simulations. It is much easier to design litigation-based negotiations. On the other hand, more ground can be covered in commercial law by combining it with drafting problems than with advocacy simulations, because drafting problems can enhance understanding of entire commercial transactions whereas with advocacy problems it is difficult to avoid a narrow commercial-law focus.

Just as important as choosing the appropriate context is the third strategy for unifying problems and objectives, choosing an appropriate format.

\(^5\) See id.
\(^6\) See id. at 135-91.
\(^7\) In the preface to their book, Binder & Price warn readers not to stretch their interviewing model beyond the context of litigation. See id. at v.
Carefully designed standardized formats increase efficiency and moderate difficulty, enabling students to meet certain objectives more quickly in the face of resource or time constraints. For example, the format of *Pat Arthurs* is a sequence of four sections that precisely parallel the Binder and Price interviewing model: (1) The Problem; (2) The Facts; (3) Details; and (4) Concerns You Should Raise With The Lawyer. When Scheer was designing this format, she had in mind both the model and the time constraint on the simulation. Scheer states:

"Obviously the format of the fact pattern was designed to fit the three-stage model of fact gathering in the Binder & Price system. In a way that could be considered a real weakness in the format—that it lends itself too easily to a stylized B & P interview. However, given the reality of the PLTC Interviewing Assessment, in particular [time limits] it seemed justifiable to create a format that reflected the B & P model so closely." 49

Unless it detracts from realism or reduces difficulty to an unacceptable level, designers should try to develop standardized formats and find or create problems that fit inside them. In this way, problems and objectives are more likely to be consistent with each other.

**E. Similar, But Different**

The fifth feature of good problems is that they are similar to, but different from, each other. This similar-but-different quality is one of the conditions that promote transfer of learning. Transfer of learning is the application of what is learned in one situation to another. Without conditions that promote transfer, knowledge acquired in one situation may be wasted if it is not applied in another situation. Moreover, skills are unlikely to improve if they are not practiced in a variety of different contexts. 50

In designing problems to promote transfer, differences need to be balanced with similarities. As designers move the curriculum from problem to problem, too many features of the problem should not be changed at once; this can confuse students and impede transfer. Students need to attain a fair degree of success in dealing with a particular kind of problem before going on to the next type. Continuous success, not failure, motivates students to learn. 51 Problems should be similar enough to promote transfer, but different enough to broaden the base of practice, thus stretching and deepening problem-solving skills. 52 To achieve this similar-but-different state in skills

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49. Letter from Patsy Scheer to Stephen Nathanson (October, 16, 1995) (on file with the author).

50. For a fuller exploration of transfer of learning in legal education, see generally Nathanson, *Skills and Transactions*, supra note 12.


52. See, e.g., Gagné, *supra* note 6, at 314. See also Robert E. Waterman & Cooley
teaching, two techniques can be used: format similarity and context similarity.

One application of format similarity is to keep both the skill objectives and the format of the problem constant, while changing the legal context. Pat Arthurs, for example, was the last in a series of simulated interview problems. The problems preceding it were located in a variety of different legal contexts, including property law and family law. But the facts were constructed in such a way that the objectives were the same, that is (Binder and Price-style) interviewing skills. The format was also the same, reflecting those objectives. Using a similar format in a variety of problems within different legal contexts may help students transfer skills by focusing them on solving the problem, rather than adapting their responses to different problem formats.

Context similarity—using similar legal contexts in different problems—also promotes transfer. As with format similarity, context similarity enables students to concentrate on fewer aspects of the problem while allowing them to reinforce, and build on, previously learned knowledge and skills. For example, in teaching drafting, a designer should not juxtapose pleadings drafting with drafting of corporate acquisition agreements because the contexts are too dissimilar. But juxtaposing two different corporate acquisition agreements, or even a corporate acquisition with a joint venture agreement, may make more sense for promoting transfer. On the other hand, care should be taken to avoid too much similarity, otherwise the base of practice may be unacceptably narrowed. The optimum approach to using format and context similarity may be to keep the same format for each skill objective, but work out a balance between contextual similarities and differences. There should be enough similarities to promote transfer, but enough dissimilarity to broaden the base of practice and challenge students to stretch and deepen skills.

F. Challenging

Gagné states that good problems are within students’ previously learned skills and knowledge, but are also “novel in the sense of presenting unfamiliar situations.” To put this another way, problems should present an interesting puzzle that the student knows something about but cannot solve right away. This is what is meant by “challenging,” the last feature of

34. See id.
35. GAGNÉ, supra note 6, at 195.
36. See Hafler, Case Writing, supra note 15, at 84.
good problems.

One way of achieving this familiar-but-novel feature in designing problems is to view problem solving as having two aspects: linearity and flexibility. Linearity is the step-by-step aspect of problem solving that requires familiarity with routines and precedents applicable to the legal context. Flexibility is the higher-level skill needed to modify the routines and precedents or to create something novel to solve the problem. If problems are designed to bring out only linearity, they may not be sufficiently challenging to many students. If they can be solved only through flexibility, most students may not have sufficient prior knowledge of the routines and precedents. Problems should be designed somewhere in the middle of these extremes, balancing the two. Achieving this balance is what makes problems appropriately challenging.

Was Pat Arthurs appropriately challenging for students under the constraints imposed? Did it elicit both linear and flexible skills? A small number of students exhibited what appeared to be a lot of flexibility in approaching the problem. For example, one possible solution that emerged among them was a two-step contingency plan: the client should try to get the Ellisons to give the client a mortgage on the house as well as a partial payment. Only if that failed, should the client move aggressively and commence a lawsuit coupled with other measures. The majority of students, however, could not make this leap. Perhaps the notion of Pat Arthurs (a private person rather than a bank) asking the Ellisons to mortgage their property was just too novel to occur to the students. Or, they had difficulty putting together a two-step contingency plan. Many of these students were able to define the problem, which was how to get the client's debt secured ahead of the bank without alienating the sister, but they were not able to progress from effective problem-definition to higher-level problem solving. They were fixated on civil dispute resolution as routine variations on the same litigate-or-negotiate theme. Even so, the design of Pat Arthurs still enabled many of the students to display a little bit of flexibility as they mimicked professional judgment by repackaging routine options with novel, if not always the most practical, suggestions. In being able to produce a range of outcomes that included both a little and a lot of flexibility, Pat Arthurs may have been challenging to an appropriate degree.

Another way of trying to achieve an appropriate-challenge standard is to control the level of difficulty outside the problem through decisions about what types of guidance should precede or accompany the problem. There are two basic types of guidance: individualized and group guidance. With individualized guidance, teachers tailor guidance to individual needs. For example, teachers may use hints or questions to channel students' thinking to help them discover solutions on their own. Through this discovery method of learning, students produce solutions of varying quality at different speeds, with different amounts and types of individualized guidance. When problem solving is less constrained by time limits than in Pat Ar-
thurs., and students are permitted to work at a more leisurely pace, designers can rely a little more on individualized guidance to control levels of difficulty, and rely a little less on the ingenuity required to achieve precisely the right balance of linearity and flexibility in the design of problems. As a partial substitute for design ingenuity, however, individualized guidance can work well only if there are enough teachers to provide it to all students.

When fewer teachers are available, designers may have to rely more on group guidance to control levels of difficulty. The structure, content, and process for group guidance can be set out in detailed notes for facilitators. In these notes, the designer can outline relevant lecturers, discussion groups or focused reading assignments ahead of the problem or during the process of problem solving. Notes can direct facilitators in demonstrating problem solving and in reminding students how lessons learned in preceding problems can be transferred to new problems. They can set out plans for small groups in which students provide guidance and feedback to each other after which facilitators conduct debriefing sessions.

As with linearity and flexibility, guidance and discovery need to be kept in balance. It is particularly tempting for teachers to overdo discovery learning because of its many advantages. One advantage is that, unlike knowledge-based learning in which students learn concepts in a systematic, topical sequence, learning through realistic problems helps students learn concepts in concrete, practical contexts. The result is that knowledge learned through discovery is arguably more deeply learned and better retained. Another advantage is that learning through discovery improves problem-solving skills essential for professional practice. Combined with reflection, discovery can promote the development of a learning stance to all problems—so that once in professional practice, the student will continue to regard each problem situation as a learning experience from which new knowledge can be derived. From the standpoint of teachers who are humanistically inclined, discovery learning can also be appealing because facilitating the process of successful discovery in others is both intriguing and satisfying.

But for many students, too much discovery learning can result in an ex-

57. See Glick & Armstrong, supra note 27, at 28.
58. See, e.g., Gagné, supra note 6, at 191-93.
60. Whether it is learning through discovery or learning in realistic contexts or a combination of both is responsible for these benefits is the subject of controversy. Colin Coles’ theory of contextual learning provides a rationale for the success of problem-based learning based not only on using discovery as a learning method, but on a structure of learning he refers to as contextual learning. See Colin R. Coles, Evaluating the Effects Curricula Have on Student Learning: Toward a More Competent Theory for Medical Education in Innovation, in Medical Education: Evaluation of its Present Status 76 (Zohair M. Nooman eds., 1990).
61. See Stinson & Milter, supra note 21, at 4.
cess of wrong turns, dead ends, and unnecessarily long hours. Especially for less able students, failure to discover the best pathways to solving problems can be very discouraging. Sending students off on an unfocused, unguided search for solutions to a problem that is just too open-ended, or too difficult to solve, can leave students frustrated. Moreover, this undermines their motivation and wastes precious resources. In designing both problems and guidance, designers need to strike a balance to ensure students are given enough guidance to work through a problem successfully—but not so much guidance that the problem disappears. With the right amount and quality of guidance, all problems can be challenging without being overwhelming.

IV. CONCLUSION

"Guidance" is a catchall that refers to all elements of the curriculum, other than the problem to be designed. In *Pat Arthurs*, guidance included the students' prior interviewing training, practice in solving collections problems, guided readings and lectures on collections law, and a pre-assessment notification given to all students that their interview would relate to a collections problem. Obviously, the features of good problems and the principles for designing good problems need to be understood in relation to these other elements of the curriculum—elements, including the complex role of the facilitator, that this article has not explored.

Even so, it is worth studying good problems separately from these elements, because good problems are the core of the problem-centered curriculum just as didactic teaching is the core of the knowledge-based curriculum. From the viewpoint of students, the quality of problems is more critical to the problem-centered curriculum than the quality of didactic teaching is to the traditional curriculum. In the traditional curriculum, students can always absorb knowledge using a variety of strategies, including textbook and case reading, discussions with fellow students, borrowing notes, and regular visits to the library. In many programs students can, and do, choose not to attend class.

In a problem-centered curriculum, however, students must learn by doing. What students do, and the way they learn, is to work on and think about the problems designed for them. No practical, alternative strategy for learning is open to them. Although good facilitation by teachers is important, students are still required to work with whatever problems they are given. If the problems are not well designed, it is unlikely that good teaching can salvage them.

This article has outlined six features of good problems. It has used *Pat Arthurs* as an example of a good problem because it embodies all six fea-

62. Unless, of course, specific objectives require such difficulty, e.g., learning research methods.
tures. But the features of good problems are most meaningful because of their impact on students. They challenge and motivate students to work hard, reflect on their performance, and learn. Good problems stimulate curiosity and fruitful interaction with others. Good problems equip students for professional practice by preparing them to solve their clients' problems. As educators learn to appreciate the vital role that problems play in professional education, the design and the designers of good problems are bound to attract more institutional attention and patronage. If educators want students to make the most of their professional education, they need to become patrons and designers of good problems.
APPENDIX A

PAT ARTHURS

SECRET INSTRUCTIONS: INTERVIEWING ASSESSMENT

Read these Secret Instructions carefully. Please try to learn the facts before the interview. Do not tell your entire story at once. ALLOW THE LAWYER TO ELICIT THE FACTS WITH QUESTIONS. Respond to questions asked, but allow the lawyer to prompt you for details.

THE MAIN CHARACTERS

- Pat Arthurs: the client (a 34 year-old mobile home salesperson)
- Joe Ellison: the client's brother-in-law (a 35 year-old insurance agent)
- Rita Ellison: the client's sister and Joe's wife (a 30 year-old homemaker)

THE PROBLEM

Your name is Pat Arthurs. You want advice about collecting a debt owed to you by your sister and brother-in-law, Rita and Joe Ellison. You loaned $50,000.00 to them so they could build an addition on their home in Coquitlam. They should have repaid the loan by now, but they haven't. You are in a bit of a financial bind right now, and you could really use the money. You're beginning to get worried that they might never be able to repay the loan. You found out that Joe is about to quit his job and start a new business. He's going to get a loan from the bank to finance the business, which will mean he's going to be even further in debt. You'd like Rita and Joe to repay the loan, or at least part of it, right away. If they can't repay the whole debt immediately, you want to do something to protect your position in relation to other creditors, especially in relation to the bank that may be about to loan money to Joe.

THE FACTS

A year ago (on April 1, Yr-1) you loaned $50,000.00 to your sister and brother-in-law, Rita and Joe Ellison. After the birth of their second child, they needed more space in their house. They decided to build an addition on their house, and they came to you for help to pay for the construction. You
were quite reluctant to loan them so much money, but Joe finally persuaded you to help them out.

When you gave them the money, Joe said they would only need it for a few months. They promised to repay the loan within six months. Rita and Joe agreed to sign a promissory note. (The promissory note is attached. Give it to the lawyer ONLY IF HE/SHE ASKS FOR IT.)

You expected the loan to be repaid by October 1, Yr-1. When you didn't receive the money, you called Joe (in early November Yr-1). He said the cost of building the addition had been much higher than he had anticipated, and that he had to use more of his savings than he had expected. He asked you for more time to repay the loan. You were reluctant to do this, but you finally agreed to extend the loan. Joe agreed that he would repay the loan by March 3, Yr-0.

When you didn't receive the money, you called Joe on the telephone (on March 10th). He said that he would get the money to you “within a week.” You called him again on March 21st, and he said he’d have a check in the mail to you “in a day or so.” Since the 21st, you’ve called him four times, but you have been unable to contact him. Each time you left a message with his receptionist to call you, but he hasn’t called you back. You finally concluded that he was trying to avoid you.

On March 30th (last Monday night), you went to Joe’s house “to have it out with him.” He wasn’t at home but your sister Rita was. She told you that they hadn’t repaid your loan because Joe was trying to “scrape together” enough money to start a new business. He planned to quit his job as an insurance agent in order to do this. Rita was very embarrassed about the money she and Joe owe you. She was also upset about Joe’s “cycle shop scheme.” She told you that to finance the cycle shop, Joe plans to use all their savings. He also intends to get a $50,000.00 bank loan, and the bank is insisting on taking a second mortgage on their house.

When you found out that Joe was about to get even further in debt, you decided you had to see a lawyer immediately to see what you could do to protect your position.

DETAILS (IF THE LAWYER ASKS FOR THEM)

About the Loan to Rita and Joe

You have nothing on paper about the loan, except for the promissory note.

The address on the promissory note (2485 Arbutus Street) is your home address.

You purchased the promissory note form at a stationery store and filled it in yourself.

You gave Rita and Joe a cheque for $50,000.00 on April 1, Yr-1. They
both signed the note when you gave them the check. 
You do not have the canceled check with you, but you can bring it the
next time you meet with the lawyer (if he/she asks you for it).
When Rita and Joe signed the note, they agreed to pay back the full
amount of the loan (and interest at 7% per annum) no later than October 1,
Yr-1. Only you, Joe and Rita were present at this meeting.
So far, none of the loan has been repaid.

About Rita and Joe’s Financial Situation

Joe is currently employed as an insurance agent at Jones and Co. His
income is about $50,000.00 a year. Your sister Rita is a full-time housewife
and mother.
You estimate that their home in Coquitlam (at 376 Blue Mountain
Road) is worth about $160,000.00. You assume that they own the home
jointly. There is a mortgage registered against the property. Rita told you
that they owe about $100,000.00 on the mortgage.
Joe intends to borrow $50,000.00 from the Confederation Bank to fi-
nance his new cycle shop. Joe hasn’t gotten this loan yet and, so far, the
business is only at the “talking stage.” Rita thinks Joe will get this loan in
about a month. Rita told you that the bank would secure this loan by taking
a $50,000.00 second mortgage against their house.
Rita told you that she and Joe have about $15,000.00 to $20,000.00 in
savings. The money is in an account at the Trans-Provincial Bank located at
1200 Granville Street in Vancouver. The account is in Joe’s name.
The only other assets Joe and Rita have are household furnishings and a
car. You believe that the furnishings have little value. The car is six years
old, and it also has little value.

About Your Financial Situation

You are a mobile home salesperson. You are not married. Your in-
come varies considerably.
Until recently, your average income was about $6,000.00 a month.
About three months ago the business slumped dramatically, and it affected
your income drastically. Since January, your income has been about
$2,000.00 a month. You don’t think that business is going to improve for
quite a while.
You own your own home, but there is a large mortgage against it. Your
monthly mortgage payments are substantial (about $1,200.00 a month).
You have about $10,000.00 in savings.
You have no other assets, except household furnishings and a car. They
are worth very little.
You are worried about the drastic drop in your income. You have already had to start using your savings. You may need the money you loaned to Rita and Joe before long just to pay your own living expenses.

CONCERNS YOU SHOULD RAISE WITH THE LAWYER

1. You want to know what your options are.
2. You want at least part of the debt repaid immediately. You’re concerned about pursuing a course of action that might upset your sister, but you want to consider all possible options open to you.
3. If Rita and Joe can’t repay the full amount of the loan immediately, you want to try to get some security. You’re especially worried about the $50,000.00 loan Joe is about to get, and you want to do something to protect your position in relation to the bank which might loan him the money.
4. You’re very annoyed at Joe for not repaying the loan. After all, right now his income is higher than yours, and he has more savings too.
5. You’re very worried about the prospects of Joe quitting his job and borrowing more money from the bank. You want to do something to protect your position right away.

PROMISSORY NOTE

Due: $50,000 on demand
Vancouver, British, Columbia, April 1, Yr-1

On demand I promise to pay to the order of Pat Arthurs the sum of Fifty Thousand Dollars ($50,000.00) with interest at the rate of 7% per annum calculated semi-annually at 2485 Arbutus Street, Vancouver, B.C.

For value received.

Joe Ellison

Joe Ellison